



First Aid, Resuscitation, and Education Guidelines

2020 Clinical and Education Updates for Canada



Introduction

Each day CRC responds to health inequities, social emergencies, and natural disasters. Often overlooked within health systems, first aid education is uniquely positioned to build resiliency—equipping communities/individuals with knowledge, skills and attitudes to address emergencies of acute illness/injury. We achieve this through creation and delivery of innovative learning interventions which build learner confidence, increase likelihood to act and ease pressure on our health systems while reducing health disparities.

This critical work is supported by the *International First Aid, Resuscitation, and Education Guidelines*—coauthored by clinical and education specialists via the Global First Aid Reference Centre. Comprised of representatives from the IFRC, ICRC, Center for Evidence-Based Practice, and more than 50 national societies, these guidelines provide industry-specific expertise designed to support meaningful learning for millions of people around the world.

INCREASING GLOBAL ACCESS TO EVIDENCE-BASED PRACTICES IN FIRST AID EDUCATION

The *International First Aid, Resuscitation, and Education Guidelines* provide learner-centred, evidence-based guidance on best practice in first aid education. Our team of medical, academic, and educational experts have systematically reviewed a wide range of first aid and resuscitation-related topics and have considered clinical best practice, environmental considerations, and educational techniques to help ensure first aid courses meet the needs of learners.

The guidelines are intended primarily for those developing first aid programming but should also be used by instructors and program managers to ensure that their delivery aligns with the scientific foundations. CRC will continue to revise our programs to reflect the latest Guidelines, and we will be actively contributing to Strategy 2025.

The Canadian Red Cross recognizes the excellent work of our peers and domestic contributors! Thank you for sharing your time and talents to continue advancing first aid education!

ABOUT THIS DOCUMENT

This document is a summary of the 2020 Canadian Guidelines on First Aid, Resuscitation, and Education. The full Guidelines consist of a detailed worksheet on each of the topics that is summarized here.

This summary document focuses on key content and examples from the full content contained in the individual topic worksheets, with special focus on the changes to medical science (clinical evidence base) and educational science (how we engage learners).

Individual worksheets for each topic will be available at <https://www.firstaideducation.net>. They will include:

- Enhanced considerations for education (as learning modalities & considerations for specific clinical topics)
- Considerations for unique contexts: conflict, disaster, mass casualty situations, water safety (aquatics) remote, and pandemic
- Fluid links between themes and resources
- Intentional links between the Chain of Survival Behaviours and specific clinical topics
- Background on the guidelines process
- Considerations for local adaptation
- Guidelines for effective water safety and rescue training for laypeople (including four emerging research questions)
- Each worksheet will include the following elements:
 - Key action
 - Introduction
 - Guidelines
 - Good practice points
 - Education considerations

- Scientific foundation
- References

ACKNOWLEDGEMENTS

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ETHICS

Ethics behind first aid are not found in scientific publications or in randomized controlled trials. They are found in greater principles, such as the Fundamental Principles of the Movement: Humanity, Impartiality, Neutrality, Independence, Voluntary Service, Unity, and Universality. In serving these principles, we strive to treat affected people in the most humane and ethical manner. (Guidelines 2016)

PROCESS

National first aid guidelines have been developed by Red Cross and Red Crescent national Societies for more than 100 years. For more than 20 years, several Red Cross and Red Crescent national societies have had evidence-based processes and published guidelines based on the same. In 2011, the IFRC published its first evidence-based guidelines based on the Red Cross and Red Crescent national societies' experiences. Work on the 2020 version began in 2016 through identifying subject matters experts, determining the list of topics to address, identifying evidence reviews, cataloguing existing evidence-based processes, and working together to review new clinical and education science.

The 2020 Guidelines are developed based on the principles of evidence-based practice:



Figure 1. Evidence-based Practice

First, the best available scientific evidence is collected from databases of scientific studies. Next, this is integrated with the practical experience and expertise of experts in the relevant fields and the preferences and available resources from the target groups (such as first aid providers and people receiving first aid) in order to formulate recommendations.

The worksheet for each topic in the Guidelines was generated through collaboration between members of the clinical and education sub-committees, with adequate opportunity for input and review by both teams to best meet the needs of our stakeholders. After the content was established, editors reviewed and revised the entire worksheet in conjunction with other stakeholders in order to ensure common, simple language was used. More detailed information about the process of developing these Guidelines will also be available at <https://www.firstaideducation.net>.

EDUCATION

Education is represented in two ways within the Guidelines:

- As individual learning modalities (supported by a scientific foundation)
- As education considerations within each clinical topic

The 2020 Guidelines continue to recognize two key concepts presented in 2016:

- a) The Chain of Survival Behaviours (Figure 2).
- b) Utstein Formula for Survival

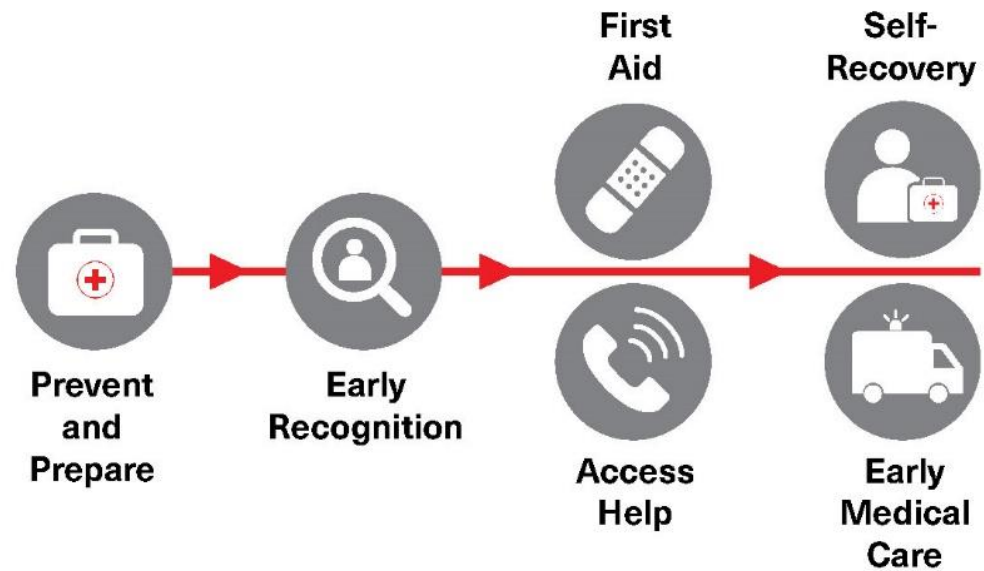


Figure 2. Chain of Survival Behaviours

CONTEXT FOR CANADIAN RED CROSS FIRST AID EDUCATION

In 2017 the Canadian Red Cross articulated a new vision for meaningful, learner-focused first aid education. This context is the backbone of our programs—it drives our learning design and showcases how our program approach is distinct from that of other training agencies in Canada and around the world. In adopting this learning philosophy, we recognized the need to support our instructional personnel through a comprehensive Instructor Development Program, designed to prepare them to support dynamic, learner-centred classroom environments.

All CRC first aid programming is planned and delivered in accordance with the following *Context for Canadian Red Cross First Aid Education*, released in 2017:

Building your participants' confidence in their ability to provide first aid is one of your main goals as a Canadian Red Cross First Aid & CPR Instructor. As an Instructor, you can increase your participants' confidence by:

- *Helping them understand the causes of injuries and illnesses.*
- *Giving them tips on how to avoid injuries and illnesses.*
- *Teaching them the latest in first aid skills and knowledge.*

Backed with this foundation of know-how, participants are likely to be more confident in their first aid skills and more willing to act in an emergency. As a practice, first aid should prevent further suffering, protect life, and promote recovery. First aid training should support communities and people—whether or not they are certified First Aiders—in caring for others and should provide individuals with the confidence to:

- *Recognize illnesses and injuries.*
- *Provide care.*
- *Recognize personal limitations and the need for more advanced care.*

The curriculum focuses on the needs and interests of your participants—the learners—to increase their confidence and understanding of the content. The safe, enjoyable, meaningful, and cooperative aspects of our classrooms create a supportive environment that allows people to increase their self-confidence and understanding of first aid behaviours and techniques. Each in-class learning activity or intervention should offer opportunities to build the participants' confidence and connect the content to the underlying principles of first aid. The Canadian Red Cross is committed to developing our Instructors in a way that supports a learner-centred approach to education.

In addition to assessing the scientific foundation for the Guidelines, reviewers were asked to provide guidance based on the following lenses (when appropriate), which help to strengthen the learning intervention by helping program developers customize the approach to the learner audience and local environment:

Learner audience: Identifies factors that program developers should consider about learners (e.g., how you might teach the topic depending on the learner's age or language use).

Facilitation tips: This section includes teaching approaches, adaptations, and points to emphasize. Reviewers were also permitted to add in novel teaching ideas or provide resources which could be valuable to others when facilitating.

Facilitator tools: This section includes tools to strengthen learning (e.g., using the acronym FAST as a cognitive aid when exploring care for a person experiencing a stroke).

Learning connections: This section includes connections to other first aid topics or general concepts of care (e.g., some clinical topics will not make sense to learners unless they have previously explored other topics).

2020 Education Topics

Please note, full worksheets will be available directly from the Guidelines website: redcross.ca/firstaidguidelines

| Topic | Key Action | Introduction | Guidelines | Good Practice Points (sample) | Education Considerations (sample) |
|---|---|--|---|--|--|
| Motivation to Learn First Aid | Consider the individual's specific motivation to learn and use this to inform the planning and content included in first aid education. | People have different motivations to learn first aid, the strongest being a requirement to attend (e.g., for work). Other motivations include if the learner has a family member at risk of illness or injury, or if they live far away from healthcare services. When people are motivated to learn, they will likely be more engaged with the process. | <ul style="list-style-type: none"> • First aid program designers should advocate that decision makers should make first aid learning a requirement for specific groups, such as school children, new drivers, and employees. • Self-led learning completed in a familiar context (e.g., at home) may improve individuals' motivation to successfully achieve the learning outcomes. | <ul style="list-style-type: none"> • Certain factors, such as cost, location, and method of learning, might influence the decision to learn. These factors should be adapted to meet the needs of each group and encourage learning. • For maximum engagement, learning opportunities should be adapted to meet learners' needs and preferences. The content should be limited to what is relevant and necessary for the learners. | <ul style="list-style-type: none"> • When learners' motivations are understood, program designers can adapt first aid programs to focus on different aspects of the Chain of Survival Behaviours. For example, parents with young babies may want to be prepared if their baby starts <u>Choking</u>. Someone living with an elderly relative may want to be able to recognize the signs of <u>Stroke</u>. • Encourage learners to share their first aid experiences as this will help you to understand their motivation for attending and resolve any concerns they have about providing care in an emergency. • Avoid overwhelming learners with too much information as this could weaken their confidence and demotivate them. |
| First Aid Education for Children | Encourage children to develop their first aid knowledge and skills and become lifelong learners. | First aid education refers to developing first aid knowledge and skills in children. This topic explores how to develop first aid abilities in children of different ages and the methods to help them retain their | <ul style="list-style-type: none"> • First aid program designers should refer to the educational pathway provided by the Centre for Evidence-Based Practice (CEBaP) to create contextually relevant educational programs according to children's intellectual, social, and behavioural abilities. | <ul style="list-style-type: none"> • Relevant, engaging scenarios that encourage children to apply their life experiences should be used to support learning. • Considerations when developing programming for children whose contexts make access to care difficult: | <ul style="list-style-type: none"> • Avoid using overly medical terms or high-level language to describe illnesses and injuries. Language should be appropriate to the age and experiences of the children. • Start by asking young learners what they know about how the |

| Topic | Key Action | Introduction | Guidelines | Good Practice Points (sample) | Education Considerations (sample) |
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| | | <p>knowledge, skills, and attitudes in both high- and low-resource settings.</p> | <ul style="list-style-type: none"> • When combined with a secondary method (e.g., educational songs), hands-on training may help children to retain knowledge and skills as well as increase their confidence and willingness to act. • Training teachers to facilitate first aid education may be more productive, time-efficient, and relevant than bringing in medical facilitators. | <ul style="list-style-type: none"> ○ Though the educational pathway recommends teaching children how to access medical care at ages seven to eight, we recommend waiting until they are ages nine to ten. Reinforce this information regularly until they are 18 years old. ○ Due to the presence of infectious diseases, facilitators should teach children to wash their hands before and after providing first aid. Repeat this skill until they are 18 years old. ○ Children may be taught to recognize their role in a first aid emergency with age-appropriate activities such as assessing the scene and calling for help. This approach will also encourage them to learn about the importance of scene management. | <p>body works and why providing first aid is important.</p> <ul style="list-style-type: none"> • Build on children’s interest to learn first aid by incorporating first aid education into different subjects and activities, such as biology class or sports. |
| <p>Online Learning (Adults)</p> | <p>Use online learning to develop learners’ first aid knowledge.</p> | <p>Online learning refers to self-directed or facilitator-led interactive learning tools accessed on digital devices, such as tablets, phones, and computers. Approaches include digital education programs, mobile apps, online games, and multimedia. Online learning is suitable for a variety of audiences because of its accessibility and flexibility.</p> | <ul style="list-style-type: none"> • Online learning is a beneficial tool and could be as effective as face-to-face learning for adult audiences. • Online learning may improve learners’ knowledge of asthma treatment, burns treatment, and CPR techniques, but may not lead to an improvement in skills. • Given the increased use of social media and smartphones, as well as technological expertise, online learning may be a cost-effective method to | <p>No specific good practice points were identified for this topic.</p> | <ul style="list-style-type: none"> • Online learning is most effective when the appropriate technical resources are available. This factor may present a barrier in areas without these resources or when regulation exists for limiting access. Consider how learners will access online learning, including the availability of offline access (e.g., through an app). • Adequate safeguarding measures should always be implemented, especially for more vulnerable learners. Consider |

| Topic | Key Action | Introduction | Guidelines | Good Practice Points (sample) | Education Considerations (sample) |
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| | | | <p>spread public information campaigns to a broad audience.</p> | | <p>how you will maintain a safe online learning environment.</p> <ul style="list-style-type: none"> Online learning can have social benefits if learners can interact and collaborate. |
| <p>Online Learning (Children)</p> | <p>Use online learning to increase children’s first aid knowledge.</p> | <p>Online learning refers to self-directed or facilitator-led interactive learning tools accessed on digital devices such as tablets, phones, and computers. Approaches include digital education programs, mobile apps, online games, and multimedia. Online learning is suitable for a variety of audiences because of its accessibility and flexibility.</p> | <ul style="list-style-type: none"> Online learning may be most beneficial when paired with face-to-face learning. Online learning could be as effective as face-to-face learning to develop first aid knowledge for conditions such as heart attack, stroke, lifestyle factors, and using a defibrillator. | <ul style="list-style-type: none"> Online learning may be useful when the child has a preferred location in which they like to learn, or when there are limited time and resources. Safeguarding measures are crucial for online learning and national and organizational protocols for protecting children online should always be followed. | <ul style="list-style-type: none"> Learners’ cultural and socioeconomic backgrounds may influence their confidence and ability to complete online learning. It is important to determine how you will protect children as they engage in online learning. Consider how they will interact with the tool and who can interact with them while they are using it. Research the data and child protection laws for your context and organization (e.g., school) and follow the regulations and guidelines carefully. You can deliver online learning in a variety of ways such as mobile apps, games, and multimedia (e.g., 3D videos or virtual reality). Children learn through play, so gamification is an important method to consider. |
| <p>Blended Learning</p> | <p>Use blended learning to increase the flexibility of first aid learning.</p> | <p>Blended learning is a formal educational method that consists of two parts:</p> <ol style="list-style-type: none"> A self-guided or independent learning where the person has | <p>No specific guidelines were identified for this topic.</p> | <ul style="list-style-type: none"> Self-directed components should be paired with a facilitated session that focuses on learning and practising first aid skills with the support of a trained facilitator (this could be face-to-face in a classroom or | <ul style="list-style-type: none"> This approach can be used with a variety of audiences (e.g., youth or older adults, people in the workplace, those travelling or living in remote areas, or those training to be professional responders). It is important that |

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| | | <p>some control over the time, place, path, and pace.</p> <p>2. A supervised session led by a facilitator.</p> <p>The modules within a blended learning course are connected to provide a unified learning experience. The recommendations and considerations included for this topic apply to both adults and children unless specified otherwise.</p> | | <p>facilitated virtually in real time through video communication).</p> <ul style="list-style-type: none"> The optimal “blend” of learning methods and the order most effective for different audiences is unknown. Regardless of the combination, blended learning may provide an opportunity to reinforce learning through repetition. The self-led learning segment may come before or after the facilitator-led segment but must be a separate session (i.e., playing a video during the facilitator-led segment is not blended learning. Learners must watch the video before or after their time with the facilitator for it to be considered blended learning.) | <p>the self- and facilitator-led methods have a meaningful, integrated connection and form an enhanced learning experience. We advise program designers to consider which elements need reinforcement based on the learners’ needs.</p> <ul style="list-style-type: none"> Prepare facilitators on how to bring the self-guided and supervised learning components together. Time with a facilitator should enhance learning, not repeat it. Encourage learners to revisit the self-guided learning components as this may increase their retention of the content. |
| Media | <p>Use media to raise awareness, change attitudes and beliefs, and motivate people to learn or recall basic first aid knowledge and skills.</p> | <p>We have defined “media” as communication outlets such as television, radio, newspapers, magazines, posters, and the internet. Media should be used to reach local, regional, national, or global audiences and share first aid information. The media outlet should be appropriate for the audience, and the message should contain authentic, relevant content that is engaging, entertaining, and educational.</p> | <ul style="list-style-type: none"> Media may be used to: <ul style="list-style-type: none"> Increase awareness of first aid or the motivation to learn it Change attitudes and beliefs about first aid Increase first aid knowledge Media may not be an effective method to improve skills or specific actions associated with providing first aid. <p>The following recommendations are for first aid program designers and the marketing and communications teams with which they work:</p> <ul style="list-style-type: none"> Media may be used intensively over time to repeat multiple, | <ul style="list-style-type: none"> Media may be used to reach a broad audience for a relatively low cost. Radio may provide the opportunity to engage with audiences who are harder to reach. Narrowcasting may be an effective method to communicate very specific messages. | <ul style="list-style-type: none"> Consider the audience’s literacy level and select the media outlet that will best engage people. Consult the target audience on which media outlets they prefer to use. Use testimonials from people who have seen or heard first aid media content and intend to change their behaviour because of it. This may encourage others to change too. Consult with the target audience when developing key messages and media content to ensure they resonate with them and are culturally appropriate. |

| Topic | Key Action | Introduction | Guidelines | Good Practice Points (sample) | Education Considerations (sample) |
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| | | | <p>refined messages aimed at a target audience.</p> <ul style="list-style-type: none"> • Messaging may be most effective when it is specific to a target audience and communicated through the appropriate outlet. • Collaboration between program designers or marketing teams and a target audience may produce authentic and relevant educational content. | | |
| Gamification | <p>Apply gamification techniques to first aid education to reach a broader range of learners, repeat learning over time, or reinforce learning from other sources (e.g., facilitator-led sessions).</p> | <p>Gamification is the application of game elements (e.g., collecting achievements, earning points, or team play) to first aid education with the intent to increase learner engagement. An example of this is a mobile application that tests the ability to assess various scenes for hazards. Gamification in electronic and non-electronic forms can captivate learners' interest and provide the opportunity to re-engage with the content on a regular, independent basis. Given the increased popularity of mobile technology, electronic gamification offers the chance to reach a much broader audience, and as</p> | <p>No specific guidelines were identified for this topic.</p> | <ul style="list-style-type: none"> • Gamification may be used to deliver first aid content either independently or as part of a comprehensive educational strategy. • Gamification should be purposeful and supported by an educational approach that identifies its benefits to the intended learning outcomes. | <ul style="list-style-type: none"> • Consider how gamification will best serve learners' needs and preferences. Some gamification elements may be inappropriate in certain contexts. For example, competition between individual learners may be irrelevant for some age groups or religious backgrounds, or in cultures that strongly value unity. The use of gamification should respect the local context in which it is used. • Ensure the learning outcomes are clear and the gamification elements are directly applicable to the learning process (e.g., evaluate the gamification elements using test and retest or learning to prioritize actions). If they are not, learners may become disinterested with the content. • Evaluate the effectiveness of the gamification elements by measuring key learning outcomes such as first aid |

| Topic | Key Action | Introduction | Guidelines | Good Practice Points (sample) | Education Considerations (sample) |
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| | | such, is the focus of this topic. | | | knowledge, skills, and attitudes. Secondary outcomes may include an increase in the rate with which learners re-engage with the content or the number of individuals they encourage to complete first aid education. |
| Peer Learning | Use peer learning to add extra value to education, as it allows users to support each other and provide different perspectives, adding extra value to the educational experience. | <p>Peer learning is a term that has many interpretations and includes a wide variety of learning approaches. It has no universally agreed definition, nor is there a standard method to its delivery. All at once, it is an approach, a communication channel, a method, a philosophy, and a strategy. Other terms used to describe peer learning include co-learning, cooperative learning, peer tutoring, peer-led instruction, peer-mediated instruction, peer evaluation, peer coaching, and reciprocal learning.</p> <p>For these Guidelines, peer learning can be divided into the following two categories:</p> <ol style="list-style-type: none"> 1. Cooperative learning: Peers learn alongside one another (i.e., reciprocal learning). | No specific guidelines were identified for this topic. | <ul style="list-style-type: none"> • Peer-led learning or cooperative learning may encourage individuals to share their first aid experiences, which may benefit the learning of others. When a peer shares insight or experience, they bring valuable authenticity to the subject matter, supporting the learning (e.g., in conflict contexts or working with vulnerable people). • Although peers bring value to the learning experience, they should not be considered a substitute for professional facilitators. • Where peers are encouraged to provide some form of facilitation (peer-led learning), they should not be viewed as interchangeable with professional educators or trainers. The peer relationship should enrich the learning experience and benefit both the learner and facilitator. | <ul style="list-style-type: none"> • While cooperative learning typically requires few resources to develop (human and financial), developing people to become effective peer facilitators can take time and effort, and care should be taken to do this sensitively. • Either cooperative or peer-led learning can be used with a variety of audiences where the influence of likeness is valued. Some examples include: <ul style="list-style-type: none"> ○ Young children (pre-school and elementary ages) ○ Aging populations ○ Those with a specific shared influence (new parents, grandparents/caregivers, homeless persons, those struggling with substance abuse, etc.) ○ Those living in similar conditions (rural, remote, conflict, etc.) • Engage peer facilitators in program development to ensure that the programs are connected with the content, approach, and audience. |

| Topic | Key Action | Introduction | Guidelines | Good Practice Points (sample) | Education Considerations (sample) |
|-----------------------|---|--|---|---|--|
| | | <p>2. Peer-led learning: Peers play a facilitator role and share their knowledge and experience with others.</p> <p>A peer is defined as someone from a “like group” who shares some (or all) of the following characteristics: gender, age, cultural background, religion, and socioeconomic circumstances. Peer learning is often used with youth or other specific audiences who may not recognize themselves (or their values and experiences) in a traditional facilitator. The familiarity of a peer can create new opportunities to share knowledge or change behaviour because the relationship is often based on trust and openness. It is especially beneficial to reach audiences who may be underserved by traditional forms of education.</p> | | | |
| Video Learning | Provide learners with skill demonstration videos ahead of face- | Video learning consists of individuals watching a video to learn about a | <ul style="list-style-type: none"> • If the learner has access to a personal mannequin, videos | <ul style="list-style-type: none"> • Video learning could be effective in situations where there would otherwise be no training. | <ul style="list-style-type: none"> • The opportunities to meet individuals’ learning needs are changing due to continuous |

| Topic | Key Action | Introduction | Guidelines | Good Practice Points (sample) | Education Considerations (sample) |
|-------------------------|--|---|--|---|--|
| | to-face sessions to improve the time spent with the facilitator. | <p>specific topic. This method is an easy way to address diverse audiences and provide them with standardized information.</p> <p>There are two basic approaches to video learning:</p> <ol style="list-style-type: none"> 1. Individuals watch a video and learn from it. 2. Individuals watch a video and apply what they learned using first aid equipment. | <p>can be an effective tool to learn CPR.</p> <ul style="list-style-type: none"> • Videos may encourage learners to respond to an emergency and start CPR or other first aid care. • Video learning may strengthen facilitator-led training but should not replace it. | <ul style="list-style-type: none"> • Video learning can provide a view of realistic scenarios which situate the first aid skill within the context of an emergency. | <p>advances in technology. Educators increasingly use social media and online learning, and therefore the role of videos has expanded as well. Consider which platforms your audience uses to consume content and what type of first aid education video will resonate with them.</p> <ul style="list-style-type: none"> • Use video learning to support face-to-face facilitation, but not to replace it. (Exceptions include refresh and retrain sessions or if face-to-face learning is not an option.) • Provide the opportunity for learners to practise what they see in the video. |
| Feedback Devices | Use automated feedback devices to teach first aid skills, such as CPR. | <p>Feedback devices are tools that provide feedback to the learner through auditory, visual, or physical (i.e., tactile) cues. For example, there are devices that give feedback on the depth and rate of chest compressions. These devices are most useful when tailored to how a learner best receives feedback. For example, an auditory-only device may be suitable for a learner with a visual impairment, but is less effective for one who is deaf or hard-of-hearing.</p> | No specific guidelines were identified for this topic. | <ul style="list-style-type: none"> • Devices that provide immediate feedback may be used during CPR training to improve the quality of performance. • Feedback devices may be used to improve learners' skills by providing individualized feedback in real time. • Feedback devices should be selected to serve the needs of the learners (e.g., selecting a device that provides visual feedback may be better suited for learners with hearing difficulties). | <ul style="list-style-type: none"> • Feedback devices may provide effective learning opportunities when a facilitator is absent. However, they may be less effective in contexts where learners respect or expect facilitator-led programming. • Consider the learner audience and their intended learning context (e.g., devices that may work for first aid providers may not fit the needs of professional responders.) • Train facilitators to set up the devices, introduce them to learners, monitor and support the feedback provided, and resolve any technical difficulties. |

| Topic | Key Action | Introduction | Guidelines | Good Practice Points (sample) | Education Considerations (sample) |
|-----------------------------------|---|---|---|---|---|
| <p>Refresh and Retrain</p> | <p>Provide opportunities for learners to maintain their knowledge and skills after completing an initial first aid education session.</p> | <p>“Refresh” refers to strengthening or reminding learners of first aid knowledge and skills, while “retrain” means re-learning skills that they may have forgotten after the initial educational experience. Methods can include face-to-face, online, or video learning, or a combination (see Blended Learning). A refresh and retrain strategy supports all learners in maintaining their first aid knowledge and skills over time.</p> | <ul style="list-style-type: none"> • Knowledge and skills decline dramatically over time, especially more than a year after completing an initial first aid education session. Refresh and retrain strategies should be considered to maintain first aid learning outcomes. • All methods reviewed (video learning, feedback devices, face-to-face learning, etc.) may be considered as appropriate refresh and retrain methods. • Refresh and retrain sessions may be delivered between three and six months after the initial educational experience. Waiting longer will lead to less effective learning. • While there is no recommended session length, refresh and retrain interventions of 45-minutes or less could be valuable. | <p>No specific good practice points were identified for this topic.</p> | <ul style="list-style-type: none"> • Plan to provide refresh and retrain opportunities three to six months after the initial education session to improve retention. • There is little evidence to suggest the most suitable method for implementing a refresh and retrain strategy. However, posters, flashcards, video lectures, feedback devices, and videos or animations viewed on mobile phones may effectively improve knowledge and skill retention. • Digital methods used to deliver refresh and retrain sessions can be scaled and made available to meet the needs of the learner (e.g., sending periodic text messages or emails with first aid tips to refresh learners’ knowledge.) |

Contexts For Learning

In addition to modalities, the Guidelines considered how location, environment, access to resources, and other local factors may influence how a topic is taught. Each of these contexts is included for the first time in 2020. It is important to recognize that these contexts can look very different for Canadian audiences compared to other countries and could even differ between different domestic regions. While we may not experience all contexts in Canada, we continue exploring the urban, rural, and remote learning environments.

| Topic | Key Action | Introduction | Guidelines | Good Practice Points (samples) | Education Considerations (samples) |
|-----------------|---|---|---|--|--|
| Conflict | Emphasize that first aid providers must consider their own safety and security before giving life-saving first aid care. | Conflict areas are common and ever-changing; preparing people for the injuries they may encounter in these situations is important across cultural, political, and societal divides. Any group that faces conflict situations will benefit from this type of first aid education. | <ul style="list-style-type: none"> • First aid education may be adapted to the type of conflict learners will experience. • Exposure to the relevant conflict, as well as practising the skills they will need, can be critical to the success of the first aid care learners will provide. | <ul style="list-style-type: none"> • First aid education within a conflict context should acknowledge that safety, security, and military tactical objectives (if applicable) often take priority over providing care. • First aid education should focus on the needs of the learners, such as the kinds of resources they have access to (they may not have a standard first aid kit) or the dangerous situations they are in when providing care. • Program designers should work together with learners (or those who represent them) to develop context-specific programs, rather than relying on a predetermined set of knowledge and skills. | <ul style="list-style-type: none"> • In general, there are three distinct conflict phases that education should cover: highly dangerous, medium safety, safe to act. • Emphasize the aim of the first aid technique, rather than the technique itself. For example, emphasize the need to stop bleeding, rather than how to tie a bandage. While this is true for any first aid education, this approach will help to address the kind of stress a learner might experience in a conflict context. • Emphasize that first aid providers must assess their own safety first. In conflict contexts, the ill or injured person plays a bigger role in responding to an emergency. For example, if the provider cannot reach the person, they can instruct the person to apply pressure to the wound. |
| Disaster | Develop the preparedness of individuals, families, communities, and emergency services to respond to disaster situations. | Disasters can be natural (earthquakes or flooding), man-made (explosions or chemical spills), or a combination of both (fires). The unexpected nature and | No specific guidelines were identified for this topic. | <ul style="list-style-type: none"> • First aid education should emphasize the hazards in different disaster settings, as well as what help might be available and how to access it. • First aid providers should be flexible and able to adapt to the disaster's | <ul style="list-style-type: none"> • Make time to explore the responses people might have to a disaster such as experiencing high emotions or filming it on camera. Discuss how to manage emotions and the positive or |

| Topic | Key Action | Introduction | Guidelines | Good Practice Points (samples) | Education Considerations (samples) |
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| | | <p>scale can affect large numbers of people and all aspects of a community. People in disaster situations often suffer injuries and require life-saving first aid. Communities with the confidence and willingness to act and the skills to provide care will be better prepared to respond to a disaster.</p> | | <p>context and any limitations they might face (such as reduced access to water or equipment).</p> <ul style="list-style-type: none"> • First aid education should focus on life-saving skills (e.g., putting pressure on a severe bleed) and the use of improvised equipment (e.g., using a shirt to stop the bleeding). It should also include content on recovery and minimizing further injury and the risk of infection. | <p>negative outcomes of behaviours.</p> <ul style="list-style-type: none"> • Concentrate on bleeding control, maintaining an open airway, and caring for shock. A focus on simple steps for stabilizing life-threatening conditions is paramount. • Emphasize the importance of infection prevention, especially as first aid supplies may not be readily available. |
| <p>Mass Casualty</p> | <p>Acknowledge that first aid providers can be essential to the survival and care of people injured in mass casualty incidents.</p> | <p>A mass casualty incident is an event that results in multiple injured people, outnumbering and overwhelming emergency medical services. In this context we include road traffic accidents, terror attacks, mass shootings, and natural disasters. While there are personal safety issues to consider, first aid providers who are first to the scene can provide life-saving care. Their contribution should be considered within official preparedness plans, and communities should be educated to act accordingly.</p> | <ul style="list-style-type: none"> • First aid providers trained in first aid skills may feel confident to provide first aid in a mass casualty incident. • Simulations are an educational tool that may be used to develop critical-thinking skills, awareness, and preparedness for a mass casualty incident among first aid providers and healthcare professionals. | <ul style="list-style-type: none"> • A lack of first aid equipment should not be a barrier to providing care; first aid providers should use whatever resources are available to them. • Filming a mass casualty incident is inappropriate and problematic, particularly if it blocks the path of professional responders. First aid education should raise awareness of this fact. • First aid providers should learn <u>Bleeding</u> control as it is a key skill for a mass casualty context. | <ul style="list-style-type: none"> • First aid education should prepare learners for the type of mass casualty incidents they are most likely to encounter. For example, in areas where there are frequent motor vehicle collisions, learning should reference these and identify the level and availability of emergency services. • In preparing people for events such as terror attacks, include individual safety measures and local regulations in the first aid education. |

| Topic | Key Action | Introduction | Guidelines | Good Practice Points (samples) | Education Considerations (samples) |
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| <p>Water Safety (Aquatics)</p> | <p>Develop a culturally inclusive program with key water safety messages that address local risk factors.</p> | <p>Rivers, lakes, pools, seas, and oceans provide people with their livelihoods, places of leisure, and vital resources for daily life. However, drowning is the third leading cause of unintentional injury-related death worldwide. Over 320,000 people die from drowning annually. Over 90% of these deaths occur in low- and middle-income countries where there is less access to drowning prevention and learn-to-swim programs and people carry out daily activities on the water. Children are disproportionately affected by drowning, and in many countries drowning is the leading cause of death in children between the ages of one and four.</p> | <ul style="list-style-type: none"> • Delivering water safety messages to children should be part of a layered approach that includes engaging and educating caregivers on drowning prevention with a particular focus on the importance of close supervision. • When developing and teaching water safety messages, Stallman et al.'s water competencies concept should be integrated into activities that promote learning a broad spectrum of physical and mental aquatic competencies. • Once evaluated as appropriate for the local context, the International Task Force on Open Water Drowning Prevention's guidelines can be considered to develop water safety messages. | <ul style="list-style-type: none"> • The development of water safety messages should be based on evidence of local risk factors for drowning and be mindful of the risk-reduction measures to implement at each phase of a drowning event. • Messages should be developed and delivered using appropriate theories to change behaviours. • Owing to the lack of evidence on the effectiveness of water safety messaging, organizations should consider developing an evaluation framework that allows them to monitor the effects of the messaging on children and caregivers' behaviour when exposed to an aquatic environment. This framework should ensure the messaging does not increase risk-taking behaviour. | <ul style="list-style-type: none"> • Water Safety Education should be developed in the framework of the Haddon Matrix. This involves evaluating personal, equipment, and environmental factors associated with aquatic activities, which in turn allows you to determine the knowledge and skills learners need to reduce their risk, stay safe during aquatic events, and survive aquatic incidents. This approach supports the ongoing development of safety-conscious attitudes and safe behaviours in, on, and around the water. • Create educational opportunities that engage the learner with content appropriate to the developmental milestones (mental and physical) of the learner. • Introduce and reinforce skills and knowledge using a variety of instructional approaches to engage the learner in decision-making activities to apply risk reduction strategies using water safety education and skills. • Apply water safety education to the variety of aquatic environments that the learner is likely to encounter (e.g., flat water, moving water, cold water, frozen water, swimming pools, decorative water features). |

| Topic | Key Action | Introduction | Guidelines | Good Practice Points (samples) | Education Considerations (samples) |
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| Remote | Differentiate first aid education according to the learners' context (e.g., the program for those living in a remote community should differ from one aimed at people visiting a remote area). | Examples of remote contexts include wilderness environments, isolated communities, and rural areas with limited resources. Advanced medical care may be limited or take a long time to access in this context. Additionally, individuals and communities may experience longer wait times for medical help and have to consider extra factors—such as environmental hazards—compared to those living in urban areas. | No specific guidelines were identified for this topic. | <ul style="list-style-type: none"> • First aid programs should reflect the differences between visiting and living in a remote location. • Where possible, learners should be involved in the development of educational content. • If learners plan to visit a remote place, they should be advised to plan their route, as well as inform family and friends of where they are going and when they expect to return. | <ul style="list-style-type: none"> • Base educational content for remote contexts on the risks posed in those specific environments. For example, where medical assistance is limited or requires longer travel times, learners need to know how to prioritize and provide care for life-threatening injuries. • Draw attention to context-specific illnesses such as <u>Hypothermia</u>, <u>Hyperthermia</u>, and <u>Altitude Sickness</u>. Provide general advice such as avoiding alcohol, drinking plenty of water, and developing ways to protect against the weather (e.g., by building a shelter or starting a fire) to help learners prepare for such conditions. • Encourage learners to improvise when they do not have appropriate first aid equipment. Help them to understand the purpose of the equipment, rather than the need for something specific. For example, if they are in a cold environment and do not have a blanket, encourage them to think about building a shelter or a fire instead. |
| Public Health Emergency | Develop an understanding of how to offer first aid knowledge and apply skills safely during times of a public health emergency such | COVID-19 is transmitted from person to person through close contact by airborne droplets. It is possible that a person could catch the virus by touching a surface or | No specific guidelines were identified for this topic. | <ul style="list-style-type: none"> • Proper use of personal protective equipment (PPE) is extremely important; improper use could potentially increase the risk of infection, especially when providing first aid care. | <ul style="list-style-type: none"> • Learners should be advised that they must be wearing a face mask or face covering and gloves to enter the classroom and complete training if they are unable to maintain a two-metre (six-foot) distance between |

| Topic | Key Action | Introduction | Guidelines | Good Practice Points (samples) | Education Considerations (samples) |
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| | <p>an outbreak, epidemic, or pandemic.</p> | <p>object on which the virus is found, and then touching the mouth, nose, or eyes. The most effective defense against the transmission of this disease is maintaining a two-metre (six-foot) distance between individuals and the use of gloves and a face mask/covering. Providing first aid during the COVID-19 pandemic can raise questions around safety and transmission. Outlined to the right are the first aid protocols that should be followed when attending to an ill or injured person.</p> | | <ul style="list-style-type: none"> • It is recommended that first aiders take training on preventing disease transmission that includes how and when to use PPE, donning and doffing PPE, and disposing of all PPE. • Maintain a physical distance of two metres, unless it is medically necessary to be near the person. | <p>themselves and all others in the space at all times.</p> <ul style="list-style-type: none"> • Easy, visible access to sanitization stations must be provided near the classroom space. Sanitization stations must include a space to wash hands (either with soap and water or an alcohol-based hand rub (ABHR) with at least 70% alcohol) and paper towels instead of cloth towels. • Have learners reduce exposure by working with the same partners and groups for the entire class or course. Avoid mixing up groups and partners for activities. |

Clinical

1.0 General Approach

| Topic | Current Guidelines | 2020 Canadian Guidelines | Good Practice Points (GPP) | Educational Considerations |
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| De-escalation Techniques | Nothing noted in 2016 Guidelines | <ul style="list-style-type: none"> Identify individuals and situations that may become dangerous due to other people's behaviour. Call for help or extra support when needed. Decide to stop care due to potential or imminent danger. | <ul style="list-style-type: none"> Practice first aid in emotionally stressful contexts to develop competencies. Learn means to de-escalate volatile situations. Anticipate stress due to context and recognize cues given by ill/injured people or bystanders. | <ul style="list-style-type: none"> Violence at all levels can disturb healthcare provision when services are most needed, be it during first aid/stabilization or referral and access to healthcare facilities. Organizations need to undertake a comprehensive assessment of situations where trainers or volunteers might encounter violent or aggressive behaviour and provide training on de-escalation techniques. Potential situations might include training within prisons or mental health facilities. |
| Oxygen Administration | Nothing noted in 2016 Guidelines | <ul style="list-style-type: none"> The use of supplemental oxygen should be limited to first aiders with specific training in oxygen administration. Supplemental oxygen should only be given to a patient with normal, spontaneous breathing. Until emergency medical care is available, it is reasonable for specially trained first aiders to provide supplemental oxygen to scuba divers suffering from decompression illness. Giving supplemental oxygen by a specifically trained first aid provider for patients with advanced cancer having dyspnea and/or hypoxemia may be reasonable. When oxygen is given, it is ideal to titrate oxygen supplementation to keep the patient's SpO₂ at 94 percent (at sea level) if the first aid responder has been trained in transcutaneous | No specific good practise points were identified for this topic. | <ul style="list-style-type: none"> Oxygen administration may not be feasible for some learners, depending on their line of work or activities in which they participate. For example, a rural rescue team may not be able to carry the required equipment to provide supplementary oxygen and, therefore, are less likely to use this skill. Stress the importance of understanding the logistical aspects of the equipment, including how to maintain and store it, as well as how to care for the compressed gas cylinders. Learners should also |

| Topic | Current Guidelines | 2020 Canadian Guidelines | Good Practice Points (GPP) | Educational Considerations |
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| | | <p>pulse oximetry and has a proper tool for measurement.</p> <ul style="list-style-type: none"> • Until emergency medical care is available, it is reasonable for specially trained first aiders to provide supplemental oxygen to patients who are suffering from carbon monoxide exposure. | | <p>be aware of and follow any local regulations around testing and inspections.</p> <ul style="list-style-type: none"> • Emphasize that it is critical that learners take extra precautions when using oxygen administration equipment as it can be a fire hazard. Learners must complete the necessary training on how to use the equipment if it is relevant to them. • The SpO₂ reading from a pulse oximetry reading often determines the use of oxygen. Therefore, learners may be required to complete additional training on the use of pulse oximetry equipment. • Provide time for learners to practise using the different devices associated with administering oxygen, such as nasal prongs, simple masks, and partial rebreather masks. • Develop scenarios that assess learners on their ability to: <ul style="list-style-type: none"> ○ Determine when supplemental oxygen is indicated. ○ Identify the potential benefits of oxygen administration. ○ Demonstrate how to administer oxygen safely. ○ Store oxygen administration equipment properly. |

2.0 Medical

| Topic | Current Guidelines | 2020 Canadian Guidelines | Good Practice Points (GPP) | Educational Considerations |
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| Poisoning | <p>For ingestion poisoning:</p> <ul style="list-style-type: none"> The casualty should preferably be laid on their left side. <p>For gaseous poisoning:</p> <ul style="list-style-type: none"> <i>Flammability warning:</i> In rooms which are potentially filled with carbon monoxide, all sources of ignition such as naked flames, electrical equipment, oxidizing chemicals, and smoking tobacco products should be prevented. Move the casualty out of the area with gas immediately, but only if this can be done without endangering the first aid provider. In most cases the rescue has to be carried out by professional rescue service. Only trained first aid providers should administer oxygen to casualties of carbon monoxide and carbon dioxide poisoning. | <ul style="list-style-type: none"> Poisoning occurs when a person is exposed to a substance that can damage their health or endanger their life. Most poisons are swallowed or inhaled; however, they can also be injected or absorbed through the skin. Many poisonous substances are found in homes and workplaces. Examples include some cleaning products, illicit drugs, medications, and certain plants. Worldwide, international organizations are working to remove toxins such as lead, mercury, and asbestos from paint and other building supplies. | <ul style="list-style-type: none"> The first aid provider should stop or limit further effects of the poison by stopping continued exposure. In the cases of inhalation of toxic gas, the person should be removed from the area, but only if it is safe for the first aid provider to do so. If life-threatening conditions are present, the first aid provider should access emergency medical services (EMS) and start <u>CPR</u> or other first aid as necessary. If only non-life-threatening conditions are present, the first aider should access and follow the instructions of the poison control centre (or local equivalent) or EMS. | <ul style="list-style-type: none"> Establish with learners what substances and sources are most likely to lead to poisoning in their context, and discuss ways to reduce the likelihood of poisoning. For example, discuss living or work conditions and how to store harmful substances. Give learners opportunities to assess danger through photos or scenarios, for example of a chemical spill or a gas-filled room. Discuss what signs they should look for. Explore how they keep themselves safe. This may be particularly relevant to some workplaces. Tailor education to specific learning needs. For example, child first aid courses aimed at parents and care providers may require more content on prevention. |
| Breathing Difficulties | <p>The 2016 Guidelines only included considerations related to asthma under this topic.</p> | <ul style="list-style-type: none"> First aid providers may help the person to sit upright and lean forward. If the person is experiencing severe breathing difficulties (as well as a change in mental status and poor perfusion) the first aid provider should access emergency medical services (EMS) and continue to observe and assist the individual until help arrives. In certain cases, a specially trained first aid provider can give supplementary oxygen to the person having breathing difficulties. | <ol style="list-style-type: none"> Help the person into a comfortable position (usually seated) and reassure them. Help them to use their medication if they have any. Loosen any tight clothing. Access EMS immediately if: <ul style="list-style-type: none"> the person's medication is ineffective. the person is experiencing severe breathing difficulties. | <ul style="list-style-type: none"> Educators should be mindful of the cultural, gender, and age-based factors that may influence learners' understanding of breathing difficulties and severity. Ensure first aid program content is inclusive. Non-emergency medical support services can treat breathing difficulties that occur slowly over time. First aid education should |

| Topic | Current Guidelines | 2020 Canadian Guidelines | Good Practice Points (GPP) | Educational Considerations |
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| | | | <ul style="list-style-type: none"> ○ the person has a change in mental status, such as confusion, aggression or unresponsiveness. ○ the person’s breathing becomes slow. | <p>include advice about the local options available.</p> <ul style="list-style-type: none"> ● In remote areas, it may be beneficial to drive towards the nearest medical facility and meet the EMS vehicle en-route. First aid program designers should know the availability and response time of pre-hospital services in their areas. Education should emphasize that early recognition of potentially time-critical situations is essential. |
| <p>Asthma Attack</p> | <ul style="list-style-type: none"> ● First aid providers may help the person to sit upright leaning forward. ● It is reasonable to expect that first aid providers are familiar with the commonly used bronchodilator inhalator devices and able to assist a person in using these devices if they experience breathing difficulties. ● A first aid provider who is carrying a bronchodilator inhaler and specifically trained to use it may administer the bronchodilator at their discretion, if local regulations allow this. | <ul style="list-style-type: none"> ● People with breathing difficulty should be moved to a comfortable position (usually sitting), and any restrictive clothing should be loosened. ● A first aid provider familiar with the commonly used bronchodilator inhaler devices (inhaler) may assist a person in using the person’s own inhaler if local regulations allow. ● A first aid provider specifically trained may administer a bronchodilator at their discretion, if local regulations allow. | <ul style="list-style-type: none"> ● Specifically-trained first aid providers can give supplementary oxygen to a person having an asthma attack, if local regulations allow this. If the person has no inhaler or the inhaler is ineffective, or if the person is experiencing severe breathing difficulties (change in mental status, slow and less noisy breathing), the first aid provider should access emergency medical services (EMS) and continue to observe and assist the person until help arrives. ● The first aid provider should move the person away from things that may be triggering the attack, such as smoke or dust. | <ul style="list-style-type: none"> ● In both high- and low-resource settings, a person with asthma may not have an inhaler with them. Give learners the opportunity to practise what to do when there isn’t an inhaler available. This may include actions to calm the person or help them breathe more easily, such as loosening clothing and helping them to sit up. You may also move the person away from the trigger causing the asthma attack (such as smoke). ● In areas where EMS services are extremely limited or non-existent, individuals should learn strategies that can help to ease breathing until the attack passes. ● Check legal restrictions that govern the help first aid providers can give and educate within these. If necessary, |

| Topic | Current Guidelines | 2020 Canadian Guidelines | Good Practice Points (GPP) | Educational Considerations |
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| | | | | include these laws in the educational content. |
| Croup | <ul style="list-style-type: none"> The child may lie in any position that is comfortable for them and ideally enables easy breathing. If there is a significant shortness of breath, EMS should be activated, otherwise the child should be taken to a healthcare provider or medical doctor. | <ul style="list-style-type: none"> The child may lie in any position that is comfortable and enables easy breathing. If there is a significant shortness of breath, advanced medical care should be accessed, otherwise the child should be taken to their regular healthcare provider. | No specific good practise points were identified for this topic. | No specific educational considerations were identified for this topic. |
| Chest Pain | <ul style="list-style-type: none"> Patients experiencing chest pain, believed to be cardiac in origin, should chew 1 adult or 2 low-dose aspirins while waiting for health-care professional assistance to arrive, unless there is a contraindication, such as an allergy or bleeding disorder. | <ul style="list-style-type: none"> If a heart attack is suspected, emergency medical services (EMS) should be accessed immediately. While waiting for EMS to arrive, the person suspected of having heart attack should take a single oral dose of 150–300 mg chewable aspirin except in the following cases: there is a known reason that the medication would cause the person harm (e.g., they are allergic or have a bleeding disorder), or the person takes aspirin regularly and has just taken the recommended dose. The first aid provider should help the person get into a comfortable position (usually semi-sitting); the person should refrain from physical activity. | <ul style="list-style-type: none"> If the person has medication, is diagnosed with angina, and is showing signs of acute chest pain, the first aid provider should help them take their medication. The medication should take effect within a few minutes. Accessing medical care should always be considered. Urgent access is necessary if the pain is intense, the person has shortness of breath, the person is clammy, pale, or has a bluish colour to their skin, nails, or lips, or if the pain does not subside after a few minutes. If EMS is delayed, get an automated external defibrillator and keep it close to the person in case it is needed. If trained to do so and local protocols allow, the first aid provider may give the person | <ul style="list-style-type: none"> In places with ambulances, EMS can provide treatment during transport to the hospital, which can improve the person's outcomes. Be aware of the recommended medications available in your region or jurisdiction, for example glyceryl trinitrate for angina or aspirin for a heart attack. Additionally, be aware of the laws surrounding whether a first aid provider can assist with or administer medication. Emphasize that sitting in a comfortable position eases the strain on the heart, and if the person collapses, they are less likely to injure themselves. |

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| | | | <p>aspirin and instruct them to chew it.</p> | |
| <p>Stroke</p> | <ul style="list-style-type: none"> • Use of a stroke assessment system, such as FAST, should be employed. <ul style="list-style-type: none"> ◦ Face, Arms, Speech, Time • First Aid providers should note the time of stroke symptoms/signs onset. | <ul style="list-style-type: none"> • First aid providers should use a stroke assessment system, such as FAST, to recognize the symptoms of a stroke. | <ul style="list-style-type: none"> • Mild stroke-like symptoms that last less than a few minutes indicate a transient ischemic attack (TIA) or “mini stroke”. The person experiencing these symptoms should seek advanced medical care as soon as possible to decrease the risk of more permanent outcomes. • For a person showing stroke signs and/or experiencing stroke symptoms, EMS must be accessed as soon as possible. • First aid providers should help the person into a comfortable position. There is limited evidence in favour of supine position or sitting position. | <ul style="list-style-type: none"> • Learners’ access to care, available transport, and distance to the nearest medical facility will vary depending on their local context. Work with learners to define what EMS access looks like in their community. In some settings, an ambulance will arrive within minutes after EMS is called, while in others the ill or injured person may need to wait for a medical professional to come to them. In some cases, the first aid provider must transport the person to the medical facility by car, boat, or other means. • A quick response time is critical to caring for someone who is having a stroke. Understanding the EMS in their community builds learners’ confidence to act quickly and determine the fastest method to transport the person to a medical facility. • In many homes there are ways to measure blood glucose because a family member has diabetes. If possible, the first aid provider may be able to perform a blood glucose test for the person who has had a stroke and may use a stroke scale assessment including glucose measurement in relation with the EMS system. |

| Topic | Current Guidelines | 2020 Canadian Guidelines | Good Practice Points (GPP) | Educational Considerations |
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| Dehydration | <p>First aid providers could use three percent to eight percent carbohydrate-electrolyte drinks for exertion-related dehydration.</p> <p>If three percent to eight percent carbohydrate-electrolyte drinks are not available or not tolerated, alternative beverages for rehydration include water, 12 percent carbohydrate-electrolyte solution, coconut water, two percent milk, tea, tea-carbohydrate-electrolyte, or caffeinated tea beverages.</p> | <ul style="list-style-type: none"> • First aid providers should rehydrate the person using either commercially prepared oral rehydration salts (ORS) or a pre-prepared salt package that complies with the World Health Organization's recommendations for ORS solutions. • First aid providers could use three to eight percent carbohydrate-electrolyte drinks for exertion-related dehydration. If these are not available or not tolerated, alternative beverages include water, 12 percent carbohydrate-electrolyte solution, coconut water, two percent milk, tea-carbohydrate-electrolyte drinks, and caffeinated or non-caffeinated tea. | <ul style="list-style-type: none"> • Emergency medical services (EMS) should be called if the person's responsiveness is altered (trouble waking up, confusion) or if the person becomes unresponsive. • First aid providers should seek medical advice if they are in doubt, or if the person: <ul style="list-style-type: none"> ○ Is a baby or older adult. ○ Loses more fluid than they take (e.g., severe vomiting). ○ Urinates very little (especially if the urine is a dark colour) or does not urinate at all. ○ Has fever or signs of heat exhaustion. (See Hyperthermia.) | <ul style="list-style-type: none"> • Ask learners to identify those most at risk of dehydration in their own lives and how to help to prevent it. • Help learners recognize that dehydration can also occur in cold settings when people wear too many layers and overexert themselves. • Provide learners with visual, written, or verbal information about how to recognize dehydration. |
| Abdominal Pain | <p>Nothing noted in 2016 Guidelines</p> | <ul style="list-style-type: none"> • Paracetamol may be effective to relieve mild period pain. Non-steroidal anti-inflammatory drugs (ibuprofen, diclofenac, naproxen, etc.) may also be effective, however, they may have side effects (e.g., upset stomach or conflict with other medications). The person should take painkillers with regularity on the days with pain according to the recommended dose and time interval. | <ul style="list-style-type: none"> • Even mild cases of abdominal pain may require a medical examination although the need is not necessarily urgent. • Reassurance and ensuring the person is comfortable are important: lying on the ground with both legs up can relieve pain. • A hot water bottle or heated wheat bag held against the abdomen may relieve the pain, anxiety, or nausea. | <ul style="list-style-type: none"> • Incorporate prevention education around food hygiene and hand washing. • Explore different causes of abdominal pain and focus on which instances are considered emergencies and when medical care is required. • Draw on learners' own experiences of stomach pain to contextualize their learning. |
| Unresponsive-ness | <ul style="list-style-type: none"> • First aid providers should start CPR if needed. Be aware that sometimes a | <ul style="list-style-type: none"> • If a person is found motionless, usually lying on the ground and/or in an unusual position, | <ul style="list-style-type: none"> • The level of responsiveness can be determined with the AVPU scale: Alert—Verbal— | <ul style="list-style-type: none"> • A person can become unconscious suddenly (e.g., due to a stroke, electrocution, or |

| Topic | Current Guidelines | 2020 Canadian Guidelines | Good Practice Points (GPP) | Educational Considerations |
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| | <p>person in cardiac arrest may initially present a short seizure-like activity.</p> <ul style="list-style-type: none"> Consider other causes such as poisoning, diabetic emergency, head injury, etc. First aid provider should put the person in the recovery position and call for EMS. <p>In 2016 this topic was listed as “Unresponsive and Altered Mental States.”</p> | <p>unconsciousness should be assumed and checked immediately:</p> <ul style="list-style-type: none"> Shout and shake the person gently Open the person’s airway Check for normal breathing for no longer than 10 seconds If the person does not breathe normally, start chest compressions (see Resuscitation) <ul style="list-style-type: none"> If normal breathing is present, but the person does not respond, he or she is very likely unconscious If the person reacts only to Pain, or is Unresponsive, airways should be kept opened: <ul style="list-style-type: none"> If cervical spine injury is suspected, by jaw thrust only, if not: <ul style="list-style-type: none"> By head tilt-chin lift maneuver or by establishing recovery position, Checking regularly whether normal breathing is still present | <p>Pain—Unresponsive, describing what kind of stimulus the patient reacts to, if any.</p> | <p>head injury) or gradually (e.g., in certain poisonings or progressive hyperglycemia).</p> <ul style="list-style-type: none"> An altered mental status may precede unconsciousness, and the first aid provider may intervene before loss of consciousness occurs, as in cases of hypoglycemia. An altered mental state may be a forerunner of unconsciousness, but the person may also experience normal responsiveness or even hyperactivity following an altered mental state. |
| Feeling Faint | <ul style="list-style-type: none"> If the person is breathing normally but remains unresponsive, maintain a patent airway by considering head-tilt/chin-lift, or recovery position. If there is abnormal or no breathing, resuscitation should be started immediately. An unresponsive person should be rapidly assessed for breathing/signs of circulation and perfusion (if trained to do this assessment). If the person is face down and unresponsive (prone position), the first aid provider should turn their face up (supine position) to check breathing. The first aid provider should activate EMS for a person who loses | <ul style="list-style-type: none"> First Aid providers should assist the person in doing physical counterpressure manoeuvres. While in a safe and comfortable position, people feeling faint can perform counterpressure manoeuvres on their own to lessen the feeling. | <ul style="list-style-type: none"> A person who is feeling faint should be helped into a safe and comfortable position, such as sitting or lying on the floor, so they cannot fall and to lessen the faint feeling. The first aid provider should immediately assess an unresponsive person’s breathing and circulation. Advanced medical care should always be accessed for a person who loses consciousness as the cause could range from minor to life-threatening (see Diabetic Emergency, Stroke, Head | <ul style="list-style-type: none"> Fainting is a common occurrence, particularly in warm climates and in areas with little fresh air. Ask learners for examples of when they have felt faint. What was the temperature? Were they hungry? Tired? Stressed? Individuals who regularly encounter or interact with pregnant women should learn how to support and lay the woman on her left side if she is feeling faint. |

| Topic | Current Guidelines | 2020 Canadian Guidelines | Good Practice Points (GPP) | Educational Considerations |
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| | <p>consciousness as causes can range from not serious to life-threatening.</p> <ul style="list-style-type: none"> • First aid providers should consider that any person who loses consciousness may have had a stroke or seizure, or may have low blood sugar or another serious condition. | | <p><u>and Spine Injury, and Poisoning.</u>)</p> | |
| Earache | Nothing noted in 2016 Guidelines | <ul style="list-style-type: none"> • First aid providers should provide paracetamol for pain relief. | <ul style="list-style-type: none"> • Medical advice should be sought when there is fever, fluid draining from the ear, vertigo, or loss of or decreased hearing associated with ear pain. • The person should seek medical advice if the symptoms don't get better (or get worse) within 48 hours. • A source of heat can be held against the affected area and may reduce pain. | <ul style="list-style-type: none"> • Individuals who look after children or spend time in water contexts (e.g., public swimming pools) could benefit from learning about earaches. |
| Sore Throat | Nothing noted in 2016 Guidelines | <ul style="list-style-type: none"> • Paracetamol should be considered to reduce the pain caused by a sore throat. • Nonsteroidal anti-inflammatory drugs (such as aspirin and ibuprofen) can be used as second-line treatment for sore throat, should paracetamol be ineffective. • A single nighttime dose of honey may have a small positive effect on a cough and sleep in children over a year old. | <ul style="list-style-type: none"> • The first aid provider should encourage the person to drink water in small amounts. • Harsh or high-pitched breathing sounds, the inability to swallow, or drooling may indicate epiglottitis. All cases of epiglottitis should receive urgent medical care. • If a first aid provider suspects the person has epiglottitis, they should help the person rest in a comfortable position until they can access medical care. | <ul style="list-style-type: none"> • Emphasize that while sore throats are usually not serious, they may be a symptom of a more severe condition and learners must recognize the situations in which to access advanced medical care. • It can be difficult for people to identify the cause of a sore throat (viral, bacterial, or environmental). Early actions, such as giving the ill person a drink, can help to eliminate some causes and help the learner to identify if the condition is more serious. |

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| | | | | <ul style="list-style-type: none"> Encourage learners to look for other signs and symptoms, and to consider causes, such as whether the person has been near another person who has a cold or flu, as this will help to inform treatment. |
| Headache | Nothing noted in 2016 Guidelines | <ol style="list-style-type: none"> Reduce anything that may worsen the headache (such as direct sunlight or noise). Advise the person to rest in a dark, quiet room with an ice-pack or cold towel applied to the affected area. Seek medical care if : <ul style="list-style-type: none"> The pain follows a Head and Spine Injury. The person is also showing signs of a <u>Stroke</u>. The person is experiencing a severe headache for the first time. The headache is severe and happens very quickly with no known cause, and the person feels sick. The headache is serious and the person also has a fever, a sore or stiff neck, or drowsiness, or is vomiting. The headache started suddenly within the last three months of pregnancy. | <ul style="list-style-type: none"> Paracetamol and other painkillers should only be used if a headache results from minor causes such as flu, tiredness, or stress, but never in emergency situations. Applying an ice pack or cold compress to the head or back of the neck may provide relief from migraine symptoms. Bright lights (e.g., from an office or phone screen) may make a headache or migraine worse. If the individual with either condition is sensitive to light, they should sit or lie in a dark or dimly lit room. Individuals with a headache should get fresh air, enough sleep, regularly drink water (see <u>Dehydration</u>), and take time to relax. | <ul style="list-style-type: none"> Emphasize rest, hydration, relaxation techniques, and a cool cloth on the forehead or neck as effective first aid support for mild headaches. Emphasize that while a headache is usually not serious, it may be a symptom of a more severe condition and learners must recognize the situations in which to access advanced medical care. |
| Hiccups | Nothing noted in 2016 Guidelines | <ul style="list-style-type: none"> Harmless home remedies such as holding the breath for a short time, breathing into a paper bag, sipping ice-cold water, swallowing some granulated sugar, biting into a lemon, or tasting vinegar may be effective and could be attempted. | <ul style="list-style-type: none"> The use of gripe water is not recommended. A person with hiccups should seek immediate medical help if hiccups last longer than 48 hours or if they have other symptoms in combination | <ul style="list-style-type: none"> This topic does not usually form part of first aid education, however it may be useful for some audiences such as school nurses, new parents, or other people who care for children. |

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| | | | <p>with hiccups, such as chest pain, weakness in their limbs or face, headache, or trouble keeping their balance.</p> | <ul style="list-style-type: none"> Define what a hiccup is and how it happens, and discuss different safe home remedies. |
| Back Pain | Nothing noted in 2016 Guidelines | <ul style="list-style-type: none"> Paracetamol does not relieve the symptoms of lower back pain but may provide short-term relief for osteoarthritis. Nonsteroidal anti-inflammatory drugs (NSAIDs) may be as effective as paracetamol at relieving acute lower back pain. Heat wrap therapy may provide some short-term pain relief and reduce disability in those with a combination of acute and subacute low back pain. There is insufficient evidence on the effects of applying a cold source to reduce low back pain. | <ul style="list-style-type: none"> The person should sit or lay down in the position most comfortable to them. | <ul style="list-style-type: none"> Emphasize that lower back pain has many different causes (some are common and mild while others can be serious). Helping the person to access professional medical advice is an important first aid action as it will help them learn how to manage their pain. Use scenario-based learning to practise recognizing and managing back pain (e.g., participants could recognize that someone who has back pain may have been involved in a motor vehicle collision in the past). Learners may have different beliefs as to what lower back pain is and what causes it. Facilitate a discussion to better understand these beliefs. |
| Fever | <ul style="list-style-type: none"> If the person is suffering from fever, paracetamol or acetaminophen should be given to them. Paracetamol or acetaminophen can be combined with sponging with tepid water (from 29°C to 33°C) as long as it does not cause the person to get upset or to start shivering. Do not use cold water for sponging as this results in more discomfort. | <ul style="list-style-type: none"> Paracetamol or acetaminophen should be given to the person with a fever. Paracetamol or acetaminophen should be combined with sponging the person with warm water (29°C to 33°C, or 84.2°F to 91.4°F) as long as it does not make them upset or start to shiver. When sponging, cold water should not be used as it will cause more discomfort. | <ul style="list-style-type: none"> When sponging, cold water should not be used. It can either cause the blood vessels to constrict and prevent the body from giving off heat or cause the person to produce more heat by shivering. A person with a fever requires immediate care if they also have: | <ul style="list-style-type: none"> Since fever can indicate a more serious illness or trigger a <u>Seizure</u>, it is important for learners to understand their role in looking out for signs that indicate the need to access medical care. Discuss clothing in the context of your climate—what clothing or layers will make the person most |

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| | <ul style="list-style-type: none"> • Do not use cold water for sponging as this can have the opposite reaction, i.e., heat the body more. • The infant, child, or adult should be referred to a healthcare professional as soon as possible, if the: <ul style="list-style-type: none"> ○ infant under two months of age has fever ○ children up to two years of age has fever higher than 39°C or 102.5°F ○ person is over 65 years of age ○ person suffering from fever has cancer, a weakened immune system, sickle cell disease, medications which affect immune system ○ fever does not decrease ○ fever is accompanied by a rash ○ fever is accompanied with a persistent cough ○ fever is accompanied with abdominal pain • The person requires immediate care in cases of: <ul style="list-style-type: none"> ○ fever with change in mental status ○ fever with difficulty breathing ○ fever with headache or stiff neck ○ fever with severe abdominal pain ○ fever with any signs of shock • Persons with fever should rest and drink fluids to replace the loss of fluids due to sweating. • Persons with fever should dress lightly and one should avoid covering them with excessive blankets or coverings. | | <ul style="list-style-type: none"> ○ A rash ○ A persistent cough ○ A change in mental status ○ A headache or stiff neck ○ Difficulty breathing ○ Severe abdominal pain ○ Signs of shock • A person with a fever should rest and drink fluids to replace the loss caused by sweating. • A person with a fever should dress lightly, and the first aid provider should avoid layering them with excessive blankets or coverings. | <p>comfortable and not cause them to overheat or feel cold?</p> <ul style="list-style-type: none"> • Consider which fluids will best keep the person hydrated and cool (e.g., a baby should have their breast or bottle milk while an adult will benefit more from cool water). |

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| Seizure | <ul style="list-style-type: none"> • First aid providers may place a person experiencing a seizure on the floor to prevent them from being injured. • Once the seizure has ended, first aid providers should assess the airway and breathing and treat accordingly. | No specific guidelines were identified for this topic | <ul style="list-style-type: none"> • Protect the person from harm by moving any nearby objects that may hurt them. Avoid moving the person unless they are in immediate danger (e.g., they are in oncoming traffic). • Place soft padding under the person's head to protect it. Remove eyeglasses and loosen any restrictive clothing from around their neck. Do not restrain the person. • Access emergency medical services (EMS) or the next available higher level of care if the person has hurt themselves, it is the person's first seizure, the seizure lasts for more than five consecutive minutes, or they have repeated unexpected seizures. If further care is not available, follow the first two bullet points above as this will help the person. • Note the start and stop time of the seizure, as well as if it reoccurs. Communicate this information to EMS if available. • When the episode is over, check the person's breathing. If they are breathing normally, move them on to their side and ensure their airway is open. If they have irregular breathing, see Unresponsiveness or the | <ul style="list-style-type: none"> • Address any misconceptions about epilepsy and seizures to reduce stigma and prejudice. • Discuss learner's experiences with seizures and address any barriers to providing care. • Acknowledge common mistakes when caring for a person experiencing a seizure, such as trying to: <ul style="list-style-type: none"> ○ Open the person's mouth ○ Put something in the person's mouth ○ Restrain the person |

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| | | | <p><u>Adult or Child, Infant, and Neonatal</u> CPR sections.</p> <p>Notes</p> <ul style="list-style-type: none"> • Do not put anything in the person’s mouth. • If you do not know the person, look for any medical information they may have on them, such as a medical bracelet with details of their condition, before accessing help. • If present, ask a family member or caregiver if the person has any anti-seizure medication. There are many ways this medication can be administered, including orally, a spray in the nose, an injection, or rectally. Assist the caregiver if you feel comfortable doing so. • Protect the person’s dignity. For example, move bystanders along or cover any signs of accidental urination. • If the person has a mild seizure, stay calm and keep the person safe. Stay with them until the seizure has passed. <p>Babies and Children</p> <ul style="list-style-type: none"> • In addition to the steps above, check the baby or child’s temperature. If they are too hot, cool them by | |

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| | | | <p>removing any excess clothing and expose them to fresh, cool air. Treat any <u>Fever</u> if necessary.</p> | |
| Diabetic Emergency | <ul style="list-style-type: none"> • First aid providers should use 15 g to 20 g glucose tablets for treating symptomatic hypoglycemia in conscious individuals. • First aid providers should use 15 g to 20 g glucose tablets for treating symptomatic hypoglycemia in conscious children and infants. • Glucose may be repeated if symptoms persist after 15 minutes. • If glucose tablets are not available, various forms of dietary sugars such as Skittles, Mentos, sugar cubes, jellybeans, and orange juice can be used to treat symptomatic hypoglycemia in conscious individuals. • If uncertain whether the symptoms displayed are for hypoglycemia or hyperglycemia, it is reasonable to treat for hypoglycemia. | <ul style="list-style-type: none"> • 15 g to 20 g of glucose tablets should be used to treat symptomatic hypoglycemia in conscious adults, children, and infants. • Glucose should be repeated if symptoms continue after 15 minutes. • If glucose tablets are unavailable, other forms of dietary sugars such as candy (e.g., jellybeans, Mentos), sugar cubes, or orange juice may be used to treat symptomatic hypoglycemia in conscious individuals. | <ul style="list-style-type: none"> • If it is unclear if the person is hypoglycemic or hyperglycemic, the first aid provider should care for hypoglycemia. | <ul style="list-style-type: none"> • Introducing the terms hyperglycemia and hypoglycemia is important, however, you may consider keeping language to “high blood sugar” and “low blood sugar”, particularly when the learners are children. • Emphasize the importance of recognizing hypoglycemia as it requires immediate care. If the brain is deprived of sugar, this can lead to <u>Seizures</u> and possible brain damage. • Affirm that providing care for hypoglycemia will rarely worsen hyperglycemia and may prevent or treat life-threatening conditions. Also see <u>Unresponsiveness</u>, <u>Seizures</u>, and <u>Stroke</u>. |
| Shock | <ul style="list-style-type: none"> • For a person experiencing or threatened by shock, body temperature should be maintained by preventing heat loss. • First aid providers should place the person in shock in the supine (lying on back) position. • First aid providers should position the person who is unresponsive and breathing normally on their side while ensuring that their airway is open (recovery position). | <ul style="list-style-type: none"> • First aid providers should prevent heat loss for a person experiencing (or with potential to experience) shock. • The person in shock should be placed in a supine position (lying on their back). • If the person is unresponsive and breathing normally, the first aid provider should place the person on their side in the recovery position, ensuring their airway is open. | <ul style="list-style-type: none"> • Advanced medical care should be accessed if it appears the person may experience or shows symptoms of shock. • If a known heart attack causes shock, a supine position with the upper body slightly elevated should be considered. • If the person has difficulty breathing or is uncomfortable in a supine position, they may be placed in the position most | <ul style="list-style-type: none"> • As many of the sudden illnesses and injuries that are covered in a First Aid course can lead to shock, it is recommended that treatment for shock be facilitated early in the course (with the basic steps of First Aid) and re-emphasized throughout the course • Since there are a variety of signs of shock, draw on learner experiences and stories of what they might have observed to |

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| | <ul style="list-style-type: none"> • First aid providers may raise the non-injured person’s legs 30 degrees to 60 degrees if it makes them feel better; this may improve the vital signs for a few minutes. • First aid providers should activate EMS if the person seems to be threatened by shock or shows signs and symptom of shock. • For people experiencing shock caused by a known heart infarction, different positioning (like supine position with slight elevation of the upper body) should be considered. • If the person is having breathing difficulties and will not tolerate being supine, first aid providers may help the person to get in a position being most tolerable or comfortable for them (usually semi-sitting or sitting position leaning forward). | | <p>comfortable to them, such as semi-sitting or sitting while leaning forward.</p> | <p>underline the need to be alert to different ways to recognise shock.</p> |
| Motion Sickness | <p>Nothing noted in 2016 Guidelines</p> | <ul style="list-style-type: none"> • Controlled breathing and distracting the ill person with an activity (e.g., listening to music) may help to reduce symptoms. • Looking straight ahead at a central point may decrease nausea. | <ul style="list-style-type: none"> • If possible, stopping the means of transport may decrease nausea. • Those that have used medications such as antihistamines to relieve motion sickness in the past should continue to use them. • Either looking outside and fixing the gaze on a central point on the horizon or restricting one’s view (e.g., closing one’s eyes) may help to prevent motion sickness. | <ul style="list-style-type: none"> • Include the types of transport and related first aid care that are relevant to learners and their environment. • Some areas may have safety considerations that prevent learners from stopping their vehicles. The first aid education should acknowledge and discuss these considerations in a learning activity. • People who may travel with children (teachers, parents, coach drivers) may find it useful to learn about motion sickness. |

3.0 Injury

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| Burns | <ul style="list-style-type: none"> • Burns should be cooled with cold water as soon as possible for a minimum of ten minutes. • As clean water is available in many areas of the world, clean tap water should be used. • Ice and ice water should NOT be applied to burn wounds. • After cooling, it is recommended that burn wounds should be dressed with a sterile dressing dependent on the local burn treatment policies. (Good Practice Point) • In cases of minor burns that will not be seen by a medical health professional, honey or aloe vera may be applied to the wound. • NO remedies should be applied before a medical practitioner has reviewed the wounds. • Care must be taken when cooling large burns or burns in infants and small children so as not to induce hypothermia. A first aid provider should NOT burst the blister(s). | <ul style="list-style-type: none"> • The burn should be cooled with running water for 10 minutes. • After the burn has been cooled, a dressing like hydrogel that maintains a moist environment, contours easily to the wound, and is non-stick should be used. • Chemical burns of the skin and/or eyes should be rinsed with drinking water and, if available, with diphoterine. | <ul style="list-style-type: none"> • Further injury should be prevented where appropriate by dealing with the source of danger, for example by covering a pot of hot oil. • Clothing and jewellery in contact with or close by the burned skin should be removed to support cooling and reduce additional discomfort. • After a burn has been cooled, covering it in a clean cloth or plastic film can protect it during transit to further medical care. | <ul style="list-style-type: none"> • Prevention is a key focus of burns. Consider the context of learners and adapt their prevention material accordingly, identifying the source of burns that learners are most likely to experience. • Approach topics which have myths or incorrect information attached to them, such as the belief that only people with lighter skin can be sunburned. Using sunscreen and avoiding long periods in direct sunlight is important across all ethnicities and skin types to reduce burning and the increased risk of skin cancer that accompanies it. • Emphasize that cooling the burn is important to reduce the damage to tissue. The cooking effect continues even after the skin has been removed from the source of heat. |
| Friction Burns | Nothing noted in 2016 Guidelines | <ul style="list-style-type: none"> • Keeping a blister intact may decrease the risk of bacteria entering the body and causing an infection, compared to draining it (aspiration) or removing the top layer of the blister (deroofing). | <ul style="list-style-type: none"> • Draining a friction blister that is filled with fluid will immediately reduce the pain associated with the blister. If drained, the blister should be covered with a sterile dressing to ensure the roof attaches to the underlying skin and that the blister does not refill with fluid. • Antibiotic ointments are advocated for the immediate | <ul style="list-style-type: none"> • Emphasize prevention and preparedness as these are the most effective strategies for managing blisters. • Explore dressings that might be used to treat blisters. • Education may also cover the removal of dressings which should, if possible, not damage the blister. Adhesive-removal sprays are available in some |

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| | | | <p>treatment of friction blisters only.</p> <ul style="list-style-type: none"> • Friction blisters can lead to open wounds, bleeding, and infection, limiting an individual’s mobility. In these situations, the person should stop the activity causing the blister, cover the blister with a sterile dressing and seek medical advice. | <p>pharmacies and may make removing dressings easier.</p> |
| <p>Abrasions/ Wounds</p> | <ul style="list-style-type: none"> • Superficial wounds and abrasions should be irrigated with clean water, preferably tap water because of the benefit of pressure. • First aid providers may apply antibiotic ointment to skin abrasions and wounds to promote faster healing with less risk of infection. • First aid providers may apply an occlusive dressing to wounds and abrasions with or without antibiotic ointment. • The use of triple antibiotic ointment may be preferable to double- or single-agent antibiotic ointment or cream. • If antibiotic is not used, antiseptic could be used. • There is some evidence that traditional approaches, including applying honey, are beneficial and may be used on wounds by first aid providers. • People with wounds that become red, warm, or painful, or that are accompanied by a fever, should seek assessment from a healthcare provider. | <ul style="list-style-type: none"> • Superficial abrasions and wounds should be cleaned with potable water, preferably from a tap to provide pressurized water flow. • An antibiotic ointment may be applied to skin abrasions and wounds to help them heal faster and lessen the risk of infection. • An occlusive dressing (an air- and water-tight dressing) may be applied to abrasions and wounds with or without antibiotic ointment. | <ul style="list-style-type: none"> • If warmth, redness, or pain develops around the wound area, or if the person develops a fever, this is an indication of Infection and the person should seek medical advice immediately. | <ul style="list-style-type: none"> • Particular local risks, as well as access to clean water and dressings, need to be considered when teaching this topic. • Different populations respond to wounds (particularly minor abrasions) in different ways. While children can react to the shock of the injury by demonstrating high levels of pain, adults might be embarrassed to “cause a fuss.” Educators can establish how different learners might respond by discussing experiences with different wounds of different severities, and how they would approach providing care. • There are myths and social conventions around wound treatment. It is important to let learners share these in order to build knowledge about what the most appropriate and available treatment might be. |

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| Bleeding | <ul style="list-style-type: none"> • First aid providers must control external bleeding by applying direct pressure. • The use of pressure points and elevation is NOT recommended. • When direct pressure fails to control life-threatening external limb bleeding or is not possible (e.g., multiple injuries, inaccessible wounds, multiple casualties), tourniquets could be considered in special circumstances (such as disaster, war-like conditions, remote locations, or instances where specially trained first aid providers are providing care). • Localized cold therapy with or without pressure may be beneficial in hemostasis for closed bleeding in extremities. Caution is advised when applying this recommendation to children due to a potential for hypothermia. • The out-of-hospital application of a topical hemostatic agent to control life-threatening bleeding not controlled by standard techniques and in situations where standard techniques could not be applied could be considered with appropriate training. | <ul style="list-style-type: none"> • External bleeding should be controlled by applying direct pressure. • Pressure points and elevation should not be used to stop bleeding. • When direct pressure fails to control life-threatening bleeding from an external limb or it is not possible to apply (e.g., due to multiple injuries, inaccessible wounds, or when injured people outnumber first aid providers), tourniquets may be used in certain circumstances, such as disaster events, war-like conditions, or remote locations. • Tourniquets may be used by specially trained first aid providers. • With or without pressure, the application of cold therapy may be beneficial to achieve hemostasis for closed bleeding in extremities. • When it is impossible to apply standard techniques, or when they are not working, the application of a topical hemostatic agent could be considered to control life-threatening bleeding, so long as the first aid provider has the appropriate training. | <p>No specific good practise points were identified for this topic.</p> | <ul style="list-style-type: none"> • The inclusion of topical hemostatic agents in the curriculum should be based on the availability of these substances and the question of whether laypersons are legally allowed to use them. • If tourniquets and/or topical hemostatic agents are included in first aid education, training in the application techniques and proper assessment of severe bleeding is required. Learners should be aware that these techniques should only be applied in life-threatening situations where direct pressure could not be applied or is not effective. See <u>Shock</u>. |
| Head and Spine Injury | <ul style="list-style-type: none"> • First aid providers may suspect a spinal injury if an injured person displays any of the following risk factors: <ul style="list-style-type: none"> ○ over 65 years of age ○ driver, passenger, or pedestrian in a motor vehicle, motorized cycle, or bicycle crash ○ fall from a greater than standing height ○ tingling in the extremities | <ul style="list-style-type: none"> • Any person suspected of sustaining trauma (a forceful bump, blow, or jolt to the head or body that results in the rapid movement of the head and brain), along with any of the symptoms of a concussion, must be presumed to have a minor traumatic brain injury (mTBI) or concussion. • Any person with a mTBI or concussion must stop any activity and seek advanced medical care from a healthcare professional qualified to evaluate and manage a concussion. | <ul style="list-style-type: none"> • If the person has an altered mental status (e.g., <u>Unresponsiveness</u>), a blocked airway or abnormal breathing, a seizure, impaired vision, abnormal functioning anywhere in the body, or bleeding from the nose, ear, or mouth, advanced medical care must be accessed immediately. | <ul style="list-style-type: none"> • If your region has specific programs for sport contexts, consult with local experts to determine if first aid providers should be taught specific screening tools to identify a concussion. • Correct application of a cervical collar requires training and regular practice; therefore emphasize the first aid provider's |

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| | <ul style="list-style-type: none"> ○ pain or tenderness in the neck or back ○ sensory deficit or muscle weakness involving the torso or upper extremities ○ not fully alert or is intoxicated ○ other painful injuries, especially of the head and neck ○ children with evidence of head or neck trauma ● For layperson first aid providers the routine application of cervical collars is NOT recommended. ● First aid providers should NOT strap the head or neck. ● In the case of suspected cervical spine injury it is recommended to manually support the head in a position limiting angular movement until experienced healthcare provision is available. | <ul style="list-style-type: none"> ● The person may have a spinal injury if they have any of the following risk factors: <ul style="list-style-type: none"> ○ Over 65 years old ○ Driver, passenger, or pedestrian in a motor vehicle or bicycle crash ○ Fall from higher than standing height ○ Tingling in the extremities ○ Pain or tenderness in the neck or back ○ Sensory deficit or muscle weakness in the torso or upper extremities ○ Altered mental status, possibly intoxicated | <ul style="list-style-type: none"> ● If the sports concussion assessment tool (SCAT3) has been used to assess a person with a suspected concussion, healthcare professionals may use this assessment as recognition of the concussion for further care. ● If a cervical spine injury is suspected, the head should be manually supported to limit movement until advanced medical care is available. | <ul style="list-style-type: none"> ● role in differentiating between high-and low-risk individuals when a collar might have to be applied. |
| Chest Injury and Abdominal Injury | <ul style="list-style-type: none"> ● For open chest wounds, first aid providers may leave the wound free without applying a dressing. ● If a wound dressing is necessary, non-occlusive wound dressings could be used (that is, one that does not seal the wound). ● For chest and abdomen injuries, first aid providers should manage shock and place the person in a comfortable position. ● For open abdominal wounds, first aid providers may place a sterile dressing on the wound. ● First aid providers should not push back viscera (internal organs). ● First aid providers should stabilize impaled objects. | <ul style="list-style-type: none"> ● An open chest wound may be left open, without the application of a dressing. ● If a wound dressing is necessary, a non-occlusive dressing could be used. | <ul style="list-style-type: none"> ● First aid providers should care for <u>Shock</u> and place the person in a comfortable position. ● A sterile dressing may be placed on open abdominal wounds. ● Internal organs should not be pushed back into the body. ● Impaled objects in the body should be stabilized. ● If there is significant external bleeding from a chest wound, direct pressure should be applied, providing it does not completely seal the wound. (See <u>Bleeding</u>.) | <ul style="list-style-type: none"> ● In high-resource settings this may be delivered with presentation software/video/simulation mannequins. These tools can be especially useful in providing the opportunity to practice direct pressure and the application of dressings around impaled/embedded objects. |

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| | <ul style="list-style-type: none"> If there is significant external bleeding, direct pressure to the chest wound with a hand and/or a dressing should be applied. Care must be taken that it does not become occluded. | | | |
| Fractures, Sprains, and Strains | <ul style="list-style-type: none"> A first aid provider could cool a sprained joint or soft-tissue injury. First aid providers should assume that any injury to an extremity could include a potential bone fracture and manually stabilize the extremity injury in the position found. There is insufficient information to make recommendations for straightening an angulated fracture. For remote situations, wilderness environments, or special circumstances with a cool and pale extremity this may be considered by a trained first aid provider. Ice or cooling should NOT be applied for more than 20 minutes. First aid providers should assess for hemorrhage in all fractures and treat for shock in fractures involving long bones, especially femur, due to possibility of significant internal hemorrhage. Based on training and circumstance, providers may need to move an injured limb or person. In such situations, providers should protect the injured person. This includes splinting in a way that limits pain, reduces the chance for further injury, and facilitates safe and prompt transport. | <ul style="list-style-type: none"> Ice or cooling may be applied to sprained joints and soft-tissue injuries. | <ul style="list-style-type: none"> Early recognition of the injury, early transport to a medical facility, and stabilizing the injury to minimize pain should be encouraged. It should be assumed that any injury to an extremity (limb) could include a potential bone fracture and should be manually stabilized in the position found. When in a remote or wilderness environment (or one with limited resources) and the angulated fracture is cool and pale, the first aid provider may consider straightening it if trained to do so. Ice or cooling should be applied for 20 minutes or less. All fractures should be assessed for internal and external bleeding and the injured person treated for <u>Shock</u>, especially if the fracture involves a long bone such as the femur. | <ul style="list-style-type: none"> Individuals may benefit from learning how to take the pulse of the injured person and use their findings to identify more severe injuries. While program designers may consider including this in training, it should not deter learners from helping the injured person in other ways if they are unable to take a pulse properly. <p>Facilitation Tips</p> <ul style="list-style-type: none"> Spend more time practising immobilisation techniques, especially improvised splints and bandages, and less time reviewing the key concepts behind fractures, sprains, and strains. Focus on application. Make note that even when ice is not available, applying a splint or sling to an injured limb may help to reduce the pain. Brainstorm as a group what you could use as an improvised bandage. Provide time for learners to practise bandaging. Use scenario-based learning to practise accessing medical care and minimizing pain during transportation. Facilitate discussions on learners' experiences with fractures, sprains, and strains |

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| | | | | and expand on the learning outcomes as they come up in conversation. This activity can help build learners' confidence. |
| Dental Avulsion | The avulsed tooth may be placed in Hank's Balanced Salt Solution. If not available, the tooth may be placed (in order of preference) in propolis, egg white, coconut water, Ricetral, whole milk, saline, or Phosphate Buffered Saline. | <ul style="list-style-type: none"> The tooth may be placed in Hank's balanced salt solution. If this is not available, the preferred order of solutions is: propolis, egg white, coconut water, Ricetral, whole milk, saline, phosphate-buffered saline. | <ul style="list-style-type: none"> First aid providers may not re-implant the tooth. The tooth should be held at the crown, not the root. (The crown of a tooth is the area that sits above the gum.) The tooth should not be cleaned as this could damage vital tissues still attached to the tooth. The person should be referred to a dentist as soon as possible. | <ul style="list-style-type: none"> The use of the solutions mentioned in the Guidelines depends on local laws, regulations, and processes—including liability protection. In some regions you may need to vary the list of recommended solutions according to the educational opportunities within the local context. |

4.0 Environmental

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| Hypothermia | Nothing noted in 2016 Guidelines | <ul style="list-style-type: none"> A person experiencing hypothermia who is responsive and shivering vigorously should be warmed passively with a polyester-filled blanket. If the person is responsive and shivering but a polyester-filled blanket is not available, alternative equipment may be used including a dry blanket, warm, dry clothing, and reflective/metallic foil. If the person is not shivering, and if resources are available, first aid providers should actively warm the person. | <ul style="list-style-type: none"> People experiencing hypothermia should be treated with care. They should be removed from the cold source and have their wet clothes removed. If the person is moderately to severely hypothermic, clothes should be cut off to minimize their movement. Care should then be taken to insulate the person by placing a barrier between them and the ground (e.g., a tarp and sleeping bag) to | <p>Key topics to cover when planning and delivering a first aid program should include:</p> <ul style="list-style-type: none"> How to prevent hypothermia and <u>Frostbite</u> in cold environments. How to reduce the risk of experiencing an avalanche, including familiarizing learners with local avalanche warning signs and safe behaviours to follow (e.g., avoid closed ski slopes). How to access help in rural or remote environments. |

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| | | | <ul style="list-style-type: none"> minimize conductive heat loss. The head and body should be covered to minimize convective and evaporative heat loss. For all cases of hypothermia, EMS should be activated and the person's airway, breathing, and circulation should be reassessed frequently. | <ul style="list-style-type: none"> The fact that hypothermia can also occur in the home (e.g., in older people who are unable or who choose not to turn on the heat in cold weather, or people who slip on icy steps and cannot help themselves up). The fact that hypothermia can even occur in warm temperatures if a person is wet and inactive. |
| Snow Blindness | Nothing noted in 2016 Guidelines | <p>Snow blindness, also called arc eye or flash eye, is a painful condition in the eye caused by overexposure to ultraviolet (UV) light. It is like the cornea (the transparent outer layer of the eye) has a sunburn. Snow blindness is most likely to happen to people who take part in outdoor sports or activities in relatively high altitudes or at sea, where surfaces reflect light into the eyes. However, artificial sources of UV radiation, such as a welder's torch or sun lamp, have the same effect.</p> | <ul style="list-style-type: none"> If applicable, the person should remove their contact lenses. The person should stay indoors and wear sunglasses to relieve pain or discomfort. The person's eyes should be kept moist (e.g., using saline solution or eye drops). A cool, damp cloth over closed eyelids may be comforting. The person should avoid rubbing their eyes. If symptoms last longer than a day, or if they worsen, the person should seek advanced medical care. Depending on the cause, this could be an eye doctor or emergency care (in the case of a welding accident). | <ul style="list-style-type: none"> Learners who are at a higher risk of snow blindness, for example those who weld, work with or use sunbeds, or spend time in the snow or at the sea, may benefit from learning about this topic. Use relevant or local terminology for this condition. For example, welders may refer to the condition as arc eye or flash eye, whereas learners who spend time in the snow may call it snow blindness. |
| Hyperthermia | Nothing noted in 2016 Guidelines | <ul style="list-style-type: none"> The person should stop all physical activity and be removed from the heat source. The person should be immersed in ice-cold water. If this is unavailable, they should be | <p>Heat Exhaustion</p> <ol style="list-style-type: none"> Help the person rest in a cool place and remove any excess clothing. | <ul style="list-style-type: none"> Combine this topic with other first aid emergencies (such as Breathing Difficulties or Seizures) so learners can recognize and |

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| | | <p>cooled with water or ice packs placed in the armpits or on the neck and groin area.</p> <ul style="list-style-type: none"> • Drinking water or a water and salt/sugar solution may be beneficial. | <ol style="list-style-type: none"> 2. Give them some water to drink. Sport drinks or water with sugar or salt may also be helpful. 3. Reassure the person and monitor their breathing and temperature. If their condition worsens, access emergency medical help. <p>Heat Stroke</p> <ol style="list-style-type: none"> 1. Help the person rest in a cool place and remove any excess clothing. 2. Cool the person down by immersing them in ice-cold water. If this is not available, wet the person with cold water and place ice packs on their neck and groin. Fanning them may also increase the cooling action. 3. Access emergency medical services (EMS). 4. Give the person some water to drink. Sport drinks or water with sugar or salt may also be helpful. 5. Monitor the person's breathing and temperature. Try to reduce their temperature to 38°C. <p>Access Help If the person shows signs of severe hyperthermia, access advanced medical care immediately.</p> | <p>differentiate the symptoms of hyperthermia.</p> |

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| Radiation Injuries | <ul style="list-style-type: none"> • Avoid touching suspected radioactive items. • Keep distance and do NOT approach suspected radioactive items or accident scenes. • Remove casualties from the scene as quickly as possible. • Avoid the smoke within 100 metres of a fire or explosion that involves a potentially dangerous radioactive source. • Keep your hands away from your mouth and do NOT smoke, eat, or drink until your hands and face are washed (to avoid inadvertent ingestion). • Exposure to sealed sources does not require decontamination. To limit exposure, stay away or place an appropriate shield (lead apron for example) between the source and the exposed persons. • Special trained forces should take care of the decontamination process but potentially contaminated persons should be instructed to remove any clothing while awaiting such teams, which may be of benefit. • Medical specialists must examine all persons who might have been exposed to radioactivity as soon as possible. | <p>Nothing noted in 2020 Guidelines</p> | <ul style="list-style-type: none"> • Avoid touching or approaching suspected radioactive materials or accident scenes. • The injured person should be removed from the scene as quickly as possible . • First aid providers should stay more than 100 metres away from smoke caused by a fire or explosion involving a potentially dangerous radioactive source. • To avoid accidentally ingesting radioactive material, you should wash your hands and face after touching them and before smoking, eating, or drinking if you have been exposed to suspected radioactive materials. • To limit exposure to radioactive sources, stay away or place a shield between the source and those who may be exposed (e.g., a lead apron). • Exposure to a sealed source does not require decontamination. • The decontamination process should be handled by those specially trained to do so. Everyone who may have been exposed should replace any clothing on their persons while waiting for specialists to arrive. | <ul style="list-style-type: none"> • Encourage learners to become familiar with the “radioactive” symbol and be aware of emergencies that are dangerous due to potential radioactivity. |

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| | | | <ul style="list-style-type: none"> Everyone who may have been exposed to radiation must be examined by medical specialists as soon as possible. | |
| Altitude | Nothing noted in 2016 Guidelines | <ul style="list-style-type: none"> People experiencing AMS, HACE, or HAPE should stop their ascent immediately and start to descend safely, with support, until their symptoms lessen. First aid providers trained in its use may administer oxygen to individuals experiencing AMS, HACE, and HAPE. If a person has prescribed medication for altitude illness with them (such as acetazolamide, nifedipine, or dexamethasone), the first aid provider may assist them in taking it based on the label instructions. Where local laws, regulations, or protocols permit, specially trained first aid providers may give medications (such as acetazolamide or dexamethasone) to individuals experiencing altitude illness. People experiencing altitude illnesses should be kept from getting cold or overheated. Ascending to higher altitudes more gradually can reduce the risk of altitude illness. Adequate hydration should be maintained (though not forced) as symptoms of <u>Dehydration</u> can mimic those of AMS. | No specific good practice points were identified for this topic. | <ul style="list-style-type: none"> Emphasize how to prevent and recognize the symptoms of altitude illnesses as often the person affected may not realize they have it. Use visual materials (pictures and videos) to illustrate signs and symptoms of the different types of illness that high altitudes can cause. |
| Decompression Illness | Nothing noted in 2016 Guidelines | <ul style="list-style-type: none"> In case of suspected decompression illness, first aid providers should administer oxygen at the highest concentration available (e.g., through a non-rebreather mask) which may reduce the symptoms substantially. The oxygen should be continued until definitive treatment is obtained. | <ul style="list-style-type: none"> Oxygen is a widely accepted first aid measure for cases of decompression illness. In some countries, laws make it mandatory for professional diving operations to have oxygen readily available (e.g., diving training institutions). Therefore, the | No specific educational considerations were identified for this topic. |

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| | | <ul style="list-style-type: none"> In cases of cardiac arrest after resurfacing, CPR should be administered with rescue breathing. First aid providers should call EMS immediately, then the Divers Alert Network (DAN), and indicate the likelihood of decompression illness so that transport of the person to a recompression chamber can be arranged as soon as possible (definitive treatment is often hyperbaric oxygen provided in a recompression chamber.) In locations requiring extended or complicated transport to a recompression chamber, rapid transport to a nearby emergency department capable of resuscitation should be prioritized so the person can be stabilized prior to being transported to the chamber. Scuba diving is a special circumstance for which oxygen during resuscitation may be helpful despite the measurement of adequate oxygenation. | <p>likelihood of oxygen being available is high at dive sites and likely immediately available if called for by the first responder.</p> <ul style="list-style-type: none"> First aid learners should be informed about the National First Aid Guidelines for decompression illness, as well as the local procedures for care. | |
| Frostbite | <ul style="list-style-type: none"> People experiencing severe bleeding or major trauma should be kept warm. When providing first aid to a person experiencing frostbite, rewarming of frozen body parts should be done only if there is no risk of refreezing. Rewarming should be achieved by immersing the affected part in water between 37°C (i.e., body temperature) and 40°C (98.6°F and 104°F) for 20 to 30 minutes. For severe frostbite, rewarming should be accomplished within 24 hours. Chemical warmers should NOT be placed directly on frostbitten tissue since these can reach temperatures | <ul style="list-style-type: none"> Frostbite is damage to the skin and other tissues caused by extreme cold. When it is cold (at or below 0°C) or there are strong winds, the human body tries to preserve its core body temperature by narrowing the blood vessels close to the skin. In extreme cases, this can reduce the blood flow in some areas of the body to dangerously low levels, resulting in frostbite. The fingers and toes are most vulnerable. Frostbite can lead to permanent damage but this can be avoided if it is recognized and treated quickly. | <ul style="list-style-type: none"> Warming should be achieved by immersing the affected area in water between 37°C (i.e., body temperature) and 40°C (98.6°F and 104°F) for 20 to 30 minutes. Chemical warmers should not be placed directly on frostbitten tissue because they can reach temperatures higher than the target temperature and may cause burns. Warming frozen body parts should be done only if there is no risk that they might refreeze. | <ul style="list-style-type: none"> As frostbite is relatively uncommon, help learners recognize it by including images in your education material. Help learners to identify how they would get medical help in an emergency if extreme cold was disrupting normal communications and/or EMS activities. |

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| | <p>that result in burns and exceed the targeted temperatures.</p> <ul style="list-style-type: none"> • After rewarming, efforts can be made to protect frostbitten parts from refreezing and to quickly transport the person for further care. • Affected body parts may be dressed with sterile gauze or gauze placed between digits until the person concerned can reach medical care. • The use of non-steroidal anti-inflammatory drugs for treatment of frostbite as part of first aid is NOT recommended based on potential side effects of these drugs (e.g., allergies, gastric ulcer bleeding). | | <ul style="list-style-type: none"> • After warming, the frostbitten area should be protected from refreezing and the person should seek medical care as soon as possible. • Affected body parts should be dressed with sterile gauze until the person can reach medical care. If fingers or toes are affected, the gauze should be placed between them. | |

5.0 Animal-Related Injuries

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| <p>Marine Animal Injuries</p> | <ul style="list-style-type: none"> • Topical application of seawater, baking soda, vinegar, or heat can be applied for nematocyst deactivation. Fresh water may cause further envenomation. The choice of agent must be individualized to the geographic area and species of jellyfish: <ul style="list-style-type: none"> ○ For most jellyfish, remove tentacles and rinse the injury in seawater. ○ For jellyfish species, sea nettle and mauve stinger, apply baking soda paste. ○ For box jellyfish stings, douse the injured area in vinegar for 30 seconds. | <ul style="list-style-type: none"> • Seawater, baking soda, vinegar, or heat (e.g., hot water) should be topically applied to treat a marine animal sting. Fresh water may cause further stinging. The choice of agent must be specific to the species of jellyfish: <ul style="list-style-type: none"> ○ For most jellyfish, remove the tentacles and rinse the site with seawater. ○ For specific types of jellyfish such as sea nettles and mauve stingers, apply a baking soda paste. ○ If the jellyfish is positively identified as a bluebottle, do not use vinegar as it will cause further stinging. • The sting site should be immersed in hot water for at least 20 to 30 minutes until the pain is gone. | <ul style="list-style-type: none"> • First aid providers should wear proper protection (gloves) and may either use their fingers or a flat object, such as a credit card, to remove any tentacles on the skin. • First aid providers should prevent the person from rubbing the sting site. • In areas with lethal jellyfish, advanced medical care should be accessed immediately. First aid providers should assess the person's airway, breathing, and circulation while | <ul style="list-style-type: none"> • Emphasize preventative measures, such as identifying warning signs at the beach and wearing protective suits when partaking in aquatic activities in the ocean or sea. • Share photos of local jellyfish and provide basic information such as where they can be found. • Share photos of local jellyfish stings to help learners identify what these look like. |

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| | <ul style="list-style-type: none"> ○ If the jellyfish is positively identified as a bluebottle or <i>Physalia utriculus</i>, do NOT use vinegar, as it triggers further envenomation. • The hot water immersion should continue until pain is resolved or at least for 20 to 30 minutes. • Pressure bandages should NOT be used for the treatment of jellyfish stings. • Topical application of aluminium sulphate, meat tenderizer, or water should NOT be used for the relief of pain. • After treatment to remove and/or deactivate nematocysts, hot water immersion could be used to reduce pain. • Any adherent tentacles may be picked off with fingers or can be scraped off with a flat object, such as a credit card. The rescuer must wear proper protection. The stung area should be rinsed well with seawater to remove stinging cells that can be seen. • Stop the person from rubbing the sting area. • For areas with lethal jellyfish, first aid providers should immediately summon EMS and assess and treat airway, breathing, and circulation while providing other therapies. | <ul style="list-style-type: none"> • Pressure bandages should not be used to treat jellyfish stings. • Aluminium sulphate, meat tenderizer, and water should not be used for pain relief. • After removing the stinger and treating the sting site, hot water immersion may be used to reduce the pain. | <p>providing care for any other symptoms caused by the sting.</p> | |
| <p>Insect Bites and Stings</p> | <ul style="list-style-type: none"> • Use of gasoline, petroleum, and other organic solvents to suffocate ticks, as well as burning the tick with a match, must be avoided. | <ul style="list-style-type: none"> • The following tick-removal methods must be avoided: using gasoline, petroleum, or other solvents to suffocate the tick, and burning the tick with a match. • A bee's sting should be removed from the skin as soon as possible. | <ul style="list-style-type: none"> • The bitten or stung area must be thoroughly disinfected with alcohol or another antiseptic solution. • If warmth, redness, or pain develops around the area, or | <ul style="list-style-type: none"> • Ask learners to share experiences of being bitten or stung, including how it feels and how they responded, to develop the group's confidence to handle this type of injury. |

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| | <ul style="list-style-type: none"> In case of a bee sting, the sting should be removed as soon as possible. To remove a tick, grab the tick as close to the skin as possible with a very fine forceps or tweezers and pull it gradually, but firmly, out of the skin. In case a commercial tick removal device, such as a hook with slip device, is available, the tick may be removed with the removal device according to the manufacturer's instructions. The bitten area must be thoroughly disinfected with alcohol or another skin antiseptic solution. First aiders should avoid squeezing the tick during removal since this may inject infectious material into the skin. If a rash, warmth, or pain develops around the bitten area or the bite leads to fever, the person should see a physician in case antibiotics or vaccinations are needed. The first aid provider should recognize signs of an allergic reaction or signs of anaphylaxis and treat. | <ul style="list-style-type: none"> The first aid provider may grab the tick as close to the skin as possible with very fine forceps or tweezers and pull it gradually and firmly out of the skin. If a commercial tick removal device, such as a hook with a slip, is available, the tick may be removed with the device according to the manufacturer's instructions. | <p>the person develops a fever, this is an indication of infection and the person should seek medical advice immediately. Antibiotics or vaccinations may be needed.</p> <ul style="list-style-type: none"> First aid providers should recognize the symptoms of an allergic reaction or anaphylaxis and provide the appropriate care. The person should avoid scratching the area as this can cause an infection, especially if the fingernails are dirty. Travellers should check to see what insect-related risks are prevalent in the area they are travelling to and seek medical advice. They may need vaccinations or medication before leaving home. | <ul style="list-style-type: none"> Demonstrate how to use tweezers to effectively remove a tick and credit cards to remove a sting. Help learners identify how a rash from an insect bite differs from other types of rashes by emphasizing the symptoms associated with an insect bite, distinctive visual differences, and the context of where the person was when the rash developed. <p>Facilitation Tools</p> <ul style="list-style-type: none"> Share photos of local insects and their associated injuries or infections to help learners identify them. Bring a variety of tick removal tools to show learners. |
| Snake Bites | <ul style="list-style-type: none"> Suction should NOT be applied to snake envenomation because it is ineffective and may be harmful. Tourniquet should NOT be applied to snake envenomation because it is not effective and may result in prolonged hospitalization. The extremity injuries may be kept still as much as possible or be immobilized by applying a non-elastic bandage. | <ul style="list-style-type: none"> The extremity injuries may either be kept still as much as possible or be immobilized by applying a non-elastic bandage. The person should not walk on an immobilized leg unless no other option is available. It is reasonable to keep the injured area at or lower than the level of the heart. Specially trained first aid providers may use compression for special situations such as remote locations and wilderness environments. It is reasonable to wash the wound if this does not delay hospital transport. | <ul style="list-style-type: none"> The person should limit physical activity. A cold compress should not be applied to a snake bite. Washing the wound is not considered a routine first aid measure. | <ul style="list-style-type: none"> Emphasize the importance of getting treatment quickly: even if the snake is not venomous, the bite can quickly become infected. Use pictures of the most common snakes in the region to increase learners' ability to identify snakes and raise awareness of the danger. Use pictures of the signs and symptoms to help learners |

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| | <ul style="list-style-type: none"> Specially trained providers may use compression for special situations such as remote locations and wilderness environments. The casualty should limit physical activity. | <ul style="list-style-type: none"> Suction should not be applied to a snake bite because it is ineffective and may be harmful. A tourniquet should not be applied in cases of snake envenomation because it is not effective and may result in an extended hospital stay. The pressure immobilisation technique is not recommended following bites from a pit viper. If properly trained to do so, first aid providers may consider the pressure immobilisation technique, using an elastic bandage, following the bite of a suspected coral snake (providing this does not delay transport time to the hospital). | | <p>understand the seriousness of snake bites.</p> <ul style="list-style-type: none"> Be clear about when to use pressure bandaging with immobilization, what it is, and how to apply it. Dispel myths about snake bites if they are prevalent among the learner audience: <ul style="list-style-type: none"> Do not cut or incise the bite. Do not use an arterial tourniquet. Do not suck the bite. |

6.0 Resuscitation

| Topic | Current Guidelines | 2020 Canadian Guidelines | Good Practice Points (GPP) | Educational Considerations |
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| Choking (FBAO) | <ul style="list-style-type: none"> Chest thrusts, back blows, and abdominal thrusts are equally effective for relieving foreign body airway obstruction (FBAO) in conscious adults and children older than one year. In adults and children older than one year, the unconscious person should receive chest compressions for clearance of the foreign body. Unconscious infants up to one year old should receive either a combination of back blows followed by chest compressions, or chest compressions alone for clearance of FBAO. Combination of back blows followed by chest compressions may be used for clearance of FBAO in conscious infants up to one year old. | <ul style="list-style-type: none"> In responsive adults and children who are choking, chest thrusts, back blows, and abdominal thrusts are equally effective. If an adult or child is unresponsive, they should receive chest compressions to clear the object from their airway. Unresponsive infants should receive chest compressions, back blows, or a combination of the two to clear the object from the airway. Responsive infants may receive back blows followed by chest compressions to clear the object from the airway. The finger sweep method may be used in unresponsive adults and children, providing the object is solid and visible in the airway. There is not enough evidence to suggest a different approach for an obese adult or pregnant woman who is choking. When helping a responsive person, first aid providers must be able to recognize the signs | <ul style="list-style-type: none"> A person with partial choking should be monitored until they improve as it could develop into complete choking. Although injuries have been reported after using an abdominal thrust, there is not enough evidence to determine whether chest thrusts, back blows, or abdominal thrusts should be used first on responsive adults and children. Chest thrusts, back blows, and abdominal thrusts should be applied in quick succession until the object has been cleared from the airway. More than one | <ul style="list-style-type: none"> Because choking often happens while eating, a choking emergency could happen in a public place. Program designers may consider framing this as a "helping behaviour" topic as it is one where the bystander effect could result in people feeling uncomfortable stepping forward to help. Emphasize that the first step is asking the person if they are choking. Learning to give back blows can be challenging as it is not possible to practice this on another person for fear of hurting them. Stress that a gentle slap will not expel an object stuck in someone's throat: force is |

| Topic | Current Guidelines | 2020 Canadian Guidelines | Good Practice Points (GPP) | Educational Considerations |
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| | <ul style="list-style-type: none"> The finger sweep could be used in unconscious adults and children older than one year with an obstructed airway if solid material is visible in the airway. There is insufficient evidence for a different treatment approach for an obese adult or pregnant woman with FBAO. Although injuries have been reported with the abdominal thrusts, there is insufficient evidence to determine whether chest thrusts, back blows, or abdominal thrusts should be used first in conscious adults and children older than one year. These techniques should be applied in rapid sequence until the obstruction is relieved; more than one technique may be needed in conscious adults and children older than one year. <p>Mild Airway Obstruction</p> <ul style="list-style-type: none"> In the case of a conscious person, the first aid providers must be able to recognize signs of a complete airway obstruction (the person is unable to speak, has a weakening cough, is struggling or unable to breathe) and signs of a mild obstruction (the person is able to speak, cough, and breathe). The person with a mild airway obstruction should remain under continuous observation until he or she improves since severe airway obstruction may develop. | <p>of partial choking (the person is able to speak, cough and breathe) and complete choking (the person is unable to speak, has a weakened cough, and has difficulty breathing).</p> <p>Note</p> <ul style="list-style-type: none"> “Child” refers to someone who is a year or older. “Infant” refers to someone who is less than a year old. | <p>technique may be needed in responsive adults and children.</p> | <p>needed to dislodge the object even if this might hurt the person.</p> <ul style="list-style-type: none"> Learners practising back blows and chest thrusts for a choking baby should sit or kneel. Although it can be easy to hold a mannequin baby in one arm (straddle arm technique), it can be more challenging with a real baby, especially for younger learners. Supporting the baby on their lap can be safer and more effective. |
| <p>CPR</p> | <ul style="list-style-type: none"> All dispatchers must be trained to recognize cardiac arrest over the phone. | <ul style="list-style-type: none"> If a person is unresponsive with abnormal or absent breathing, it is reasonable to assume the person is in cardiac arrest. | <ul style="list-style-type: none"> First aid providers should perform chest compressions for all adults who are | <ul style="list-style-type: none"> The tools, locations, and methods you choose to use when teaching first aid should be |

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| | <ul style="list-style-type: none"> All dispatchers should consider a person described as being unconscious with abnormal or no breathing to be in cardiac arrest during a calling. All dispatchers must provide CPR instructions to callers who report a person in suspected cardiac arrest. | <ul style="list-style-type: none"> The first aid provider should determine if a person is unresponsive with abnormal breathing. Palpation of the pulse as the sole indicator of the presence or absence of cardiac arrest is unreliable. First aid providers who are trained, able, and willing to give rescue breaths and chest compressions may do so for all unresponsive adults with abnormal breathing. CPR should start with compressions rather than rescue breaths. Chest compressions may be performed on the centre of the chest (i.e., the lower half of the sternum or breastbone) on adults who are unresponsive with abnormal breathing. Chest compressions should be performed at a rate of 100 to 120 per minute. Chest compressions must be done to a depth of approximately 5 cm; a compression depth of more than 6 cm should be avoided. First aid providers should avoid leaning on the chest between compressions to allow full chest-wall recoil. A ratio of 30 compressions to 2 rescue breaths (30:2) should be used on people who are unresponsive with abnormal breathing. If in doubt whether a person is experiencing cardiac arrest or not, the first aid provider should start CPR without concern of causing additional harm. Interrupting chest compressions to deliver two rescue breaths should take less than ten seconds. First aid providers should continue to perform CPR while the defibrillator is set up and pause only when it is ready for analysis and, if indicated, provides a shock. In any setting, chest compressions can be resumed immediately after shock delivery for | <ul style="list-style-type: none"> unresponsive with abnormal or absent breathing. To achieve more effective chest compressions, the dominant hand should be placed against the sternum with the non-dominant hand over the first. | <ul style="list-style-type: none"> selected based on what will be accessible for learners in an emergency and on their needs and abilities. Prioritize training for community members most likely to encounter cardiac arrest emergencies. Members include but are not limited to medics, police officers, firefighters, and lifeguards. Also, consider that these groups, given their status and role in the community, might make effective educators for the general public. Previous studies noted that bystanders have concerns about disease exposure and transmission through standard CPR, which has caused a significant decrease in their willingness to provide it to both strangers and family members. Compression-only CPR is the preferred method in these cases. Consider the gender makeup of a group of learners. There is limited evidence to demonstrate that women-only learner groups are beneficial to women learners, but there is evidence to support the position that men are more likely to learn in mixed groups. Emergency medical dispatchers play a critical role by promptly recognizing cardiac arrest, providing CPR instructions by phone, and dispatching EMS personnel with a defibrillator. |

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| | | <p>adults who are unresponsive with abnormal breathing. Total pre-shock and post-shock pausing between compressions should be as short as possible.</p> | | <p>Consider as part of the education for this role:</p> <ul style="list-style-type: none"> ○ The use of scripted protocols as a helpful way to confirm when a person is in cardiac arrest. ○ Additional training around the recognition of abnormal breathing. ○ How to provide CPR instructions to an adult. ○ How to provide instructions for both rescue breaths and compressions if the person in cardiac arrest is a baby, child, or adult. <ul style="list-style-type: none"> ● Dispatchers who communicate using video-assisted emergency calls may need more training for this tool to be effective and widespread within CPR education. |
| Adult | <ul style="list-style-type: none"> ● For an adult, chest compression depth should be approximately 5 cm but not more than 6 cm. ● First aid providers should NOT lean on the chest between compressions so that the chest is allowed to recoil fully. | <ul style="list-style-type: none"> ● If a person is unresponsive with abnormal or absent breathing, it is reasonable to assume the person is in cardiac arrest. ● The first aid provider should determine if a person is unresponsive with abnormal breathing. ● Palpation of the pulse as the sole indicator of the presence or absence of cardiac arrest is unreliable. ● First aid providers who are trained, able, and willing to give rescue breaths and chest compressions may do so for all unresponsive adults with abnormal breathing. ● CPR should start with compressions rather than rescue breaths. ● Chest compressions may be performed on the centre of the chest (i.e., the lower half of the | <ul style="list-style-type: none"> ● First aid providers should perform chest compressions for all adults who are unresponsive with abnormal or absent breathing. ● To achieve more effective chest compressions the dominant hand should be placed against the sternum with the non-dominant hand over the first. | <ul style="list-style-type: none"> ● Emphasize that time is critical to a successful outcome for the unresponsive person. Evidence indicates survival relies upon: <ul style="list-style-type: none"> ○ Immediate recognition that someone is unresponsive with abnormal breathing. ○ Early access to help and access to EMS. ○ Early high-quality CPR. ○ Early defibrillation with an automated external defibrillator. ● Emphasize the importance of the first aid provider, other bystanders, and EMS working together to provide quick and effective care. |

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| | | <p>sternum or breastbone) on adults who are unresponsive with abnormal breathing.</p> <ul style="list-style-type: none"> • Chest compressions should be performed at a rate of 100 to 120 per minute. • Chest compressions must be done to a depth of approximately 5 cm; a compression depth of more than 6 cm should be avoided. • First aid providers should avoid leaning on the chest between compressions to allow full chest wall recoil. • A ratio of 30 compressions to 2 rescue breaths (30:2) should be used on people who are unresponsive with abnormal breathing. • If in doubt whether a person is experiencing cardiac arrest or not, the first aid provider should start CPR without concern of causing additional harm. • Interrupting chest compressions to deliver two rescue breaths should take less than ten seconds. • First aid providers should continue to perform CPR while the defibrillator is set up and pause only when it is ready for analysis and, if indicated, provides a shock. • In any setting, chest compressions can be resumed immediately after shock delivery for adults who are unresponsive with abnormal breathing. Total pre-shock and post-shock pausing between compressions should be as short as possible. | | <ul style="list-style-type: none"> • Help learners understand that the desired outcomes of CPR—to pump blood around the body (chest compressions) and get oxygen into the lungs (rescue breaths)—keep the brain and vital organs functioning until defibrillation and advanced care can take place. • Define proper compression rate and depth and highlight that these are critical factors in the health outcomes of the patient. • Emphasize that starting CPR early has a significant impact on the likelihood of achieving the return of spontaneous circulation for people experiencing cardiac arrest. • Ensure that learners understand the fundamental components of standard CPR before being taught compression-only CPR. • Some massive multiplayer virtual worlds allow learners to play a role and experience “real life” scenarios and environments in which to practise their CPR skills. If implementing this tool, ensure facilitators understand how to use it and that the technology is not too complex (see Gamification and Online Learning [adults].) • Providing CPR instructions using video-assisted technology does not significantly improve the overall quality of bystander CPR compressions or rescue breaths. • For learners who train regularly and are knowledgeable in CPR, |

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| | | | | <p>extend skills training to include performing CPR in different settings and situations (e.g., in noisy or distracting environments, with anxious relatives present, in crowds or small spaces with restricted access). Such training exercises stimulate team-based approaches and lateral thinking.</p> <ul style="list-style-type: none"> • Use film clips to improve learners' ability to recognize agonal breathing. |
| <p>Child, Infant, and Neonatal</p> | <ul style="list-style-type: none"> • All dispatchers must be trained to recognize cardiac arrest over the phone. • All dispatchers should consider a person described as being unconscious with abnormal or no breathing to be in cardiac arrest during a calling. • All dispatchers must provide CPR instructions to callers who report a person in suspected cardiac arrest. • In situations when a first aid provider is performing CPR and following telephone instructions from a dispatcher when treating an adult, compression-only CPR should be used. In children and infants it should be full CPR. • Chest compressions should be performed on the centre of the chest, i.e., the lower part of the breastbone. • Compression rate should be 100 to 120 per minute. • First aid providers should NOT lean on the chest between compressions so that the chest is allowed to recoil fully. | <ul style="list-style-type: none"> • First aid providers should use a response check and breathing check to ascertain whether a baby or child is unresponsive and not breathing normally. Checking for a pulse is not needed. • In babies and children who are unresponsive with abnormal breathing, CPR should be performed with rescue breaths. • Chest compressions on children may be performed with one or two hands. • In babies or newborns, chest compressions can be performed with the two-thumb-encircling hand method or with the two-finger technique. In newborns, the former approach is preferred. • For babies and children, rescue breaths should be given before compressions. Either two or five initial rescue breaths may be given. • In instances where there is one first aid provider only, a compression-to-rescue-breath ratio of 30:2 may be used. • In instances where there are two first aid providers, a compression-to-rescue-breath ratio of 15:2 may be used. • For a child, chest compression depth should be one-third of the depth of the chest (approximately 5 cm but not more than 6 cm). | <ul style="list-style-type: none"> • First aid providers who are unwilling, untrained, or unable to perform rescue breaths can perform compression-only CPR. | <ul style="list-style-type: none"> • Focusing on prevention is critical for the survival of babies and children. • Emphasize the importance of the first aid provider, other bystanders, and EMS working together to provide care quickly and effectively. • Consider providing training in both the two-finger and two-thumb techniques when facilitating baby CPR. When in a stressful situation, learners may choose the one with which they are most comfortable. • Change management requires not only highlighting positive changes to practise, but also explicitly noting when techniques are to be removed from practice (and the reasons for their removal). • If using mannequins, ensure they are realistic in terms of size, weight, and features so learners can get a sense of how to perform the skill correctly. |

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| | <ul style="list-style-type: none"> • Interruption of chest compressions to give breaths should be less than ten seconds and pre- and post-shock pauses should be as short as possible. • For a person in cardiac arrest an AED should be used and as early as possible. • The first aid provider should always ask if an AED is available. • When an AED is available the first aid provider must always do CPR while waiting for the AED to be available and made ready for use. • A standard AED should be used for adults and children aged eight years and over. • For infants and children up to eight years of age, a pediatric AED must be used. If not available, a standard AED should be used with pediatric pads. If that is not available, a standard AED should be used. • For infants, children and casualties of drowning the preferred method of CPR is compressions with breaths. • For infants and children in cardiac arrest being treated by unwilling untrained or people unable to do conventional CPR, compression-only CPR should be used. • First aid providers may use a compression-ventilation ratio of 30:2 in cardiac arrest for adults and for children and infants with one provider. • First aid providers may use a compression-ventilation ratio of 15:2 in cardiac arrest for children and infants with two providers. | <ul style="list-style-type: none"> • For a baby, chest compression depth should be at least one-third of the chest's depth (approximately 4 cm). • The rate of chest compressions for babies and children should be 100 to 120 per minute. • All emergency medical dispatchers should provide CPR instructions (referred to as dispatcher-assisted CPR) to first aid providers who call regarding an unresponsive baby or child with abnormal breathing, including when no bystander CPR is in progress. | | <ul style="list-style-type: none"> • Help learners understand that the desired outcomes of CPR—to pump blood around the body (chest compressions) and get oxygen into the lungs (rescue breaths)—keep the brain and vital organs functioning until defibrillation and advanced care can take place. • Emphasize that rapid and continuous compressions are critical for a positive outcome. Have learners practise keeping the time it takes to give rescue breaths or find the right personal protective equipment to a minimum. • Emphasize that the goal of resuscitation remains the same for all ages and that only the approach is modified. However, first aid providers who know how to perform adult CPR, but do not know baby or child CPR, may use the same sequence as is used for adults. • Highlight that the decision to start CPR should be immediate and without delay. Time is critical to a positive outcome. • Learners can gain knowledge and some basic skills through self-directed learning. The improved efficiency of the self-directed curriculum may allow facilitators to use in-person session time on critical interpersonal interaction between learners. |

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| | <ul style="list-style-type: none"> For infants and children the anterior-posterior placement of AED pad may be preferred. For infants, children and in drowning cases breaths should be given before compressions. Either two or five breaths may be given. | | | |
| AED | <ul style="list-style-type: none"> For a person in cardiac arrest an AED should be used as early as possible. When an AED is available the first aid provider must always do CPR while waiting for the AED to be available and made ready for use. | <ul style="list-style-type: none"> For an unmonitored cardiac arrest, a short period of CPR should be provided until the defibrillator is ready for analysis. In any setting, chest compressions should resume immediately after shock delivery for adults in cardiac arrest. Self-adhesive defibrillation pads are safe, effective, and an acceptable alternative to standard defibrillation paddles. Paddles or pads should be placed in an anterior (front) position on the chest. Acceptable alternatives include an anterior-posterior position (for either paddles or pads) or an apex-posterior position (for pads only). For large-breasted individuals, the left electrode paddle or pad should be placed lateral to or underneath the left breast, avoiding breast tissue. Fast removal of excessive chest hair can be done before the application of paddles or pads, so long as the delay to shock delivery is minimal. For optimal external defibrillation in adults, a paddle or pad size greater than 8 cm as a specific electrode size should be used. After the defibrillator administers a single shock, the first aid provider should resume chest compressions immediately and not delay for rhythm reanalysis or a pulse check. Automatic defibrillation is preferred over manual defibrillation because it is easier to use and may deliver fewer inappropriate shocks. | <ol style="list-style-type: none"> Ask bystanders to access emergency medical services (EMS), or if you are alone access EMS yourself. If using a phone, activate the speaker function. Ask a bystander to bring a defibrillator as quickly as possible, or get one yourself if you are alone. Begin CPR immediately. Use the defibrillator as soon as it is ready and follow the voice prompts. Only pause chest compressions when it is absolutely necessary. Continue CPR unless instructed to pause (either by the defibrillator or a professional responder). Pause CPR if the person shows signs of recovery, such as breathing normally, coughing, opening their eyes, speaking, or moving purposefully. <p>Note</p> <ul style="list-style-type: none"> Pediatric pads have attenuators that will automatically lower the delivered energy, so | <ul style="list-style-type: none"> Advocate that public access defibrillators should have clear signage and be placed in highly visible locations. Ensure learners are familiar with defibrillator signage or icons and can identify where to find one in their local context. Use scenario-based learning to provide learners with the opportunity to practise using a defibrillator. Practising will increase their confidence and willingness to act in an emergency. Have learners practise providing continuous CPR, minimizing any interruptions, while a partner sets up the defibrillator and applies the chest pads. Have them practice resuming CPR immediately after the shock. Emphasize that time is critical to a successful outcome for the unresponsive person. Evidence indicates survival relies upon: <ul style="list-style-type: none"> Immediate recognition that someone is unresponsive with abnormal breathing. Early access to help and access to EMS. Early high-quality CPR. |

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| | | <ul style="list-style-type: none"> • First aid providers should take precautions to minimize sparking during defibrillation (e.g., pay attention to pad or paddle placement). • In an oxygen-rich atmosphere (where high-flow oxygen is directed across the chest), first aid providers should ensure that defibrillation does not take place. • For analysis of electrocardiographic rhythms during CPR, the routine use of artifact-filtering algorithms is not recommended. • For analysis of electrocardiographic rhythms during CPR, artifact-filtering algorithms should be used and assessed in clinical trials or research initiatives. • The implementation of public-access defibrillation programs is recommended to improve the outcomes for people with out-of-hospital cardiac arrests. • For adults and children (eight years or older), a standard defibrillator should be used. • For babies and children up to eight years of age, a pediatric defibrillator should be used. If one is not available, a standard defibrillator with pediatric pads should be used. • For babies and children up to eight years of age, if a pediatric defibrillator and pediatric pads are not available, a standard defibrillator and pads should be used. • For babies or children in cardiac arrest, an initial dose of 2 J/kg of defibrillation waveforms may be considered. • For babies or children in cardiac arrest, self-adhesive defibrillation pads can be used as paddles. • For babies and children, the anterior-posterior placement of self-adhesive pads may be preferred. • In an out-of-hospital setting, CPR should begin immediately (with chest compressions) after a | <p>pediatric pads should not be used on an adult patient.</p> | <ul style="list-style-type: none"> ○ Early defibrillation with an automated external defibrillator. • It is suggested that bystanders using video-assisted dispatcher defibrillator support do not need to be previously defibrillator-trained in order to use a defibrillator successfully, due to live video feed allowing the dispatcher to monitor and correct the actions of the first aid providers in real time. • Emphasize that anyone can use an automated external defibrillator, even someone who has never used one before. There are voice prompts that will tell you what to do. |

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| | | <p>single shock strategy for children in cardiac arrest.</p> <ul style="list-style-type: none"> • When compared with monophasic waveforms and for terminating ventricular fibrillation, biphasic waveforms are more effective. In the absence of biphasic defibrillators, monophasic defibrillators are acceptable. • With a BTE waveform for defibrillation of pulseless ventricular tachycardia or ventricular fibrillation cardiac arrest, a selected energy level of 150 to 200 J should be used to start defibrillation. • For any other biphasic waveform, a selected energy level of at least 360 J should be used for both initial and subsequent shocks. For second and subsequent biphasic shocks, the same initial energy level is acceptable. It is reasonable to increase the energy level when possible. | | |
| Narcotic Poisoning | Nothing noted in 2016 Guidelines | <ul style="list-style-type: none"> • Based on the outcome of the initial assessment of the casualty, First Aid measures like recovery position of unconscious person or CPR in any unconscious person not breathing normally should be started without delay. • The search for and application of naloxone (narcotic antidote) may be used by lay rescuers in suspected opioid-related respiratory or circulatory arrest. Naloxone should not delay basic first aid measures. | <ul style="list-style-type: none"> • Specially-trained First Aiders like social workers and peer support/outreach workers should be familiar with naloxone. • Symptoms can vary based on the chemical substance and dose taken, but clues may be found on the scene (e.g., empty bottles, empty blisters of drugs, syringes, needles, spoons for preparing injections.) These items may point in the direction of a narcotic poisoning. • CPR should be started without delay in any unresponsive person not breathing normally, and | <ul style="list-style-type: none"> • It is important to mention the emerging problem of drug/opioid addiction. Information about local helplines and support centers should be given. • Social workers and peer support/outreach workers should be trained in the usage and potential side effects of naloxone. This is not just a matter for social workers and peer support/outreach workers, however, but a global epidemic affecting everyone. • First aid instructors should educate participants in a first aid course on the following: <ol style="list-style-type: none"> 1. How to recognize opioid poisoning |

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| | | | <p>naloxone should be used by lay rescuers in suspected opioid-related respiratory or circulatory arrest.</p> <ul style="list-style-type: none"> It is recommended that those whose job may involve responding to opioid poisoning (e.g., peer support/outreach workers) be trained in full CPR protocols to the in BLS level and have access to both Naloxone and proper PPE. | <ol style="list-style-type: none"> How to react to an emergency involving opioid poisoning How to effectively administer naloxone How to connect people who have experienced opioid poisoning with community support resources (simply providing information about naloxone will be less effective than linking the person to community resources that can help them) How to provide critical messaging, such as the importance of never using opioids when the user is alone <p>Note First aid providers are not counsellors, but they often know the local community resources. Just as they would to treat a psychological emergency, first aid providers can provide life-saving care and be able to direct someone, possibly families, to external resources.</p> |

7.0 Psychological First Aid

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| Traumatic Event | Nothing noted in 2016 Guidelines | <ul style="list-style-type: none"> Single-session debriefings may be harmful to those who have experienced a traumatic event. They are not recommended. There is wide support by expert consensus for the benefit of PFA. The following interventions | <ul style="list-style-type: none"> The following interventions are recommended to support those who have experienced a traumatic event: <ul style="list-style-type: none"> Engage in conversation | <ul style="list-style-type: none"> Consider the different types of vulnerabilities learners are most likely to encounter. For example, are they most likely to provide support to young children? In this |

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| | | <p>are recommended for those who have experienced a traumatic event:</p> <ul style="list-style-type: none"> ○ Engaging in conversation ○ Listening to the person’s concerns ○ Offering empathic support ○ Maintaining contact ○ Connecting to support | <ul style="list-style-type: none"> ○ Listen to the person’s concerns ○ Offer empathetic support ○ Maintain contact ○ Connect to additional support resources or networks ● Psychological first aid can help during or in the immediate aftermath of a distressing event and should be provided to those who need it. ● Psychological first aid can also help in the days, weeks, months and even years after an event has taken place. | <p>case, first aid education should focus on the particular vulnerabilities of children and acknowledge the link to potential mental and emotional health challenges children may face later on in life as a result of a traumatic event. Conversely, if interacting more with older adults who have experienced multiple bereavements and traumas (including significant changes in their health), learners should be aware that this group of people may have increased loneliness, isolation, anxiety and depression.</p> <ul style="list-style-type: none"> ● Emphasize the importance of self-care. Learners must understand that supporting others in crisis can be overwhelming. They need to learn to recognize their own cues and have strategies in place to maintain their own emotional, mental, and physical health. ● Have learners practise active listening. This involves being attentive to the verbal and nonverbal cues (facial expressions and body language) of a person. ● Have learners work together to build case studies in which they have to support individuals in coping with traumatic events. ● A key factor in successful programming is creating a safe learning environment, starting with the creation of a group |

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| | | | | <p>charter that is inclusive and culturally safe.</p> <ul style="list-style-type: none"> • This curriculum is intended to be very fluid and driven by learners' desire to understand the topics in their own context/environments. The role of the facilitator is to guide the learning journey in a safe way: The focus should be less on steps and protocols and more about attitudes and discussions. • Utilizing a two-facilitator method is key to both facilitator and learner safety. It gives the facilitators space to be able to privately support a learner that is openly emotional and also check in with each other (facilitators) on educational process within the context of the learning (and also emotionally). • Have a plan of communication to let the facilitator or peers know something needs to be addressed. • Interactive activities enable the learners to openly explore the concept of grief and loss with one another. Think-pair-share. • Truth or Myth discussion activities will allow learners to explore their preconceptions of grief and encourage them to consider the impact of common phrases associated with grief and grieving. • Learners will all come with a back story or history and will have |

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| | | | | likely experienced elements of trauma, distress, and loss more than those in any other first aid programming. It is very important to acknowledge this early and plan for disclosure and emotions as a facilitation team. |
| Suicidal Ideation | <ul style="list-style-type: none"> • If a person is considered to have suicidal ideation, trained first aid providers should directly ask them about the suicidal thoughts. Inquiry about suicidal thoughts will NOT precipitate a suicide attempt. Instead, the person will feel being cared for if the inquiry is performed appropriately. • If a person is considered to have suicidal ideation, a trained mental health provider should evaluate them immediately or EMS should be activated. | <ul style="list-style-type: none"> • There is wide support by expert consensus for benefit for Mental Health First Aid and PFA. • There is limited evidence with benefit for staying connected to and befriending the person at risk. • The following interventions are recommended for suicidal ideation: <ul style="list-style-type: none"> ○ Engaging in conversation ○ Listening to the person’s concerns ○ Evaluating the risk of suicide ○ Offering empathic support ○ Ensuring safety ○ Maintaining contact | <ul style="list-style-type: none"> • Be aware of and attentive for signals of suicidal ideation and suicide risk. • Ensure physical safety in cases of imminent threat. • Be aware that witnesses to a frightening event, and their relatives or others close to them, may also be strongly affected and need PFA. • Approach calmly and promote calmness. • Speak clearly and softly. • Acknowledge the event. • Express concern. • Listen with empathy and accept the feelings shared. • Offer practical help. • Be direct: ask about and talk openly about suicidal thoughts. • Evaluate the suicidal threat, as well as the threat to you and others. • Respect privacy but do not promise confidentiality. Never agree to keep a plan for suicide a secret. • Provide honest and reliable information. • Promote contact with loved ones or other social support. | No specific educational considerations were identified for this topic. |

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| | | | <ul style="list-style-type: none">• Collaborate on problem solving.• Encourage professional help and/or take immediate actions (e.g., removing dangerous objects) when suicidal threat or threat to others seems imminent to ensure the person's safety, your safety, and safety of others. Undertake necessary actions supportively.• Avoid leaving a person who is actively suicidal alone. Ask the person's relatives or friends to accompany them to the hospital or other medical facility, or notify EMS.• Remember the following points:<ul style="list-style-type: none">○ People do not all react at the same time or in the same way to a critical incident.○ Some people are calm and do not react strongly at the time of an event, but may have strong reactions later. | |

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