

COVID-19 First Aid Adaptations

During the COVID-19 pandemic people will continue to injure themselves or become sick for all of the same reasons they did prior to the virus. However, people may be hesitant to call emergency services or go to hospital for fear of exposure to and contracting COVID-19 illness, which may lead to worse consequences if not dealt with by advanced care. The opposite could also occur when people who do not have first aid knowledge to care for themselves or others at home access advanced care unnecessarily, increasing their risk of exposure to the virus and burdening those systems. Both emergency services and hospitals in some geographical regions (e.g., large cities) may be at capacity which could lead to delayed help.

First aid education, with components tailored to COVID-19, can prepare people to carefully observe themselves and others for symptoms, find and make use of appropriate sources of information, and follow directions from those sources to access appropriate advanced care at the right time, as well as protect themselves from infection in the process. See how the Chain of Survival Behaviors impacts decision making in the COVID-19 context: <https://youtu.be/eEMKKH9QfEg>. As first aid educators and organizations we have the opportunity to distribute context-specific COVID-19 first aid considerations, along with education that would help people act in the most appropriate manner with the considerations of risk for contracting the virus, spreading the virus, or appropriate use of advanced care and self-care actions.

Mechanisms for the distribution of such information start with existing networks. For example, various apps, such as the First Aid App used by hundreds of Red Cross and Red Crescent National Societies could be a source of practical action for just-in-time components. Individual educators can send tips to those they have trained or work through companies and organizations who have sponsored training. In places where digital communication is less feasible, messaging through formal and informal public advertising (e.g., posters or news media) could be used. Any distribution mechanism needs to keep the learner in mind and consider the media accessibility, time needed to learn, take home messages, and ease of learning/practice. Each domain of the Chain of Survival Behaviors (International Federation of Red Cross Red Crescent Societies, 2016) can be relevant when thinking through how best to communicate information, depending on the circumstances, mechanism and audience.

Using the domains of the Chain of Survival Behaviors

Prevent & prepare focuses on eliminating or reducing the need to seek advanced care. This seems to be of special importance right now regarding virus transmission. Over the last few weeks, this aspect has been dynamic – information has changed according to the different stages of the outbreak in different geographical regions based on the stage of the pandemic. A constant eye on up to date guidance from experts including [the World Health Organization](https://www.who.int) (WHO), will

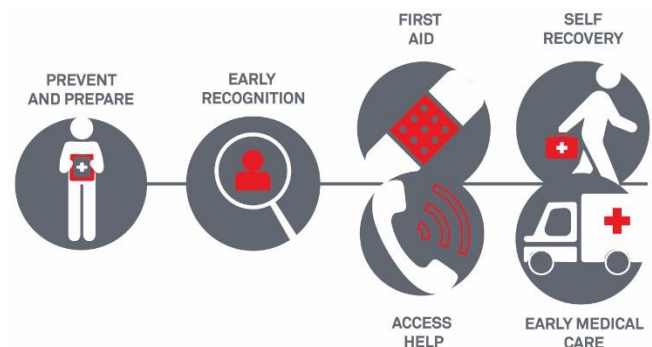


Figure 1: Chain of Survival Behaviors

help messaging in a timely fashion. Learning from the experiences of people in locations at a more advanced stage of the pandemic can also be beneficial.

COVID-19 Considerations:

- People with underlying health issues (such as diabetes, heart disease, kidney disease, asthma) have an increased risk of mortality with COVID-19. The social aspect of monitoring people with increased risks and protecting them from exposure to the virus can help reduce risks.
- People in general also have the opportunity to be extra diligent in avoiding the disease and staying healthy through a variety of means, from washing their hands to physically isolating themselves, which could be adapted to home activities during the pandemic.
- People's mental health may also need to be addressed with the additional stress of isolation alone or in-home settings. In some situations, this can lead to increased levels of violence, abuse or self-harm. Learning techniques of de-escalation or how to physically distance may be important.

Normal preparedness messaging may continue to be helpful. Encouraging and working to ensure people have access to adequate supplies of any medication taken routinely, access to emergency contact information, which can be shared with your family, and a supply of first aid equipment for emergencies when sheltering in place.

COVID-19 Considerations:

- Write down telemedicine and emergency contact information and keep medication lists for people in your household
- Keep a supply of masks for in home & out of home use, gloves, alcohol-based hand sanitizer; also, a thermometer is now critical.
- See this video example for [preparing](#) as an example of content
- Organize having a plan with your family and friends for social connections, routines, etc. to reduce psychological stresses.
- Purchase household supplies and goods for longer periods of time to reduce going into public spaces.

Early Recognition

It is important to remind people to check the environment or scene for dangers, check your first aid resources (e.g., first aid kit and people available to help) and check the person to gather the information needed to make decisions on who to call for help.

COVID-19 considerations:

- Everyone should treat themselves as a possible path for sharing the virus and should consider other people as a possible risk too. Protecting yourself or the ill/injured person can be done by good hand hygiene, wearing masks, or better yet, working from a reasonable distance.
- The ill/ injured person can also be source for first aid. For example, they could put direct pressure on their bleeding injury, cool their burn, or take their own temperature, allowing the first aid responder to stay 2 meters apart in many situations. Other people who are less at risk or already exposed to the ill/injured person and can also be given directions by the first aid responder.
- Assessing breathing can be done from a distance by asking them a question, and observing chest rise/fall, both which avoid being exposed to their exhalations.

- If there are no signs of life or regular breathing, compression only CPR is reasonable. Ideally breaths are administered with the use of a mask with one-way valve or bag-valve-mask device.
- If the person is breathing, place a cloth mask on the person while you assess or treat them if it doesn't make breathing more difficult for injured/ ill person to protect yourself from their exhalations.

Any life-threats found should be addressed in this stage along with notifying emergency services.

A detailed or focused assessment follows after life-threatening issues are dealt with and includes a head-to-toe physical check and an interview of the person to identify all first aid issues which can give more background to advanced care.

COVID-19 Considerations

- The following are factors to consider if a person is exhibiting signs of COVID-19,
 - A person who is sweaty
 - Fever (>100.4F/ 37.8C)
 - Age over 50 depending on underlying health conditions like heart/ lung disease, diabetes, or is immunocompromised
 - Coughing
- Asking if the person might have taken anything specific to COVID-19 to prevent it or help could also identify potential poisoning situations.
- People with significant medical history should be considered at risk, these might include recent surgeries, cancer treatment, or diabetes.

This information is very valuable to the call taker at emergency services or a telehealth provider to help you make the best decisions on where to go for advanced care.

Accessing help

Once a life-threatening condition is identified emergency services need to be activated. Or, after an assessment reveals the need for advance care, people can use the following circumstances and local availability to decide next steps:

- Extent of the person's injuries/ illness and your knowledge/ skills
- Risk in your community for traveling
- Other people sick or in need of care, which would prevent attention or put others at risk
- Available equipment or resources to properly care for the long term
- Worsening of the person's condition.

The following table sets out some serious conditions and the most appropriate steps to take to access help:

Finding	Emergency Services	Teledoc/ Doctor visit/ Urgent Care
Life-threatening bleeding	X	
Unconscious/Altered/Confused	X	
Difficulty Breathing- New or worsening	X	
Anaphylaxis (severe allergic reaction)	X	
Chest pain	X	
Stroke symptoms/signs	X	
Heat Stroke	X	

Shock	X	
Severe pain in stomach region	X	
First time seizure or one that does not resolve within 5 to 10 minutes	X	
Fever with confusion, faintness, inability to stand/walk	X	
Fever (no difficulty breathing)		x
Acute abdominal pain	X	
Persistent abdominal discomfort		x
Bleeding controlled with pressure		x
Suspected fractured rib		x
Injuries that prevent use of an extremity		x
Migraine headache (similar to previous)		x
Elevated or low blood sugar		x
Urinary tract infection symptoms		x
Vomiting and diarrhea		x
Coughing		x

First aid

Care to a person can start immediately for life-threats or after additional assessment. First aid curricula that incorporate long term care (e.g., wilderness, travel, or disaster) can be repurposed to address care for minor injuries and self-recovery from illness. First aid responders should prioritize care by severity of the injury or illness. During the pandemic it is of even more importance to protect virus transmission between each person by using personal protective equipment or distancing.

COVID-19 considerations:

CPR- First aid responders will need to be cognizant of local ethics and legalities, but the special considerations regarding CPR are:

- CPR, especially giving ventilations (mouth to mouth) is a relatively high-risk for disease transmission in both directions (Couper et al., 2020). If there are no signs of life or regular breathing, compression only CPR is reasonable. Ideally breaths are administered with the use of a mask with one-way valve or bag-valve-mask device, with the first aider wearing gloves and facial protection.
- CPR during COVID pandemic, especially out of hospital, unlikely to be successful and the decision to initiate CPR needs to be carefully balanced with the risk of being exposed to the virus by those performing CPR and assisting, amongst other factors by emergency medical systems.

Asthma

- Wheezing with fever and cough may be a sign of a more serious illness such as pneumonia or COVID-19 and requires further evaluation by a health care provider.
- Use PPE if available, assist a person with wheezing/difficulty breathing to use his or her own prescribed inhaler as directed

Cough

- If available, over the counter cough suppressant with dextromethorphan could be used to relieve symptoms

Fever

- Fever over 100.4 F/ 37.8 C with persistent cough and difficulty breathing may indicate infection with COVID-19, seek assistance.
- Apply a face cover/mask on the individual and seek advice from Primary Care Physician or local health department. For severe shortness of breath, call emergency services immediately

Many common injuries or acute illnesses can be treated at home and supported through telehealth, phone consultations with doctor's office, or clinics that have been designated as non-COVID-19. First aid Apps and internet resources may be useful but should not be relied on when there are advanced care consultations available.

Most COVID-19 illnesses will not be severe, but those that are or are complicated by other factors need to always consider contacting emergency services, especially if signs or symptoms are deteriorating. Self-recovery may involve many people in the same space, take care to be hygienic and vigilant in assessing the ill person through the experience can reduce chances of spreading or recognizing deteriorating signs. (See https://youtu.be/NHi_p4xHfo4.)

Together as first aid educators we can maintain our own attention to the biological and social-behavioral sciences and the evidence-based recommendations that continue to emerge during this pandemic. Our training partners and organizations have large networks and resources to help push simple messages forward that can have a cumulative effect in helping individuals and entire communities through this pandemic. If resources could be made available, this is an ideal time to think about what information can be collected in terms what illnesses and injuries were experienced and how first aid was used or not used effectively. After the pandemic, we will also have the opportunity to better understand our role and opportunities for future events, local or global.

In this issue we share other COVID-19 considerations from practical and ethical consideration. Please continue to share the IJFAE with you teams and training partners.

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