



Risk of Transmission of COVID-19 (Coronavirus)



A. Guidance for resuscitation by Healthcare Providers (in hospital and out of hospital Cardiac arrest)

COVID-19 is thought to spread in a way similar to seasonal influenza; from person-to-person through close contact and droplets. Standard principles of infection control and droplet precautions are the main control strategies and should be followed rigorously. Aerosol transmission can also occur. Attention to hand hygiene and containment of respiratory secretions produced by coughing and sneezing are the cornerstones of effective infection control.

All healthcare workers carrying out direct patient care, with a patient with suspected/confirmed COVID-19, would be advised to wear a disposable N95 mask, gloves with long tight-fitting cuffs, a single-use disposable fluid-resistant full-sleeve gown and eye protection (e.g. full-face visor / single-use goggles). If the patient is wearing a mask this would also further reduce any potential risk.

Patients for whom a 'do not attempt cardiopulmonary resuscitation' (DNACPR) and/or other similar decision is appropriate should also be identified early.

The principles of PPE should also be applied in cases of deterioration (no cardiac arrest) situation when dealing with a patient with suspected/confirmed COVID-19.

Recommendations for Resuscitation when faced with patients suspected or confirmed to have COVID-19

1. During CPR, there is always the potential for rescuers to be exposed to bodily fluids, and for procedures (e.g. tracheal intubation or ventilation) to generate an infectious aerosol.
2. Resuscitation team members must be trained to put on/remove PPE safely (including respirator-fit testing) and to avoid self-contamination
3. Patients with suspected or confirmed COVID-19 like illness, who are at risk of acute deterioration or cardiac arrest, should be identified early. Appropriate steps to prevent cardiac arrest and avoid unprotected CPR should be taken. Use of physiological track-and-trigger systems (e.g. QEWS) will enable early detection of acutely ill patients in hospitals.
4. The minimum PPE requirements to assess a patient, start chest compressions and establish monitoring of the cardiac arrest rhythm are: N95 facemask, eye protection, plastic or equivalent apron, and gloves.
5. The need to do PPE may delay CPR in patients with COVID-19. Review of the processes involved (including the availability of PPE kits on resuscitation trolleys where such patients are located), along with training and practice, will minimise these delays. Staff safety is paramount. In a cardiac arrest of presumed hypoxic aetiology (including paediatric events), early ventilation with oxygen is usually advised. Any airway intervention performed without the correct PPE protection will subject the rescuer to a significant risk of infection. Consequently, we recommend even in presumed hypoxic arrest starting with chest compressions.
6. Recognise cardiac arrest by looking for the absence of signs of life and the absence of normal breathing. Feel for a carotid pulse if trained to do so. Do not listen or feel for breathing by placing your ear and cheek close to the patient's mouth. If there are any doubts about the diagnosis of cardiac arrest, the default position is to start chest compressions until help arrives.
7. Start compression-only CPR and monitor the patient's cardiac arrest rhythm as soon as possible. Avoid mouth-to-mouth ventilation and the use of a pocket mask. If the patient is already receiving supplemental oxygen therapy using a face mask, leave the mask on the patient's face during chest compressions.
8. Local staff (already wearing full PPE) may be able to give support whilst chest compressions are ongoing before the arrival of the resuscitation team. Other helpers and members of

the resuscitation team must apply N95 mask, gowns, gloves and eye protection, before taking over from the first responders to the cardiac arrest.

9. Defibrillate shockable rhythms rapidly - the early restoration of circulation may prevent the need for airway and ventilatory support.
10. Dispose of, or clean, all equipment used during CPR following the manufacturer's recommendations and infection control guidelines. Any work surfaces used for airway/resuscitation equipment will also need to be cleaned according to infection control guidelines. Specifically, ensure equipment used in airway interventions (e.g. laryngoscopes, face masks) is not left lying on the patient's pillow, but is instead placed in a tray. Do not leave the Yankauer sucker placed under the patient's pillow; instead, put the contaminated end of the Yankauer inside a disposable glove.
11. Remove PPE safely to avoid self-contamination and dispose of clinical waste bags as per local guidelines. Hand hygiene has an important role in decreasing transmission. Thoroughly wash hands with soap and water; alternatively, alcohol hand rub is also effective.

B. Recommendations for CPR and Resuscitation techniques for teaching establishments

- The main infection risk in a classroom full of learners is contact with other people and/or surfaces rather than the manikin itself. Learners always need to observe a high standard of handwashing, with alcohol gel (or wipes if gel unavailable) provided in addition to handwashing facilities.
- Learners should be reminded to cough/sneeze into a tissue and dispose of this into a bin immediately, washing hands afterwards. Alternatively, coughing/sneezing into the bent elbow if no tissue available.
- Where individuals are exhibiting symptoms typical of flu, a cold or have been in close contact with someone who has the COVID-19 infection then they should exclude themselves from the course. Likewise, if an individual has travelled to/from the countries/regions affected.

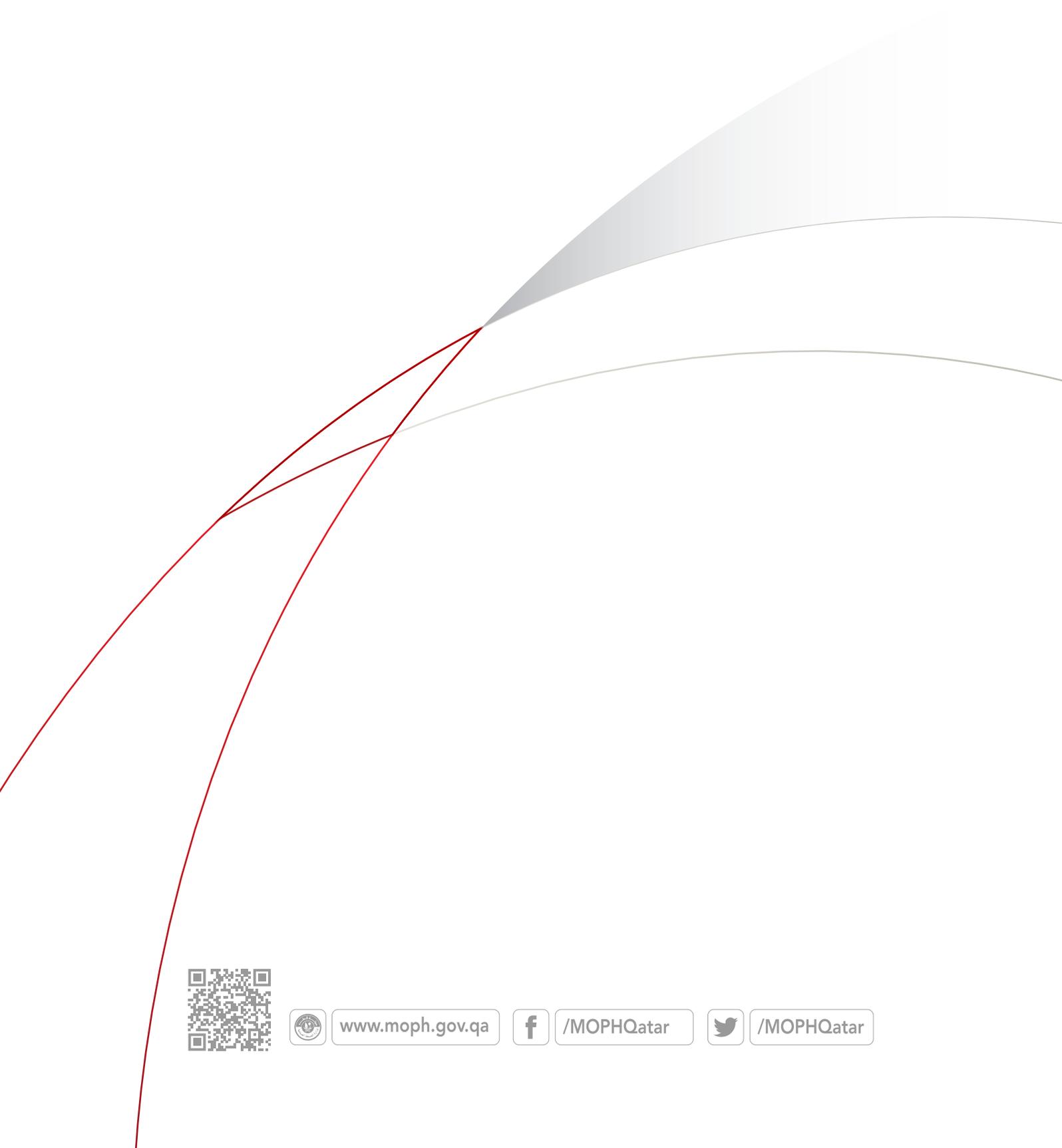
Actions to take when taking a training session

- If teaching CPR only sessions, we would suggest teaching compression only CPR
- If teaching basic CPR in hospital, teach compression only CPR until help and ventilation equipment arrives. If appropriate, training in bag-mask ventilation techniques can take place.
- Wipe the chest, forehead and face of the manikin using disinfectant/alcohol wipes between learners and allow the surface to dry naturally before the next learner takes their turn

References:

Resuscitation Council Guidance UK statement on COVID-19 (coronavirus) CPR and Resuscitation, March 2020

Public Health England: Guidance for first responders and others in close contact with symptomatic people with potential COVID-19: Updated 27 February 2020



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