السلام عليكم ورحمة الله وبركاته

نديكم غرفة الشرقية أطيب تحياتنا، ونفديكم بتلقيها خطاب مجلس الغرف السعودية رقم (الو/19147) وتاريخ (6/9/1441 هـ)، المشار فيه إلى خطاب المجلس الصحي السعودي رقم (1) وتاريخ (6/9/1441 هـ)، والمimetype بأن المركز الوطني للقلب في المجلس الصحي السعودي وبالتعاون مع جمعية القلب السعودية قد أصدر "الدليل الإرشادي لضوابط التدريب على الإسعاف القلبي الرئوي والاحتياطات الواجب توخياً أثناء جائحة فيروس كورونا (كوفيد-19)"، موجه للعاملين في هذا المجال.

ومزيد من المعلومات والإطلاع على الدليل الإرشادي، يمكنكم زيارة موقع الغرفة الإلكتروني:

(www.chamber.org.sa)

وتفضّلوا بقبول خالص التحية والتقدير

الأمين العام

عبد الرحمن بن عبدالله الوابل
الله سلمه

سعادة أمين عام الغرفة التجارية والصناعية

 السلام عليكم ورحمة الله وبركاته،،

إشارة لخطاب المجلس الصحي السعودي رقم (11- 2569) وتاريخ 9/9/2019 هـ المتضمن إحاطتكم بأن المركز الوطني للقلب بالمجلس الصحي السعودي وبالتالي التعاون مع جمعية القلب السعودية قد أصدر "الدليل الإرشادي لضوابط التدريب على الإسعاف القلبي الرئوي والاحتياطات بالوجب توجيهها أثناء جائحة فيروس كورونا (كوفيد-19)" موجه للعاملين في هذا المجال (مرفق). عليه، آمل من سعادتكم توجيهه من يلزم بتميم هذا الدليل على اللجان المناظرة وعلى

メントسيبكم في القطاع الصحي بصرفكم الوفرة.

شاكرين ومقدرين لحكم تكريم اهتمامكم,

وتقبلوا وافر التحية والتقدير،،

مساعد الأمين العام لشؤون اللجان الوطنية

عبدالمالك بن عبدالله السليمان
National CPR Committee and National Heart Center (NHC) Statement on CPR Training During COVID-19 Pandemic

In collaboration with:

SAREM

Saudi Heart Association

Saudi Society of Emergency Medicine
National CPR Committee and National Heart Center (NHC) Statement on CPR Training During COVID-19 Pandemic

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<th>Acronym</th>
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<tr>
<td>ACLS</td>
<td>Advance Cardiac Life Support</td>
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<tr>
<td>BLS</td>
<td>Basic Life Support</td>
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<tr>
<td>CPR</td>
<td>Cardiopulmonary Resuscitation</td>
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<tr>
<td>ILCOR</td>
<td>International Liaison Committee on Resuscitation</td>
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<tr>
<td>NCPR committee</td>
<td>National Cardiopulmonary Resuscitation Committee</td>
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<td>NHC</td>
<td>National Heart Center</td>
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<td>PALS</td>
<td>Pediatric Advance Life Support</td>
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<td>PPE</td>
<td>Personal Protective Equipment’s</td>
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<td>Saudi CDC</td>
<td>Saudi Center for Disease Prevention And Control</td>
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<td>SHA</td>
<td>Saudi Heart Association</td>
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<tr>
<td>SHC</td>
<td>Saudi Health Council</td>
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<td>URTI</td>
<td>Upper Respiratory Tract Infection</td>
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Introduction

Corona Virus Disease 2019 (COVID-19) is a global pandemic which affects more than One and half million individuals with a high death rate that exceeds 90,000 death cases across the globe. The Saudi Heart Association (SHA) and the national cardiopulmonary resuscitation (NCPR) committee developed a taskforce to discuss the magnitude of clinical management on patients with cardiac arrest in a pre-hospital and in-hospital settings. Meanwhile, the taskforce plans to populate a local clinical guidance in case of cardiac arrest to be used by concerned practitioners in the region. Also, to discuss the principles and governance scheme of life support training courses conduction in the SHA accredited centers in collaboration with the national heart center (NHC) – Saudi Health Council (SHC).

General Recommendations

Prevention

Prevention of disease transmission to health care workers and the community is deemed a priority nowadays. Therefore, protective measures should be aligned with the entire collection of measures that the Saudi Government has taken to combat the disease. A wide array of measures include: strict quarantine, partial and full curfew, banning Umrah season, freezing public transportation activities, and limiting public mass gathering at sports gym, mosques, and other public places. In addition, the Saudi Center for Disease Prevention and Control (Saudi CDC) issues couple of guidelines that assist healthcare providers dealing with COVID-19 pandemic situation.

COVID-19 is transmitted by droplets; however, airborne transmission is possible through aerosolization in the setting of high oxygen flow, bronchoscopy, open tracheal suctioning, intubation, extubation, non-invasive positive pressure ventilation, endoscopy, cardiopulmonary resuscitation (CPR) and transesophageal echocardiography (1).

Keeping in mind that some asymptomatic patients may be a source of infection and transmission, all patients with severe emergent cardiovascular or respiratory diseases should be managed as suspected cases of COVID-19 (2). Hence, all training courses delivered by the SHA’s accredited centers were terminated due to the strict (forced?) quarantine applied by the Saudi Government.
Training Courses

Health care institutions who embrace accredited training centers still can run some training sessions for smaller groups of trainees from their own staff members. While conducting these sessions, the training center administration taking the following steps in to into consideration in order to minimize the risk of infection:

Involvement of Infection control prevention department to help setting protocols for infection control in the training Sites when a training session is ongoing.
To be sure that all trainees are asymptomatic of flu like illness or upper respiratory tract infection (URTI). Symptomatic trainees must be rescheduled to join another training session in the future after they get recovered.
At least 1.5 meter-space distance should be kept between a trainee and another while classes or workshops are running or at food court.
Force using alcohol sanitization between workshops to disinfect equipment and surfaces.
During the BLS courses, no need for active demonstration of mouth to mouth breathing through a barrier at any workshop only the techniques of Bag-Valve-Mask respirator (resuscitator).
Online BLS courses that include practical skills demonstration (e-learning module of SHA and the new Arabic and English videos) are preferred at the time of pandemic to cover emergent requirements by health care providers.

Pre-hospital Cardiopulmonary Resuscitation

The rescuer (layperson or bystanders) should cover the mouth and nose of the victim and avoid deliver breathing. They should do only chest compressions as per the guidelines until medical assistance arrived. Rescuer should keep in mind that vomitus is a source of infection and all secretions should be dealt with caution. The use of external mechanical compression devices is preferred when available. (3). If return of spontaneous circulation (ROSC) has not been achieved after appropriate resuscitation efforts in the field, consider not transferring the victim to the hospital as to lower the risk of additional exposure by providers. (4)

EMS personnel should avoid emergency intubation and effort should be planned to do elective intubation in a negative pressure room with strict airborne precaution, full PPE and N95 mask. The assisted breathing should be done with a Bag-Valve-Mask device/resuscitator connected to HEPA filter. For adults, consider passive oxygenation with nonrebreathing mask covered with surgical mask. (4)
In hospital Cardiopulmonary Resuscitation

All efforts should be performed to avoid emergency intubation by planning elective intubation in every sick patient in a negative pressure room with strict airborne precaution, full PPE and N95 mask. If intubation is delayed, consider manual ventilation with a supraglottic airway or a bag-valve-mask device with HEPA filter. (4) Once the patient on a closed circuit, minimize disconnection to reduce aerolization. (4) The minimum Mobile of expert staff should participate in the CPR and should enter the room only after wearing full airborne PPEs. The documentary recorder team member should be outside the room. Rescuer should keep in mind that vomitus is a source of infection and all secretions should be dealt with caution. The use of external mechanical compression devices is preferred when available.

It is reasonable to consider age, comorbidities, and severity of illness in determining the appropriateness of resuscitation and balance the likelihood of success against the risk to rescuers and patient from whom resources are being diverted. (4)

The prognosis of COVID19 related Cardiac arrest is extremely poor and therefore considered to be futile by some experts. (5)

Initially successful (ROSC achieved) in 13%. Only 2.9% survived for least 30 days, just one patient (0.7%) had a favorable neurological outcome at 30 days. (6)
(PRE-HOSPITAL) ADULT BASIC LIFE SUPPORT FOR SUSPECTED & CONFIRMED COVID-19 CASES

UNRESPONSIVE?

Shout for help / Call 997 and AED

Use PPE and cover the victim’s nose & mouth with a piece of fabric

30 CHEST COMPRESSIONS

Continue 30 compressions at a rate of 100-120/m Until EMS arrives or unable to proceed
دعم سبل المحافظة على الحياة الأساسية (للبالغين)
(قبل الوصول للمستشفى في التعامل مع الحالات المشتبه بها والمؤكدة بالإصابة
بفيروس كورونا المستجد)

المصاب غير واعي؟

اطلب المساعدة / اتصل بالهلال الأحمر 997 واطلب جهاز الصدمات
الروبوتات

استخدم وسائل الحماية الشخصية مع تغطية فم وأنف المصاب بقطعة
قماش

قم بعمل 30 ضغطة صدرية

استمر بعمل 30 ضغطة صدرية (بمرور 1-2 دقيقة)
حين حضور المساعدة أو عدم القدرة على الأكمل
ADVANCED LIFE SUPPORT
FOR SUSPECTED OR CONFIRMED COVID19

Unresponsive?
Not breathing or only occasional gasps

Call resuscitation team, PPE with Aerosol protection
Limit the number of the team

CPR 30:2. Attach AED or defibrillator pads/monitor, minimize interruptions.
Ventilate by BVM with filter. Prepare to connect to chest compressor device if available. Prepare
to Intubate.

ASSESS RHYTHM

SHOCKABLE
(VF/PULSELESS VT)

RETURN OF SPONTANEOUS
CIRCULATION

NO SHOCK
DIVISED

1 SHOCK

Immediately resume CPR 30:2 for 2 min
Minimize interruptions

Immediately resume CPR 30:2 for 2 min
Minimize interruptions

DURING CPR
• Ensure high-quality CPR: rate, depth, recoil (may connect to chest compressor device)
• Plan actions before interrupting CPR
• Give oxygen
• Consider advanced airway and capnography
• Continuous chest compressions when advanced airway in place
• Vascular access intravenous, intracessous
• Give epinephrine every 3-5 min
• Amiodarone 300 mg IV bolus for refractory VF/pulseless VT
• Correct reversible causes
• If no ROSC by 10-15M, consider termination of CPR

REVERSIBLE CAUSES
• Hypoxia
• Hypovolemia
• Hypo- / hyperkalemia / metabolic
• Hypothermia
• Thrombosis - coronary or pulmonary
• Tamponade - cardiac
• Toxins
• Tension pneumothorax
References

3. ILCOR Covid-19 Consensus on Science and Treatment Recommendation (CoSTR),(draft)

Useful links

Saudi CDC: https://covid19.cdc.gov.sa/