

# 3<sup>rd</sup> SRFAC Townhall (Virtual)

S/N	Time	Topic	Presenter	Session Chair
1	9am to 9.15am (15mins)	Opening Address by Chairman	Prof Lim Swee Han (SGH)	N.A
2	9.15am to 9.35am (20mins)	Keynote Address - An Essential Review of How Singapore Progressed its OHCA Response Over the Years	Prof Marcus Ong (SGH)	LTC Janice Oh and A/Prof Ng Kee Chong
3	9.35am to 9.55am (20mins)	Singapore Basic Cardiac Life Support and Automated External Defibrillation Guidelines 2021	Prof Lim Swee Han (SGH)	
4	9.55am to 10.15am (20mins)	Singapore First Aid Guidelines 2021	Dr Faraz Zarisfi (SGH)	
5	10.15am to 10.45am (30mins)	Q & A	Prof Lim Swee Han, Prof Marcus Ong, Dr Faraz, Dr Benjamin Leong, Ms Wee Fong Chi	
<b>Break (20mins)</b>				
6	11.05am to 11.35am (30mins)	Singapore Advanced Cardiac Life Support Guidelines 2021	A/Prof Ching Chi Keong (NHC)	Dr Benjamin Leong and Ms Wee Fong Chi
7	11.35am to 11.55am (20mins)	Beyond Return of Spontaneous Circulation – Update on Post-Cardiac Arrest Management in the Intensive Care Unit	Dr Chia Yew Woon (TTSH)	
8	11.55am to 12.15pm (20mins)	Extracorporeal Life Support in Adult Out-of-Hospital Cardiac Arrest	Dr Lim Jia Hao (SGH)	
9	12.15pm to 12.25pm (10mins)	Life Support Course for Nurses: Beyond Competency Training	Umadevi D/O Paneer Selvam (TTSH)	
10	12.25pm to 12.55pm (30mins)	Q&A	A/Prof Ching Chi Keong, Dr Sewa Duu Wen, Dr Chia Yew Woon, Dr Lim Jia Hao, Umadevi D/O Paneer Selvam	
<b>Lunch Break (20mins)</b>				
11	1.15pm to 1.45pm (30mins)	Singapore Paediatric Resuscitation Guidelines 2021	A/Prof Gene Ong (KKH)	Dr Quek Bin Huey and Dr Mok Yee Hui
12	1.45pm to 2.05pm (20mins)	Singapore Neonatal Resuscitation Guidelines 2021	Dr Biswas Agnihotri (NUH)	
13	2.05pm to 2.35pm (30mins)	Q&A	A/Prof Gene Ong, Dr Biswas Agnihotri, A/Prof Yeo Cheo Lian	
<b>End</b>				

A person is lying on their back, receiving a massage. Their back is to the camera, and their arms are raised. A person's hands are visible, massaging the person's back. The background is blurred, suggesting an indoor setting. The text is overlaid on the image in a blue, bold font.

# **3<sup>rd</sup> SRFAC Townhall (Virtual) Opening Introduction**

**Prof. Lim Swee Han**

Chairman, SRFAC

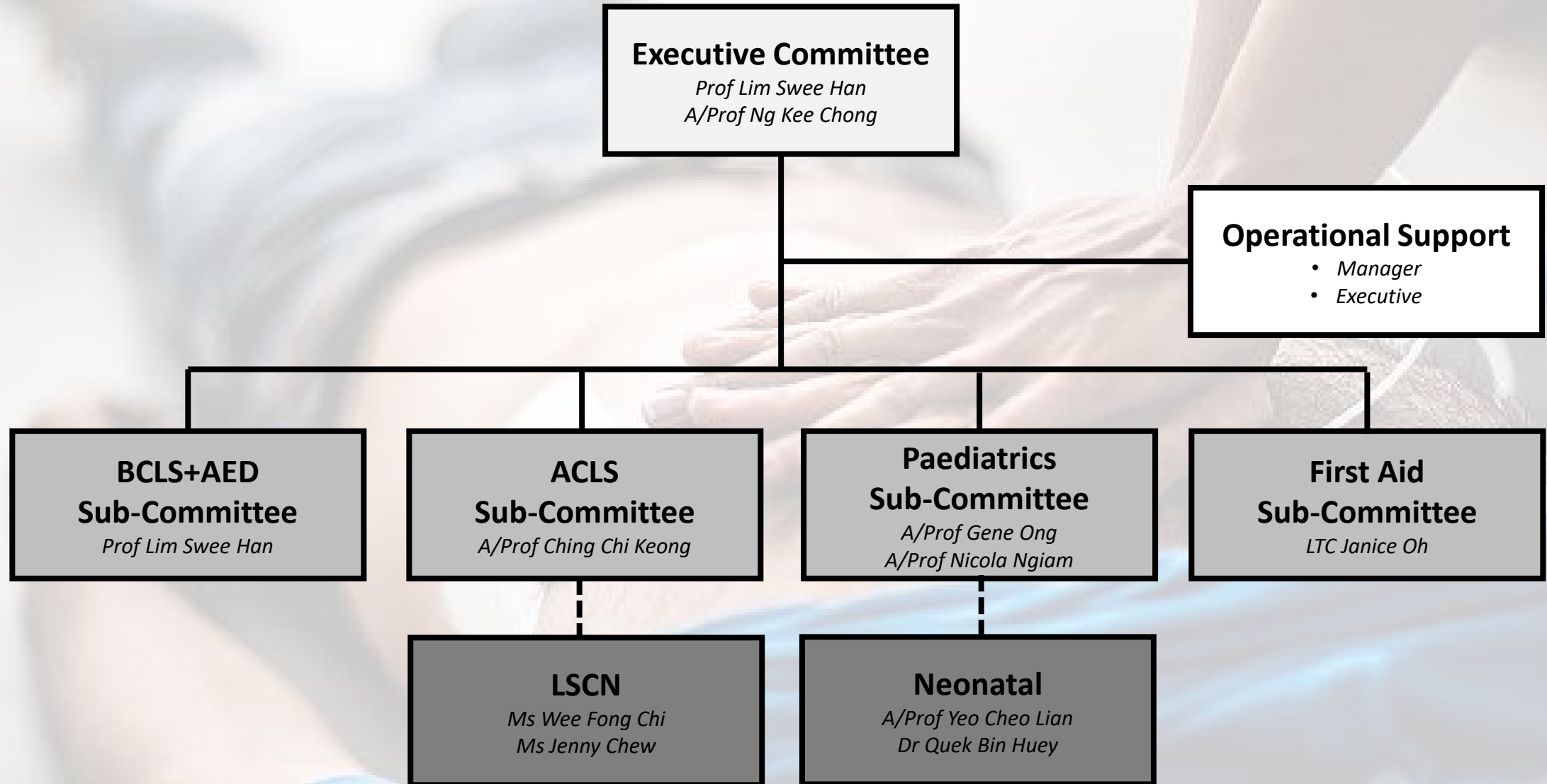
**A/Prof. Ng Kee Chong**

Vice-Chairman, SRFAC

# SRFAC Executive Committee

- College of Emergency Physicians, Academy of Medicine Singapore
- Singapore Cardiac Society
- Society of Intensive Care Medicine
- College of Paediatrics & Child Health, Academy of Medicine Singapore
- Society for Emergency Medicine in Singapore
- Chapter of Cardiologists, Academy of Medicine Singapore
- Nursing, Ministry of Health
- Singapore Red Cross Society
- Singapore Civil Defence Force
- St. John Association Singapore
- Singapore Armed Forces
- Singapore Heart Foundation
- Unit for Prehospital Emergency Care
- Ministry of Manpower

# SRFAC Organisation Chart



November 22, 1992

American Heart Association®



Fighting Heart Disease and Stroke



European Resuscitation Council



HEART AND STROKE FOUNDATION OF CANADA



InterAmerican Heart Foundation



Australian Resuscitation Council

+



NEW ZEALAND

Resuscitation Council

Whakahauroa, Aotearoa



Resuscitation Council of Asia

2006



RESUSCITATION COUNCIL OF SOUTHERN AFRICA



**(2005)**

- Japan Resuscitation Council (2005)
- Korean Association of CPR (2005)
- National Resuscitation Council, Singapore (2005)
- National Resuscitation Council, Taiwan (2005)
- Philippine Heart Association (2010)
- The Heart Association of Thailand (2011)
- Resuscitation Council of Hong Kong (2016)

Associate members

- Penang CPR Society (2014)

## ILCOR ORGANIZATIONAL CHART

### Board

Co-Chairs:	Robert Neumar (AHA) & Gavin Perkins (ERC)
Honorary Treasurer:	Peter Morley (ANZCOR)
Honorary Secretary:	Maaret Castren (ERC)
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#### American Heart Association

Raina Merchant, Ch	Jeanette Previdi	Marina Del Rios	Gustavo Flores	Dianne Atkins	Comilla Sasson
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#### Australian & New Zealand Committee on Resuscitation

Richard Aickin, Ch	Julie Considine	Michael Parr	Tony Scott
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#### European Resuscitation Council

Koen Monsieurs, Ch	Bernd Boettiger	Robert Greif	Hildigunnur Svavarsdottir	Jerry Nolan	Ian Maconochie
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#### Heart & Stroke Foundation of Canada

Allan de Caen, Ch	Farhan Bhanji	Michelle Welsford
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#### Inter-American Heart Foundation

Raffo Escalante, Ch	Giuliana Matos	Alfredo Sierra	Saul Drajer
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#### Resuscitation Council of Asia

Tzong-Luen Wang, Ch	Sung Oh Hwang	Mayuki Aibiki	Swee-Han Lim
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#### Resuscitation Council of Southern Africa

David Kloeck, Ch	Jonathan Witt	Johann Claussenn	Anita Groenewald
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## Task Forces

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# **BLS PICO (population, intervention, comparator, outcome) Questions**



2020

## **BLS347 Public Access AED Programs (SysRev)**

**EVREV 1: Chung Sung-Pil**

**EVREV 2: Lim Swee Han**

**Taskforce: BLS**

# Population, Intervention, Comparator, Outcome

- **Population:** Adults and children with OHCA
- **Intervention:** Implementation of a public access AED program
- **Comparator:** Traditional EMS response
- **Outcome:**
  - Critical outcomes - Survival to hospital discharge with good neurological outcome, survival to hospital discharge.
  - Important outcomes - ROSC, bystander CPR rates, time to first compressions, time to first shock, CPR quality.



# Justification and Evidence-to-Decision Framework Highlights

- Among 31 included studies, there was only 1 RCT which showed improved survival to discharge in the CPR-plus-AED group compared with the CPR-only group.
- Observational studies were mostly retrospective analyses of data from large registries and generally showed improved survival outcomes associated with PAD.
- Some studies were before-and-after studies in which historic controls included periods before PAD implementation or the initial period of implementation.
- Some were unable to show any significant differences in outcomes.
- 2 studies including only children.
- The location of cardiac arrest was various and included airports, subways, and sports facilities.
- Optimizing availability, signage, novel delivery methods, public awareness, device registration, mobile apps for AED retrieval.
- Cost-effectiveness of PAD programs may vary according to countries, with ratios between 37,200 and 1,152,400 US dollars/quality-adjusted life-years.

# Treatment Recommendation

- We recommend the implementation of PAD programs for patients with OHCA (strong recommendation, low certainty evidence).

# What is the relationship (or the difference) between the ILCOR CoSTRs and guidelines?

The Consensus on Science and Treatment Recommendations (CoSTR) developed by ILCOR **represent the international consensus statement regarding the published science** available for a specific topic. The various **resuscitation councils around the world write more elaborate coordinated recommendations (Guidelines) for their specific national/international audiences.** The Guidelines are usually about broader topics, or incorporate a combination of multiple individual topics. The CoSTR statements are used by the resuscitation councils to inform the writing of their Guidelines. Often the same wording is used in the Guidelines as is written in the individual ILCOR summary of science documents (CoSTR).

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

# Resuscitation

journal homepage: [www.elsevier.com/locate/resuscitation](http://www.elsevier.com/locate/resuscitation)

## Executive Summary

### 2020 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations<sup>☆</sup>



*Jerry P. Nolan, Ian Maconochie, Jasmeet Soar, Theresa M. Olsveengen, Robert Greif, Myra H. Wyckoff, Eunice M. Singletary, Richard Aickin, Katherine M. Berg, Mary E. Mancini, Farhan Bhanji, Jonathan Wyllie, David Zideman, Robert W. Neumar, Gavin D. Perkins, Maaret Castrén, Peter T. Morley, William H. Montgomery, Vinay M. Nadkarni, John E. Billi, Raina M. Merchant, Allan de Caen, Raffo Escalante-Kanashiro, David Kloeck, Tzong-Luen Wong, Mary Fran Hazinski*

**Keywords:** AHA Scientific Statements, advanced life support, basic life support, cardiopulmonary resuscitation, first aid, neonatal life support, pediatric life support, resuscitation education

The International Liaison Committee on Resuscitation (ILCOR) was formed in 1992 as an international council of councils and currently includes representatives from the American Heart Association (AHA), the European Resuscitation Council, the Heart and Stroke Foundation of Canada, the Australian and New Zealand Committee on Resuscitation, the Resuscitation Council of Southern Africa, the InterAmerican Heart Foundation, and the Resuscitation Council of Asia.<sup>1</sup> The ILCOR mission is to promote, disseminate, and advocate international implementation of evidence-informed resuscitation and first aid by using transparent evaluation and consensus summary of scientific data. Resuscitation includes all responses necessary to treat sudden life-threatening events affecting the cardiovascular and respiratory systems, with a focus on sudden cardiac arrest. As in 2015, this 2020 consensus publication also includes first aid topics as part of the international review and consensus recommendations.

and Emergency Cardiovascular Care (ECC) Science With Treatment Recommendations (CoSTR) includes a separate publication from each of the 6 task forces as well as this Executive Summary and a publication detailing the evidence evaluation process and management of potential conflicts of interest.

In this publication, the separate sections for each task force highlights the “hot” topics and the new CoSTRs developed. Not all relevant references are cited here; refer to each task force publication in this supplement for details of each of the reviews and task force deliberations. In addition, each task force publication summarizes additional reviews that are not highlighted in this Executive Summary.

#### Evidence Evaluation Process and Management of Potential Conflicts of Interest

## Circulation

### Executive Summary

#### 2020 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations

#### CONTENTS

Evidence Evaluation Process and Management of Potential Conflicts of Interest.....	S3
Evidence Evaluation Process .....	S3
Management of Potential Conflicts of Interest .....	S4
Basic Life Support .....	S4
Hot Topics .....	S4
New Systematic Reviews .....	S6
Additional Reviews.....	S8
Advanced Life Support.....	S8
Hot Topics.....	S9
New Systematic Reviews .....	S9
Additional Reviews.....	S11
Pediatric Life Support (Basic and Advanced) .....	S11
Hot Topics.....	S11
New Systematic Reviews .....	S12
Additional Reviews.....	S13
Neonatal Life Support .....	S13
Hot Topics.....	S13
New Systematic Reviews .....	S14
Additional Reviews.....	S14
Education, Implementation, and Teams .....	S14
Hot Topics.....	S14
New Systematic Reviews .....	S16
Additional Reviews.....	S17
First Aid .....	S17
Hot Topics.....	S17
New Systematic Reviews .....	S17
Additional Reviews.....	S19
Next Steps .....	S19
Disclosures.....	S19
References.....	S21

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MSN (Coeditor)

The full author list is available on page  
S19.

Key Words: AHA Scientific Statements

# The ILCOR 2020 International Consensus on CPR and ECC Science With Treatment Recommendations

- Part 1: Executive Summary
- Part 2: Evidence Evaluation and Management of Conflicts of Interest
- Part 3: Basic Life Support
- Part 4: Advanced Life Support
- Part 5: Pediatric Life Support (Basic and Advanced)
- Part 6: Neonatal Resuscitation
- Part 7: Education, Implementation, and Teams
- Part 8: First Aid

## Part 3: Adult Basic and Advanced Life Support

### 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

#### TOP 10 TAKE-HOME MESSAGES FOR ADULT CARDIOVASCULAR LIFE SUPPORT

1. On recognition of a cardiac arrest event, a layperson should simultaneously and promptly activate the emergency response system and provide cardiopulmonary resuscitation (CPR).
2. Performance of high-quality CPR includes adequate compression depth and rate while minimizing pauses in compressions.
3. Early defibrillation with concurrent high-quality CPR is critical to survival when sudden cardiac arrest is caused by ventricular fibrillation or pulseless ventricular tachycardia.
4. Administration of epinephrine with concurrent high-quality CPR improves survival, particularly in patients with shockable rhythms.
5. Recognition that all cardiac arrest events are not identical is critical for optimal patient outcome, and specialized management is necessary for many conditions (eg, electrolyte abnormalities, pregnancy, after cardiac surgery).
6. The opioid epidemic has resulted in an increase in opioid-associated out-of-hospital cardiac arrest, with the mainstay of care remaining the activation of the emergency response systems and performance of high-quality CPR.
7. Post-cardiac arrest care is a critical component of the Chain of Survival and demands a comprehensive, structured, multidisciplinary system that requires consistent implementation for optimal patient outcomes.
8. Prompt initiation of targeted temperature management is necessary for all patients who do not follow commands after return of spontaneous circulation to ensure optimal functional and neurological outcome.
9. Accurate neurological prognostication in brain-injured cardiac arrest survivors is critically important to ensure that patients with significant potential for recovery are not destined for certain poor outcomes due to care withdrawal.
10. Recovery expectations and survivorship plans that address treatment, surveillance, and rehabilitation need to be provided to cardiac arrest survivors and their caregivers at hospital discharge to optimize transitions of care to home and to the outpatient setting.

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On behalf of the Adult Basic and Advanced Life Support Writing Group



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## Resuscitation

journal homepage: [www.elsevier.com/locate/resuscitation](http://www.elsevier.com/locate/resuscitation)



EUROPEAN  
RESUSCITATION  
COUNCIL

### European Resuscitation Council Guidelines 2021: Basic Life Support

Theresa M. Olasveengen<sup>a,\*</sup>, Federico Semeraro<sup>b</sup>, Giuseppe Ristagno<sup>c,d</sup>, Maaret Castren<sup>e</sup>, Anthony Handley<sup>f</sup>, Artem Kuzovlev<sup>g</sup>, Koenraad G. Monsieurs<sup>h</sup>, Violetta Raffay<sup>i</sup>, Michael Smyth<sup>j,k</sup>, Jasmeet Soar<sup>l</sup>, Hildigunnur Svavarsdottir<sup>m,n</sup>, Gavin D. Perkins<sup>o,p</sup>

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<sup>b</sup> Department of Anaesthesia, Intensive Care and Emergency Medical Services, Maggiore Hospital, Bologna, Italy

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#### Abstract

The European Resuscitation Council has produced these basic life support guidelines, which are based on the 2020 International Consensus on Cardiopulmonary Resuscitation Science with Treatment Recommendations. The topics covered include cardiac arrest recognition, alerting emergency services, chest compressions, rescue breaths, automated external defibrillation (AED), CPR quality measurement, new technologies, safety, and foreign body airway obstruction.

**Keywords:** Guidelines, Basic Life support, Cardiopulmonary Resuscitation, Chest compression, Ventilation, Rescue breaths, Automated External Defibrillator, Emergency Medical Services, Emergency Medical Dispatch

#### Introduction and scope

These guidelines are based on the International Liaison Committee on Resuscitation (ILCOR) 2020 Consensus on Science and Treatment

Recommendations (CoSTR) for BLS.<sup>1</sup> For these ERC Guidelines the ILCOR recommendations were supplemented by focused literature reviews undertaken by the ERC BLS Writing Group for those topics not reviewed in the 2020 ILCOR CoSTR. When required, the guidelines

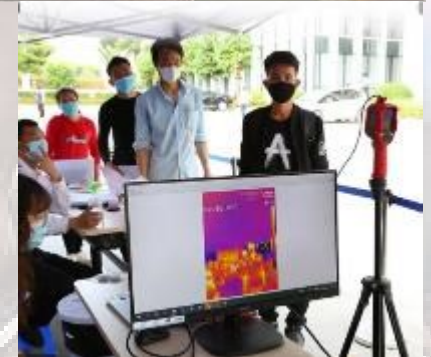
# Development of Singapore Resuscitation and First Aid Guidelines

S/N	Title	Authors
01	<b>SRFAC - Resuscitation &amp; Saving Lives in the COVID-19 era and beyond</b>	Lim Swee Han, Ng Kee Chong, Gene Ong, Ching Chi Keong, Biswas, Janice Oh, Loke Jun Hao, Lim Jia Hao , Faraz Zarisfi
02	<b>An Essential Review of How Singapore Progressed its OHCA Response Over the Years</b>	Alexander White, Andrew FW Ho, Nur Shahidah, Nurul Asyikin, Le Xuan Liew, Pin Pin Pek, Jade PH Kua, Michael YC Chia, Yih Yng Ng, Shalini Arulanandam, Benjamin SH Leong, Marcus EH Ong
03	<b>Singapore Basic Cardiac Life Support and Automated External Defibrillation Guidelines 2021</b>	Lim Swee Han, Chee Tek Siong, Wee Fong Chi, Tan Siew Hong, Loke Jun Hao, Leong Siew Hon Benjamin
04	<b>Singapore First Aid Guidelines 2021</b>	Faraz Zarisfi, Pek Jen Heng, Oh Janice, Loke Jun Hao, Lim Swee Han
05	<b>Singapore Advanced Cardiac Life Support Guidelines 2021</b>	Ching Chi Keong, Benjamin Leong, Praseetha Niar, Chan Kin Chai, Eillyne Seow, Francis Lee, Kenneth Heng, Lim Toon Wei, Daniel Chong, Yeo Khung Keong, Lim Swee Han
06	<b>Beyond Return of Spontaneous Circulation – Update on Post-Cardiac Arrest Management in the Intensive Care Unit</b>	Chia Yew Woon, Lim Shir Lynn, Julian Kenrick Loh, Benjamin Leong Sieu-Hon, Marcus Ong Eng Hock
07	<b>Extracorporeal Life Support in Adult Out-of-Hospital Cardiac Arrest</b>	Lim JH, Chakaramakkil MJ, Tan BKK
08	<b>Life Support Course for Nurses: Beyond Competency Training</b>	Teoh Yen Tjuin Eugene, Ms Jenny Chew Jok Hiok, Ms Lee Ai Ling Irene, Ms Umadevi Panneer Selvam, Wee Fong Chi
09	<b>Singapore Paediatric Resuscitation Guidelines 2021</b>	Gene Ong Yong-Kwang, Tham Lai Peng, Mok Yee Hui, Jacqueline Ong SM, Lee Khai Pin, Sashikumar Ganapathy, Chong Shu-Ling, Pek Jen Heng, Chew Su Yah, Lim Yang Chern, Germac Shen Qiaoyue, Jade Kua, Josephine Tan, Ng Kee Chong
10	<b>Singapore Neonatal Resuscitation Guidelines 2021</b>	Agnihotri Biswas, Selina Kah Ying Ho, Wai Yan Yip Khadijah Binti Abdul Kader, Juin Yee Kong, Kenny Teong Tai Ee, Vijayendra Ranjan Baral, Amutha Chinnadurai, Quek Bin Huey, Yeo Cheo Lian

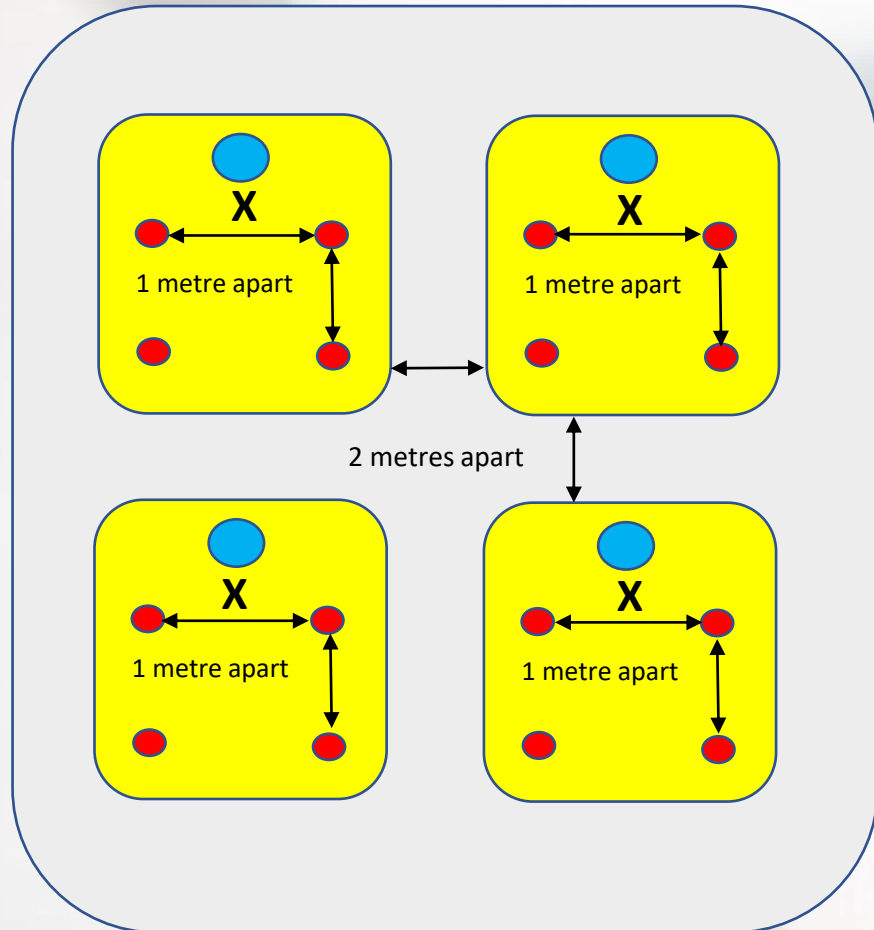
*The above papers are expected to be published by Singapore Medical Journal in September of 2021*

# Additional safety measures during CPR training class

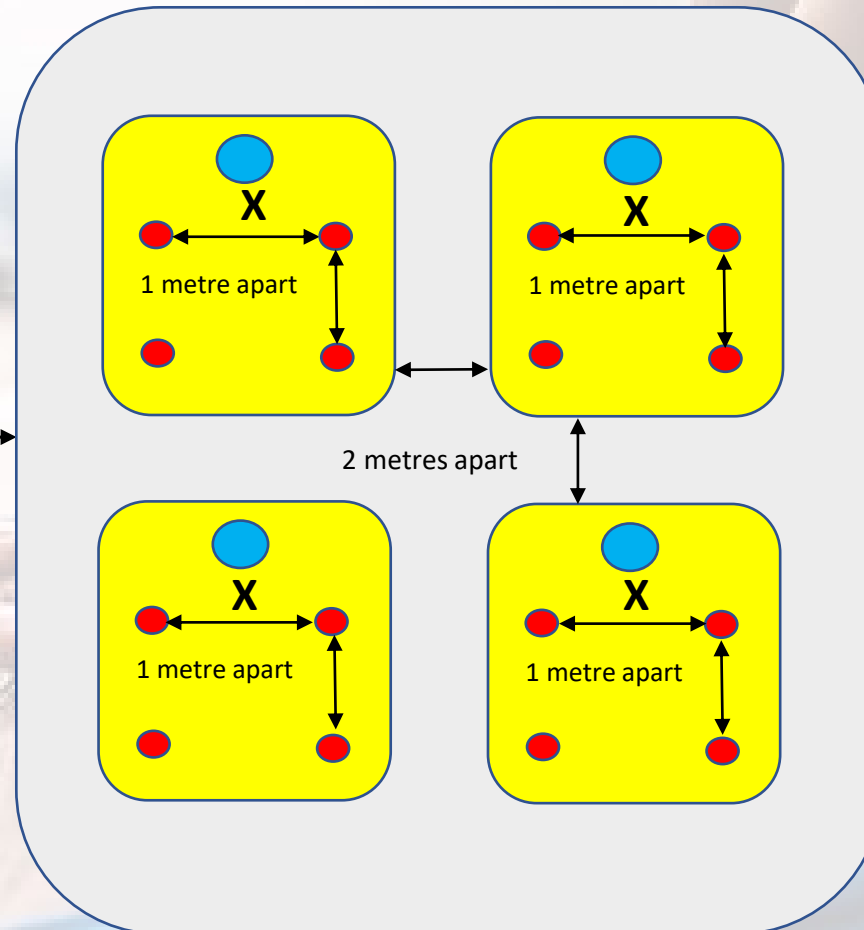
- During COVID times, all learners are required to use the SafeEntry system (a national digital check-in system) and Trace Together (a national contact tracing mobile application or token/device) before they enter training premise.
- SRFAC requires learners to scan a QR code upon registering
- Twice-daily temperature checks before class for all learners and staff.
- Learners/staff who are found unwell are to seek medical attention immediately.
- Wearing of masks at all times.
- Washing of hands before and after each practice sessions or after breaks.
- Disinfection of manikins and training aids before and after use.
- Cleaning and disinfection of training space and common touch points after every class.



## Class 1



## Class 2



Manikin to Learner ratio  
(exclude instructor)

- 1:4 (Singapore)
- 1:3 (Korea)
- 1: 1 (Japan)
- 1: 1 (The Philippines)

Size of each group

- 4 pax (Singapore)
- 5 pax (Korea)
- 6 pax (Japan)
- 10 pax (The Philippines)

\*Staggered reporting and break times if there are multiple classes conducted concurrently

● Instructor      X Manikin      ● Learner

# WRAH 2021: Singapore

- Celebrating World Restart a Heart Day as a virtual event on 17<sup>th</sup> October 2021.
- Short video with cardiac arrest survivors and highlight the importance of bystander CPR and public AED.
- Panel discussions by heart specialists and healthcare professionals will talk about heart diseases and importance of bystander CPR.
- More details will be made available closer to date.



# Reminders

- The entire Townhall session will be recorded and uploaded on the SRFAC YouTube channel.
- Please mute your mic to avoid disruption during the presentation.
- You may post your questions (if any) in the Zoom chat function below and we may address them during the respective Question and Answer section.