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Implementation of Indian Society of Anesthesiologists' cardiopulmonary resuscitation guidelines: A bumpy road ahead?

The Indian Society of Anesthesiologists (ISA) published its guidelines on cardiopulmonary resuscitation (CPR) customized for Indian adult patients.^[1-3] The need for this India-specific guidelines has long been felt. To address this concern the ISA recently constituted a “*Resuscitation Council*” for framing and implementing these guidelines. This is a commendable effort. The resuscitation council of ISA, for better implementation, simplicity, and greater efficacy has formulated three basic guidelines: One for layperson (compression only life support—COLS), another one for doctors and paramedics to resuscitate cardiac arrest victims outside hospital (basic cardiopulmonary life support—BCLS), and third one for in-hospital cardiac arrest victims by doctors and paramedics (comprehensive cardiopulmonary life support—CCLS).^[1-3]

While the guidelines have been framed, the key task that will determine the success or failure of these guidelines is their pan-India implementation. As of now, the American College of Cardiologists/American Heart Association (ACC/AHA) CPR guidelines are the most widely practiced guidelines in India. They are ingrained in all the CPR training programs in the country, and have almost attained the status of being considered “gold standard.” These indigenous ISA CPR guidelines over time are required to replace the ACC/AHA guidelines. Leading medical training institutions (e.g., All India Institute of Medical Sciences, New Delhi, India) known to influence medical education policies and curriculum are also imparting CPR training as per ACC/AHA-based guidelines.^[4]

All members of ISA (including the authors of this study) would be keen to see the successful implementation of the new guidelines. It is known that there are two aspects in the entire process to have successful implementation

of ISA guidelines: (1) Need to convince the existing CPR trainers that the AHA/ACC guidelines do not meet the requirements of the healthcare system in India. (2) Need to show that how the newly formulated ISA guidelines will overcome this weakness, and are better than AHA/ACC guidelines, and therefore should be followed [Table 1]. The authors feel this would be a challenging task, more so when there are no clinical studies based on the ISA guidelines which have been introduced recently. It would also not be easy to convince the present-day trainers to dismantle the existing training program and replace it with the ISA guidelines.

Further, it must be appreciated that CPR is not a domain restricted to anesthesiologists. CPR is multidisciplinary. Review of literature reveals that an earlier effort was undertaken to meet the same objective: Devising CPR guidelines for Indian subcontinent and published as “Society Consensus Guidelines for Resuscitation in India” and even had a dedicated website for achieving this target. It had participation of various scientific/professional bodies (including ISA).^[5] It would have been appropriate if the present effort was a continuation of the previous effort, more so when ISA is associated with both.

The rationale behind categorization of ISA CPR guidelines is the infrequent availability of certain devices such as automated external defibrillators (AEDs), and limited feasibility of transferring the patient to appropriate higher facility.^[6] India is a vast country and the rural–urban divide is on the decline. The Government of India is also taking efforts to ensure that latest technology in the field of healthcare is made available to all. This makes it even more important to teach the general population about the use of advanced technologies such as AEDs, especially when in the current-day scenario, they are available

Table 1: Assessing strength and weakness of ISA guidelines as compared to ACC/AHA guidelines

Strength of ISA guidelines 2017 (over ACC/AHA guidelines)

1. Simplified and customized for Indian conditions
2. Local language/hindi included in the algorithm
3. Use of mobile phone on speaker mode encouraged.
4. Rate of chest compressions- 120/min (to establish no ambiguity and to prevent number of compressions going below 100)
5. Causes of cardiac arrest: New mnemonic (HIT THE TARGET) to include 2 new causes; namely raised intracranial pressure and glucose (hypo/hyperglycemia)
6. Mentions about the protocol to be followed if difficult airway encountered while advanced airway placement

Shortcomings of ISA guidelines 2017 (over ACC/AHA guidelines)

1. Variable local languages/dialects across India which cant be known by everyone
2. Local emergency number to be used which varies from state to state. 112 (plan to implement pan India since JAN 1 2017 not mentioned in ISA guidelines)
3. absence of certified trainers for ISA specific CPR guidelines
4. Doesnot mention about the use of Naloxone
5. Validates use of carbon dioxide detectors for confirmation of advanced airway placement, which are not reliable
6. Doesnot mention about the use of cardiac/chest echo cardiography even in hospital settings
7. Doesnot include use of central venous oxygen saturation for assessing efficacy of resuscitation measures (even for in hospital settings)

for public use at metro stations and airports, which are accessed by people from all walks of life. Factors such as cost-cutting, user-friendliness, and technical simplicity should not become pretexts for compromise on quality of CPR training. Lack of AED training could cost human lives. Every citizen, including Indian citizens, deserves highest quality CPR.

Of late, India has become the hub of medical tourism with a large number of international patients availing medical facilities in reputed corporate hospitals, having Joint Commission International (JCI) accreditation. There are at least 38 institutions in India which are accredited to the JCI of United States of America.^[7] Some of them had conducted training programs based on ACC/AHA guidelines.^[8]

Another important aspect that must be looked into is the use of naloxone. ACC/AHA 2015 guidelines suggest use of naloxone by “trained lay rescuer and BLS provider” in patients with known or suspected opioid overdose who are unresponsive with no normal breathing but a pulse present.^[9] However, there is no indication suggested on the use of naloxone in the ISA

guidelines. This can turn out to be a major weakness of the ISA guidelines. India is a vast country with states and regions suffering from menace of narcotic abuse. Thus, there is a likelihood to find a victim of respiratory arrest who would respond to naloxone.

An exhaustive effort has no doubt, been put in to devise the present guidelines. It will require coordinated efforts of all those involved in providing resuscitation and extensive publicity through media advertisements and websites of institutes and dedicated training centers across the country to reach the desired goal of uniform indigenous CPR guidelines.

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Conflicts of interest

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