

Need for the development of national cardiopulmonary resuscitation guidelines

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The cardiopulmonary arrest can happen in many situations and places warranting immediate management. There are many guidelines promulgated around the world for management of such victims. The guidelines provide safe, evidence base practice for optimal outcome of the patients along with appropriate support to physicians and health care system. This is in current line with a paradigm shift towards evidence based medicine approach in clinical practice.

In medicine, guideline is conventionally referred to a document that aims to streamline the clinical decision and management effectively and timely. The guidelines are a way for guiding the performance of resuscitation in an optimal way and may not be the only way. Guidelines documents are different from standards as they remain flexible, systemically developed evidence based statements and thus suits in clinical practice. Such document helps in judging the standard of care at all levels and raise quality of care. The guidelines including algorithms for cardiopulmonary resuscitation exists for various nations around the world^[1-3]. It is known fact that structured guidelines improves the survival of cardiac arrest victims irrespective of the place^[1,2]. However, a single algorithm for cardiopulmonary resuscitation may not be suitable universally. The formulation of guidelines requires consideration of local practice, logistics, and infrastructure for the management of victim of cardiopulmonary arrest in a evidence manner. This becomes more evident in region like India where wide spectrum of variations is seen in many aspects of patient care. Guidelines need to be made which is flexible so that resuscitator may tailor it to suit to their clinical practice based on patient requirement. It is also believed that guidelines that are well suited to local

needs are well accepted and brought into clinical practice with lesser conflicts. But on the other hand, flexibility should not hamper the basic ethos of the guideline and still should remain evidence based. The algorithms should be easy to understand and practice, especially when struck in an emergent situation like that of sudden cardiac arrest. The presence of well-structured guideline and algorithm for cardiopulmonary resuscitation would in fact improve the victim overall outcome.

The formulation of guidelines would require a dedicated task force with inputs from all the stack holders with a background awareness of local needs. The basic principle of answering each aspect of guidelines should be based on PICO (Population, Intervention, Comparator and Outcome) format. In the absence of existing local data, the international data may be extrapolated based on expert opinion. Finally consensus-based management recommendations need to be formulated. This approach should keep in mind the variable situations in the country and thus guideline needs to be tailored in such a way that it is applicable to majority without losing the sheen of evidence based approach.

The guideline for a particular region would require data of that particular area. The best source of such data would be to have a registry, wherein all the cardiopulmonary

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arrests are documented and may be used for guideline development. Absence of such registry in India remains a major lacuna hampering the local need to be incorporated in guideline. Registry aids in data collection in a standardized manner and further improving in the revision of the guidelines with more acquisition of the data. Also presence of a guideline and continuous collection of data would bring out the shortcomings in the guidelines and thus the need for revising the guideline from time to time.

The guideline should also focus on bringing lay person into the team of resuscitator in simple and lucid way. There should not be difficult to understand medical jargon or skill by the layperson. The bystander may not be expected to learn a skill that is either too difficult to learn or retain. The core emphasis should not be diluted with many skills, which though essential but may not be at priority. There should be a mechanism for repeated sensitization and training at frequent intervals as bystanders may not be using the skills quite frequently and thus skill may get perished. The use of social media and mobile based apps would be a welcome step as present generation is well comfortable using these gadgets. The lack of available infrastructure like pocket mask and defibrillator may deter the bystander to get confused with various steps of internationally published guidelines for resuscitation by lay persons.

The medical transport facilities with fully equipped devices for advanced resuscitation may not be universally available. The guidelines should be formulated in such way that in spite of these shortcomings the victim gets maximum benefit with improved outcome. This could only be achieved with simple and easy to do steps with minimum infrastructure. The guidelines need to be in complete in itself for its use at various places like in and out of hospital to avoid any confusion. Finally it requires a dedication and acceptance for any guidelines to improve the outcome of a cardiac arrest victim. Also, steps have to be ensured for appropriate dissemination and sensitization of the public at large to use it. This would require training at all levels. The other issue that remains is variations in teaching and training of the cardiopulmonary resuscitation.

In the absence of structured program, the variation exists at execution of skill during resuscitation as different people will follow the different guidelines with some variability. The guidelines should emphasize not only academics related to algorithms and technical core skills but also should include non-technical skills like team approach, behaviours, sense of dedication and communications. These soft skills are also essential for an optimal outcome for the victim with cardiac arrest. Another concern is the acceptability of the guidelines in clinical practice. The critical appraisal of the existing literature is necessary to prevent any conflict of interest or variations in the target population for which guidelines are prepared. At times, absence of robust evidence, algorithm uses expert opinion and may differ from opinion of the clinician with regards to clinical practice^[4,5]. The algorithm approach for cardiopulmonary is impacted by the cognitive domain and attitude of the resuscitator as well. So, we need an attitudinal change for guideline acceptance as well.

To conclude, our national cardiopulmonary resuscitation guidelines are utmost warranted. Also, there is dire need of a registry to understand our requirements so as to revise subsequently based on the collected information.

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