

Resuscitation Ladder – An Innovative Method of Learning Resuscitation

Shahan Waheed

Emergency care constitutes about 50% of the total disease burden in low and middle-income countries¹. However, many low-middle-income countries continue to deal with communicable diseases and observe a rise in non-communicable diseases. Most of the deaths reported in emergency departments of Pakistan are from sepsis, myocardial infarction, cerebrovascular accident, pneumonia, upper GI bleed, cardiogenic shock, pulmonary embolism, and respiratory failure¹. The critical presentation outcome of these common presentations can be decreased by providing timely and effective resuscitation in the emergency room. Many national and international resuscitation courses are run in Pakistan. The majority of these courses are based on data from developed countries with little or no focus on the emergency medicine dynamics of Pakistan.

Additionally, current educational offerings of life support courses are either face-to-face or standardized online courses falling short, with learners demonstrating a decay of knowledge and skills over time². Implementation of knowledge and skills learned in these courses are affected in pressure situations and in places where resources are limited. This ultimately translates to suboptimal clinical care and poor survival outcomes. Learning in emergency medicine is mainly dependent upon algorithms and guidelines that differ in clinical practice of different regions and demonstrate recall problems due to anxiety, stress, and human factors that interplay during actual resuscitation scenarios³.

Department of Emergency Medicine, Aga Khan University Hospital

Correspondence: Shahan Waheed
Department of Emergency Medicine, Aga Khan University Hospital
Email: Shahan.waheed@aku.edu
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In the current editorial, I am putting forth an innovative emergency medicine resuscitation learning method that is practical and has shown promise in resuscitation learning. Developing resuscitation skills is like climbing up a skills ladder with three steps figure 1. Step 1 (alpha) – Approach. Step 2 (bravo) – Skills. Step 3 (Charlie) – Pressure. In step 1, the resuscitation skills are broken down into smaller, more manageable parts, which includes an approach to a critically ill patient, Basic Life Support (BLS), Advance Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS), and Advance Trauma Life Support (ATLS). In step 1, a beginner assessment framework is provided to the learner. In this step, each part is kept on refining by practice.

A learner is expected to have the understanding and mastery in managing each of the different aspects of resuscitation. Once that has been practiced and signed off, the learner will be allowed to enroll in Step 2, skill. In step 2 (bravo), technique becomes a skill. In performing a technique during resuscitation, the focus is on running through a standard procedure. In executing a skill, the focus is on engaging with the immediate circumstances, which includes making specific adjustments to have the most efficient effect. In this step, the learner adapts the technique in a simulated situation. The skills like defibrillation, cardiopulmonary resuscitation, cardioversion, central venous line insertion, chest tube insertion, needle thoracentesis, and endotracheal intubation are practiced in this step. The situation in this step is not demanding, but it is practiced on high fidelity simulation that is developed for this learning method⁴.

The scenarios presented in this step resemble actual resuscitation scenarios faced by emergency medicine attending or taken up from monthly morbidity and mortality meetings. The last step of the resuscitation ladder is step 3 (Charlie) – pressure. Uncertainty is a core feature in dealing with resuscitation cases in the

emergency room in pressure situations. When learners go into the resuscitation room, they are unaware of what critical care scenarios they will be dealing. This changes the overall management perspective. In step 3, the learner is presented with situations in which they feel under control. A new twist is unexpectedly given to test their ability to adjust during their performance, which in actual resuscitation scenarios is not practiced. In the resuscitation ladder, the learner needs to work through all three steps up and down the ladder to achieve mastery so that they'll be able to stand up under pressure situations of resuscitation in the emergency room. Neglecting steps 1 and 2 will mean that the foundations aren't reliable. Ignoring step 3 represents the learner is vulnerable when pressure situations are put forth. The step ladder aims to introduce complexity in a practical manner yet based on actual case presentation and management that seem to vary in every emergency department owing to resources and skills.

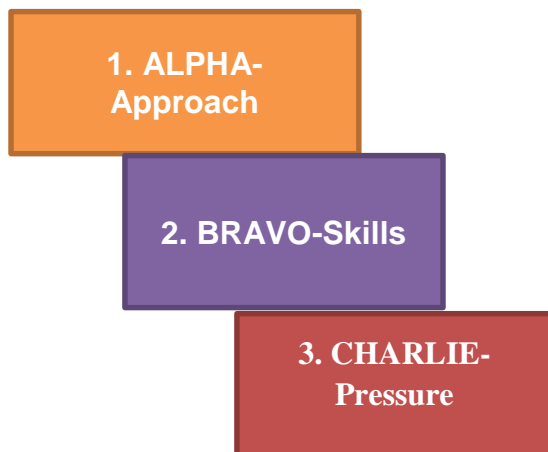


Figure 1: The Resuscitation Ladder shows the three sequential steps of learning.

“Resuscitation Ladder” is a learning model that is developed considering the issues and gaps observed during resuscitation. The model is used in the “resuscitation in the emergency department (RED)” workshop and is well appraised. There is a need to evaluate the effectiveness of this model through better study designs and gather evidence that could be used in learning resuscitation in the emergency room of low- and middle-income countries. The model gives a

unique learner perspective and may prove beneficial effective translation of knowledge and skills in actual practice.

References

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