



## ACFAS Advisory Sub diaphragmatic Thrusts and Drowning Victims

### **Overall Recommendation including any Standard, Guideline or Option:**

Subdiaphragmatic abdominal thrusts are neither effective nor safe methods for attempting water removal from the airway or lungs and for the treatment of a drowned person. No scientific literature supports the idea that aspirated water obstructs these patient's airways thus hindering ventilations. Since no scientific study has shown water can be removed from drowned people's airways or lungs through subdiaphragmatic abdominal thrusts current Guidelines for Emergency Care and Education remain the treatment standard for a drowned person.

### **Recommendations and Strength:**

**Standards:** Manage a drowned person victim with airway, breathing or circulatory problems the same as any other patient with airway breathing or circulatory problem. The one variation being the need for removal from the water as part of the care rendered.

**Guidelines:** Manage drowned child or infant with airway, breathing or circulatory problems the same as any other patient with airway breathing or circulatory problem. The one variation being the need for removal from the water as part of the care rendered

### **Options:**

### **Questions to be addressed:**

After removing a person in respiratory or cardiac arrest from the water, what is the first step a first responder should carry out?

### **Introduction/Overview:**

The International Liaison Committee on Resuscitation (ILCOR) conducts a scientific evidence review and the American Red Cross (ARC) uses this review as one of the sources to provide Guidelines for Emergency Care and Education which apply but are not limited to people in respiratory or cardiac arrest. The 2005 Guidelines for Emergency Care and Education state if a victim is in cardiac arrest, the rescuer should begin CPR immediately. If, after repositioning the patient's airway ventilation efforts are not effective, the rescuer should try to clear the airway by using age-appropriate methods for relieving a solid foreign body. The ILCOR evidence evaluation is supported by multiple professional and scientific organizations including the American Academy of Pediatrics, the American College of Cardiology, and the American College of Emergency Physicians and the Institute of Medicine of the National Academy of Sciences.

Despite consensus which is part of the ILCOR scientific evidence review process, Henry J. Heimlich MD, has advocated that when treating drowned people, subdiaphragmatic abdominal thrusts should be tried before CPR is given. Dr. Heimlich asserts aspirated water obstructs the patient's airway and significantly hinders ventilation of the lungs. He argues subdiaphragmatic abdominal thrusts will relieve the alleged airway obstruction, remove water from the patient's lungs, and should be continued until no water or fluid flows from the patient's mouth.

### **Summary of Scientific Foundation:**

The first step after removing a drowned person from the water should be to obtain an airway, start rescue breathing and deliver cardiac compressions. The 2005 American Red Cross Guidelines for Emergency Care and Education provide one approach to patients with airway, respiratory and cardiac emergencies without variation for the techniques applied to the near drowning patient. The one exception is the insertion of a step for removal from the water.

Studies have shown that there is no need to clear the airway of aspirated water. Only a modest amount of water is aspirated by the majority of drowning victims and it is rapidly absorbed into the central circulation. Therefore, it does not act as an obstruction in the trachea (Institute of Medicine Report Rosen, Stoto, & Harley, 1995). It has also been shown that some victims do not aspirate fluid because they develop laryngospasm or experience breath-holding (Modell, 1993). An attempt to remove water from the breathing passages by any means other than suction (e.g., abdominal thrusts or the Heimlich maneuver) are unnecessary and potentially dangerous (Institute of Medicine Report, Rosen Stoto, & Harley, 1995). The routine use of abdominal thrusts for drowning victims is not recommended. The 2005 guidelines also eliminated the phrase "Heimlich maneuver" and replaced it with the more descriptive "abdominal thrust."