



World Water Safety

INTERNATIONAL LIFE SAVING FEDERATION

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MEDICAL POSITION STATEMENT - MPS 26

RESUSCITATION ONBOARD RESCUE BOATS

NOTE: ILS Medical Position Statements are intended for use only by trained lifeguards with a duty to respond.

PLAIN LANGUAGE SUMMARY

Cardiopulmonary resuscitation (CPR) can be successfully performed onboard most rescue boats. If it can be safely performed, CPR should be initiated immediately while at the same time transporting the patient to an appropriate EMS/Ambulance handover point or the shore.

BACKGROUND

Safety and prompt rescue are important principles of lifesaving. For patrolling, and to expedite rescue, lifeboats and inflatable rescue boats (IRB) [Figure 1] are routinely used by lifeguard and rescue agencies worldwide. Some agencies have included on-board resuscitation in their training and patient-care protocols.¹ Lifeguards/crews may be faced with time-critical decisions when rescuing an unconscious patient: either transport the victim to shore immediately and delay resuscitation, or provide essential life-saving care during transportation, which may lead to transport delays. Despite decades of use in lifesaving operations, data supporting the provision of essential life-saving care during transportation is lacking.

However, several recently published studies suggest that resuscitation in lifeboats is feasible. On-board resuscitation (OBR) has been analysed aboard different sized vessels and in

variable maritime conditions. Studies have reported the quality of CPR while adrift and at different speeds in IRBs, and in fishing boats where the operators were trained in CPR. Studies have also analysed the use of AEDs during rescue boat operations.^{2,7-10}

These studies show that performing CPR in lifeboats is difficult; considerations must be made for the sea conditions, the size of the boat, and the boat's speed (at higher speed CPR quality decreases).^{2,6,8} However, if conditions are favourable (meeting requirements for rescuer safety, training, and experience in resuscitation, victim status, and distance to the landing point)^{8,11}, OBR should be actively considered, since earlier resuscitation is linked to markedly improved outcomes. Szpilman's study of early in-water ventilation supports this premise.¹²

The use of AEDs, as recommended in the European Resuscitation Council drowning protocol, has been shown to be viable and reliable in IRBs.^{9,13} Unfortunately, when studied in real-world operations by Seesink et al., no direct correlation to improved survival was found, possibly due to prolonged response times, the small sample size, and only 17% of patients having a shockable rhythm.¹⁰ More studies are necessary to evaluate the use of AEDs in lifeboats.



Figure 1. Surf lifeguards training in onboard resuscitation in an IRB (Spain) (Photos Roberto Barcala-Furelos)

STATEMENT

1. The literature suggests that a lifeguard or person with experience in resuscitation on IRBs can perform CPR on an IRB as well as larger boats. These skills, however, are based on manikin studies with expert lifeguards and usually in favourable maritime conditions. More research is needed in real-world situations.
2. The speed and size of the rescue boat are the limiting factors in OBR. Smaller boats, or boats traveling at higher speed, are less stable and require greater operator skill. Operators must weigh the benefit of operator safety and procedural effectiveness against

the knowledge that with every minute defibrillation is delayed, the patient's chance of survival decreases by about 10%. Operators must also consider the time delay to obtaining assistance from EMS/ambulance. If the delay is significant, starting OBR is recommended.

3. Performing CPR while underway requires significant skill and effort and creates issues of rescuer safety and fatigue. Physical fitness, safety awareness, and specific and recent skills training is essential for any organisation considering OBR.
4. It is possible that the space or design of the lifeboat forces the lifeguard to perform CPR in non-traditional positions, such as over-the-head CPR. This possibility must be trained for.
5. OBR training should not be limited to lifeguards but should incorporate the greatest number of first-aiders as possible, including recreational boaters, fishermen, and other water users.
6. AED and oxygen use are feasible in OBR and should be encouraged in the management of drowning patients in respiratory distress, provided rescuers have adequate training and the use of such adjuncts can be performed safely.

LEVEL OF EVIDENCE

This document is based on expert consensus.

POTENTIAL CONFLICT OF INTEREST STATEMENT

None of the participants in the consensus process leading to this position statement has a conflict of interest with the stakeholder industry, technology, persons or organisations that are identified and/or impacted by the position statement.

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APPROVAL

Position Statement approved by the ILS Board of Directors on XXXXXXX