

EDITORIAL

The advisory board for the implementation of the chain of survival: a leap into the future of lay resuscitation in Italy

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The poor outcomes currently observed in out-of-hospital cardiac arrest (OHCA) are likely attributable to delays in the initiation of cardiopulmonary resuscitation (CPR), ineffective and low-quality chest compressions, and limited or delayed access to defibrillation.[2-3] The Italian Agency for Healthcare Quality (AGENAS) has established an 8-minute call-to-intervention time in urban areas and 20 minutes in rural areas. While the Italian Emergency Medical Services (EMS) generally meets these targets, in the context of cardiac arrest and its associated anoxic cascade,[4-6] resuscitation efforts initiated solely by EMS often occur too late. Consequently, early intervention by laypersons is crucial for improving survival outcomes.

The concept of the *Chain of Survival*, first introduced in 1968, underscores the interdependency of time-critical interventions in cardiac arrest. Adopted by the European Resuscitation Council in 2005, it has since been refined to highlight the relative importance of each link in successful resuscitation efforts.[7] Despite efforts to emphasize the first three links - recognition, calling for help, and early CPR and defibrillation - Italy's rates of lay rescuer-performed CPR and defibrillation remain alarmingly low at 32% and 3.2%, respectively, compared to the European averages of 56.7% and 28%.[1,8,9]

To address these disparities and promote a culture of resuscitation among laypersons, the Italian Resuscitation Council (IRC) launched the *Advisory Board for the Chain of Survival* in December 2023. This advisory board comprises nine members, including healthcare professionals experienced in public CPR education and lay rescuers actively engaged in cardiac arrest awareness initiatives.

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The board's first meeting with the IRC steering committee occurred in January 2024, focusing on prioritizing the implementation of the Chain of Survival across four key settings: schools, sports, workplaces, and institutional advocacy. Among these, school-based education was identified as the top priority.

The following key objectives were outlined (Figure 1):

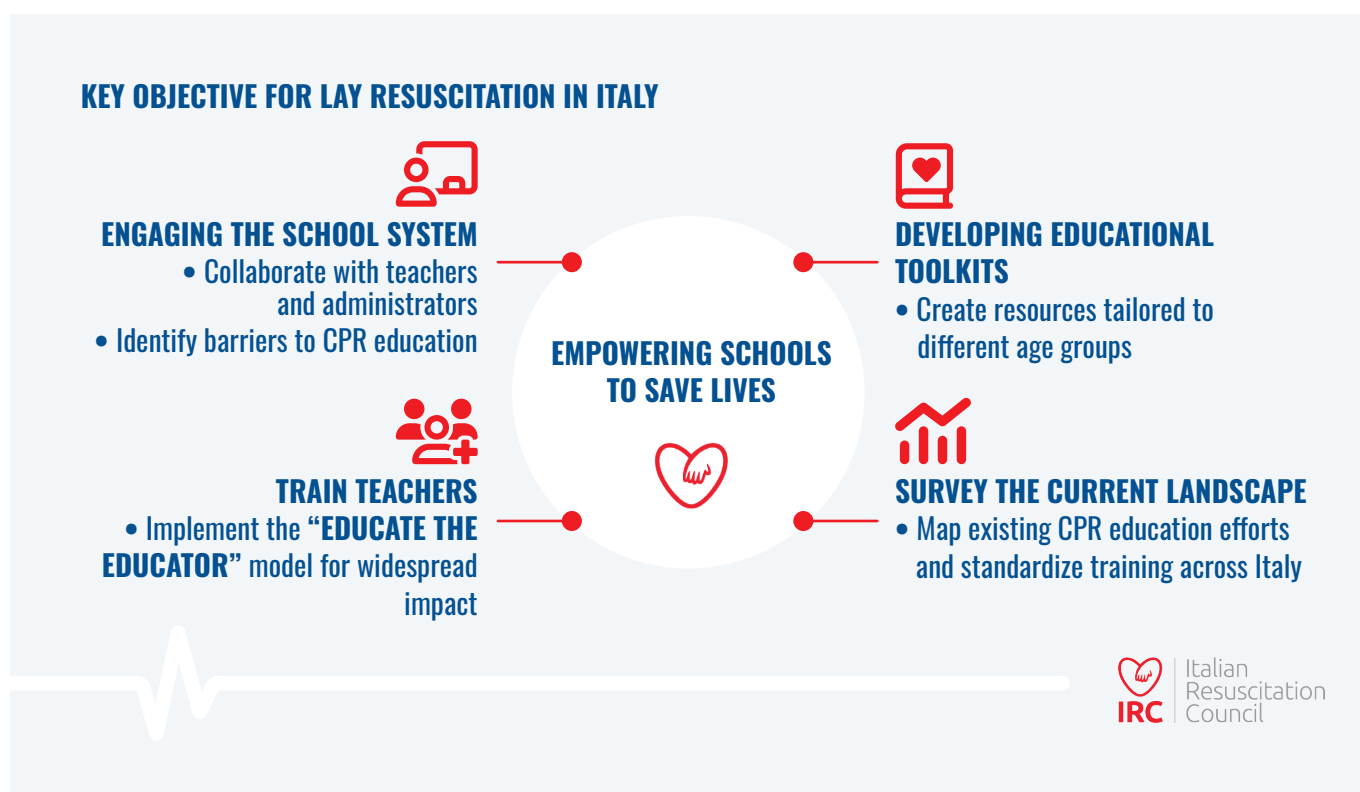
- 1. Engaging the school system:** Develop strategies to reach teachers and students, emphasizing the importance of CPR while gathering insights into barriers and needs related to CPR education.
- 2. Developing educational toolkits:** Design age-appropriate tools and resources to effectively communicate CPR concepts to various student age groups.
- 3. Prioritizing teacher training:** Standardize CPR training for teachers to implement an "educate the educator" model, ensuring sustainability and widespread dissemination.
- 4. Assessing the current landscape:** Conduct a comprehensive survey to map existing CPR education models across Italy, addressing the variability in the delivery of CPR training nationwide.

This initiative aims to strengthen the first three links of the Chain of Survival and improve OHCA outcomes in Italy through widespread public awareness and training. Prioritizing school-based education, as highlighted in the *Kids Save Lives* manifesto, is seen as the most effective strategy to increase bystander CPR rates and foster a generational shift toward a CPR-aware society.[10]

The advisory board will establish a sustainable framework for CPR education, starting with the development of standardized training programs and age-appropriate toolkits for teachers and students. Key components of this initiative are expected to be in place by the 2024-2025 academic year, including a nationwide recognition of existing local educational programs. Over time, the board aims to integrate CPR education into the national curriculum, ensuring consistency across Italy.

These efforts are expected to increase bystander CPR rates and improve OHCA survival. Progress will be monitored through IRC forthcoming Cardiac Arrest Registry, enabling the assessment of training outcomes and community impact.

FIGURE 1 - Key objective of advisory board for the Chain of Survival.



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