

# IRC 2021

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NUOVE LINEE GUIDA 2021:  
RIANIMAZIONE CARDIOPOLMONARE  
POST-LOCKDOWN



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# FIRST AID IN PEDIATRIA

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## European Resuscitation Council Guidelines 2021: First aid

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### Abstract

The European Resuscitation Council has produced these first aid guidelines, which are based on the 2020 International Consensus on Cardiopulmonary Resuscitation Science with Treatment Recommendations. The topics include the first aid management of emergency medicine and trauma. For medical emergencies the following content is covered: recovery position, optimal positioning for shock, bronchodilator administration for asthma, recognition of stroke, early aspirin for chest pain, second dose of adrenaline for anaphylaxis, management of hypoglycaemia, oral rehydration solutions for treating exertion-related dehydration, management of heat stroke by cooling, supplemental oxygen in acute stroke, and presyncope. For trauma related emergencies the following topics are covered: control of life-threatening bleeding, management of open chest wounds, cervical spine motion restriction and stabilisation, recognition of concussion, cooling of thermal burns, dental avulsion, compression wrap for closed extremity joint injuries, straightening an angulated fracture, and eye injury from chemical exposure.

### Introduction and scope

In 2015 the European Resuscitation Council published its initial First Aid guidelines<sup>1</sup> based on the International Liaison Committee on Resuscitation (ILCOR) Consensus on First Aid Science with Treatment Recommendations published in the same year.<sup>2,3</sup> In 2015 ILCOR modified its consensus on science review process from a

five-year cycle to a continuous evidence evaluation process. This is reflected in the 2020 ILCOR Consensus on Science with Treatment Recommendations (CoSTRs).<sup>4,5</sup>

In 2016 the ILCOR First Aid Task Force assessed all the topics reviewed by the American Heart Association and American Red Cross in the 2010 evidence review<sup>6</sup> and the 13 medical Population, Intervention, Comparison, Outcome (PICO) questions, ten trauma PICO questions and one education PICO examined in the ILCOR

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## Definition of first aid

First aid is the initial care provided for an acute illness or injury. The goals of first aid include preserving life, alleviating suffering, preventing further illness or injury and promoting recovery. First aid can be initiated by anyone in any situation, including self-care. General characteristics of the provision of first aid, at any level of training include:

- Recognising, assessing and prioritising the need for first aid
- Providing care using appropriate competencies and recognising limitations
- Seeking additional care when needed, such as activating the emergency medical services (EMS) system or other medical assistance.

**Key principles include:**

- First aid should be medically sound and based on the **best available scientific evidence**
- First aid education should be **universal**: everyone should learn first aid
- Helping behaviours should be promoted: everyone should act
- The scope of first aid and helping behaviours varies and **may be influenced by environmental, resource, training and regulatory factors.**

FIRST AID 2021



# 5 TOP MESSAGES

- 1.** Only use the recovery position for casualties who do NOT meet the criteria for the initiation of rescue breathing or chest compressions (CPR)
- 2.** Use stroke scale assessment protocols for the early recognition of stroke
- 3.** When exertional or non-exertional heatstroke is suspected, immediately remove the casualty from the heat source, commence passive cooling and use additional, available cooling techniques
- 4.** To control severe-life threatening bleeding, apply direct pressure and consider the use of a haemostatic dressing or the application of a tourniquet
- 5.** For thermal burns, remove the casualty from the heat source and commence immediate cooling of the burn with cold or cool water for 20 minutes. Loosely cover the burn with a dry, sterile dressing or cling wrap

Fig. 1 - Infographic summary of key messages relating to first aid.



## EMERGENZE MEDICHE

- Posizione di sicurezza
- Posizione ottimale nel paziente con shock
- Somministrazione di broncodilatatore in caso di asma
- Riconoscimento dello stroke
- Somministrazione precoce di aspirina nel dolore toracico
- Riconoscimento dell'anafilassi
- Seconda dose di adrenalina nell'anafilassi
- Gestione dell'ipoglicemia
- Soluzioni deidratanti orali nel trattamento della disidratazione correlata allo sforzo
- Colpo di calore e raffreddamento
- Supplementazione di O2 nello stroke acuto
- Gestione della presincope

## EMERGENZE NEL TRAUMA

- Controllo di emorragie a rischio di vita
- Gestione di ferite aperte del torace
- Stabilizzazione e immobilizzazione del rachide cervicale
- Riconoscimento della concussione
- Ustioni: raffreddamento e medicazione
- Avulsione dentaria
- Fasciatura compressiva dei traumi chiusi degli arti
- Gestione di fratture angolate
- Lesioni oculari da agenti chimici



# Emergenze in età pediatrica

MANUALE PER FAMIGLIE E OPERATORI NON SANITARI  
PREVENZIONE, RICONOSCIMENTO E TRATTAMENTO  
DISOSTRUZIONE VIE AEREE E RIANIMAZIONE CARDIOPULMONARE  
CON DEFIBRILLATORE SEMIAUTOMATICO ESTERNO

Secondo le linee guida Italian Resuscitation Council  
e European Resuscitation Council 2015



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# Emergenze in età pediatrica

## MANUALE PER FAMIGLIE E OPERATORI NON SANITARI: PREVENZIONE, RICONOSCIMENTO E TRATTAMENTO

Secondo le Linee Guida Italian Resuscitation Council e European Resuscitation Council 2020-2025

**INTRODUZIONE** LE MANOVRE RIANIMATORIE DI BASE IN ETA' PEDIATRICA PER SOCCORRITORI NON SANITARI (PAEDIATRIC BASIC LIFE SUPPORT)

**CAPITOLO 1** PRIMO SOCCORSO NELLE PRINCIPALI EMERGENZE IN ETA' PEDIATRICA

**CAPITOLO 2** LO SPORT E I TRAUMI SPORTIVI IN ETA' PEDIATRICA

**CAPITOLO 3** SEQUENZA BLS PEDIATRICA (PAEDIATRIC BASIC LIFE SUPPORT) PER SOCCORRITORI NON SANITARI E INTEGRAZIONI CON NORME DI SICUREZZA COVID-19

**CAPITOLO 4** DEFIBRILLAZIONE SEMI-AUTOMATICA ESTERNA (DAE) IN ETA' PEDIATRICA

**CAPITOLO 5** MANOVRE DI DISOSTRUZIONE DELLE VIE AEREE DA CORPO ESTRANEO

**CAPITOLO 6** KIDS SAVE LIVES

### APPENDICI

1. CENTRI ANTIVELENI (CAV) E INTOSSICAZIONI DA SOSTANZE CHIMICHE in ITALIA (attivi 24 ore su 24)
2. CENTRI USTIONI in ITALIA



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## PAEDIATRIC BASIC LIFE SUPPORT

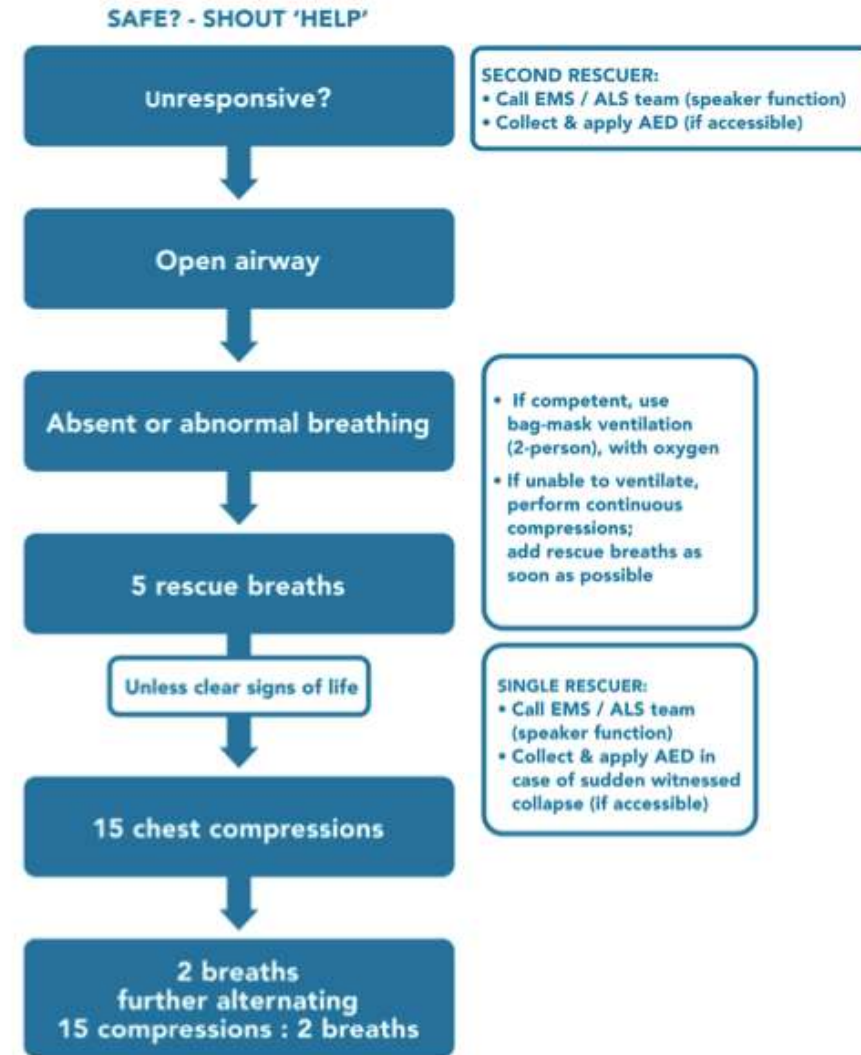
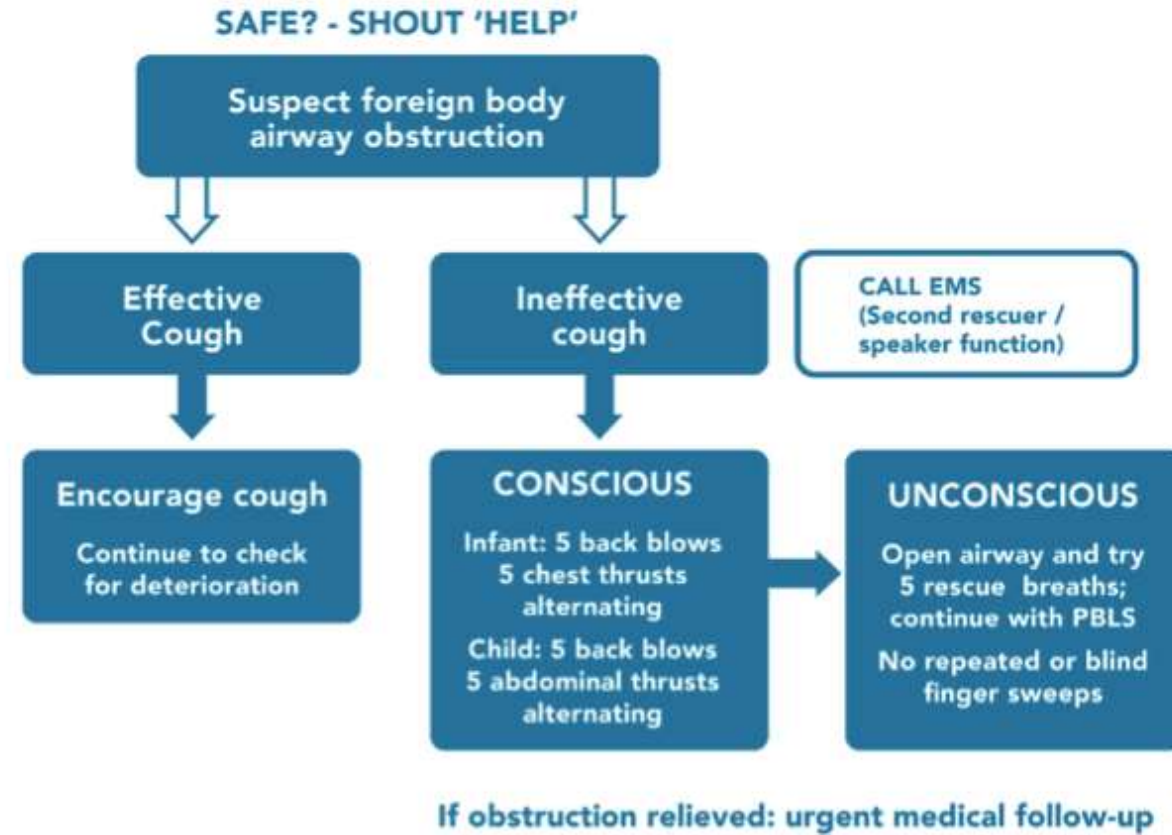


Fig. 2 - Paediatric basic life support.

Preferibile  
 rapporto compressioni : ventilazioni  
 di 30 : 2

# PAEDIATRIC FOREIGN BODY AIRWAY OBSTRUCTION



**Fig. 3 – Foreign body airway obstruction.**



## European Map of CPR Education 2020



**KIDS  
 SAVE  
 LIVES**

**A LEGISLATION**  
 Belgium  
 Denmark  
 France  
 Italy  
 Portugal  
 United Kingdom

**A SUGGESTION**  
 Austria  
 Bosnia and Herzegovina  
 Croatia  
 Cyprus  
 Czech Republic  
 Germany  
 Greece  
 Hungary  
 Iceland  
 Ireland  
 Luxembourg  
 Malta  
 Netherlands  
 Norway  
 Poland  
 Romania  
 Russia  
 Serbia  
 Slovenia  
 Spain  
 Sweden  
 Switzerland  
 Turkey

The countries with kids with green hair have a legislation about CPR education, the countries with kids with yellow hair have CPR education as a suggestion.





## Knowledge and practice of secondary school teachers about first aid

Majed Al Gharsan<sup>1</sup>, Ibrahim Alarfaj<sup>1</sup>

<sup>1</sup>Department of Family Medicine, Armed Forces Hospitals, Southern Region, Saudi Arabia

## First aid practices, beliefs, and sources of information among caregivers regarding paediatric burn injuries in Harare, Zimbabwe: A cross-sectional study

Farai Chirongoma<sup>1</sup>, Samson Chengetanai<sup>2</sup>, Cathrine Tadyanemhandu<sup>1</sup>

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2. Division of Basic Medical Sciences, Faculty of Medicine, National University of Science and Technology, Bulawayo, Zimbabwe

<http://dx.doi.org/10.1016/j.resuscitation.2016.07.068>

AP021

**Do people who graduate from a first-aid course have actual knowledge of providing first aid?**

Sylwia Korzeniowska\*, Justyna Wysocka, Emilia Kulak-Janczy, Mateusz Waskiewicz

Medical University of Lublin, Lublin, Poland

Simulation and education

**YouTube as a source of information on cardiopulmonary resuscitation<sup>☆</sup>**

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Workneh et al. BMC Emergency Medicine (2021) 21:73  
<https://doi.org/10.1186/s12873-021-00488-6>

BMC Emergency Medicine

RESEARCH

Open Access

Determinants of knowledge, attitude, and practice towards first aid among kindergarten and elementary school teachers in Gondar city, Northwest Ethiopia

Belayneh Shetie Workneh<sup>1</sup>, Enyew Getaneh Melkonen<sup>2\*</sup> and Mohammed Seid Ali<sup>3</sup>



Original research

Mixed-methods process evaluation of SafeTea: a multimedia campaign to prevent hot drink scalds in young children and promote burn first aid

Laura Elizabeth Cowley<sup>1</sup>, C Verity Bennett<sup>1</sup>, Isabelle Brown<sup>2</sup>, Alan Emond<sup>3</sup>, Alison Mary Kemp<sup>1</sup>

Bakke et al. BMC Emergency Medicine (2017) 17:6  
DOI 10.1186/s12873-017-0116-7

BMC Emergency Medicine

RESEARCH ARTICLE

Open Access

A nationwide survey of first aid training and encounters in Norway

Håkon Kvåle Bakke<sup>1,2,3\*</sup>, Tine Steinvik<sup>2</sup>, Johan Angell<sup>4,5</sup> and Torben Wisborg<sup>2,6,7</sup>




Italian Resuscitation Council





# A nationwide survey of first aid training and encounters in Norway

Håkon Kvåle Bakke<sup>1,2,3\*</sup> , Tine Steinvik<sup>2</sup>, Johan Angell<sup>4,5</sup> and Torben Wisborg<sup>2,6,7</sup>

**In Norway, 54–76% of OHCA victims receive bystander CPR, and 62–81% of trauma patients receive basic life support (BLS) from bystanders.**

First aid training is part of the national school curriculum for grades 7 and 10.

Since 2003 first aid training has also been compulsory for obtaining a drivers license.

Employees in schools and kindergartens, and fishermen are required by law to be able to perform first aid.

All other occupational groups are unregulated by Norwegian law.

**Among the respondents, 90% had received first aid training,** and 54% had undergone first aid training within last 5 years.

Willingness to perform first aid was high. Of the 43% who had been in a situation requiring first aid, 89% had provided first aid.

## Conclusions

A high proportion of the Norwegian population is exposed to situations requiring first aid actions, and the large majority is willing to act.

While first aid is part of the school curriculum, few (13%) have listed school as their source for their first aid training.





## European Resuscitation Council Guidelines 2021: Education for resuscitation

*Robert Greif<sup>a,\*</sup>, Andrew Lockett<sup>b</sup>, Jan Breckwoldt<sup>c</sup>, Francesc Carmona<sup>d</sup>,  
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Salma Shammet<sup>i</sup>, Andrea Scapigliati<sup>j</sup>, Nigel Turner<sup>k</sup>, Joyce Yeung<sup>l</sup>,  
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Gli obiettivi principali della formazione per soccorritori laici  
(**dai bambini all'età adulta**) sono:

- incrementare il numero di RCP da parte degli astanti,
- esecuzione di BLS - D efficace,
- attivazione tempestiva del soccorso avanzato



## European Resuscitation Council Guidelines 2021: Education for resuscitation

*Robert Greif<sup>a,\*</sup>, Andrew Lockett<sup>b</sup>, Jan Breckwoldt<sup>c</sup>, Francesc Carmona<sup>d</sup>,  
Patricia Conaghan<sup>e</sup>, Artem Kuzovlev<sup>f</sup>, Lucas Pflanzl-Knizacek<sup>g</sup>, Ferenc Sari<sup>h</sup>,  
Salma Shammet<sup>i</sup>, Andrea Scapigliati<sup>j</sup>, Nigel Turner<sup>k</sup>, Joyce Yeung<sup>l</sup>,  
Koenraad G. Monsieurs<sup>m</sup>*

Strategie didattiche:

- Uso di **devices per il feedback** su frequenza, profondità, rilascio e punto di reperi delle CTE (in alternativa musica o metronomo)
- **Retraining**: le skills del BLS decadono dopo circa 3/12 mesi dalla formazione e ci sono evidenze che retraining più frequenti incrementano le skills e la prontezza a proporsi in caso di necessità
- **KIDS SAVE LIVES**: non ci sono evidenze su quale sia la strategia didattica migliore per insegnare nelle scuole l'RCP.

Un esempio di approccio efficace è l'insegnamento dell'RCP da parte di **studenti di medicina**: questi incrementano le loro competenze nella rianimazione, imparano mentre formano i futuri istruttori di BLS e contribuiscono alla formazione della comunità

# FIRST AID - key points

- *CONTENUTI*
- *DIVULGAZIONE SCIENTIFICA*
- *TRAINING e RETRAINING SKILLS*
- *AUMENTO del TASSO di FIRST AID da PARTE degli ASTANTI*
- *MONITORAGGIO, RACCOLTA DATI, RICERCA*







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