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Review

ILCOR World Restart a Heart – Spreading global CPR awareness and empowering communities to save lives since 2018



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Abstract

The International Liaison Committee on Resuscitation (ILCOR) World Restart a Heart (WRAH) Initiative is helping to save countless lives by promoting a culture of preparedness and encouraging widespread lay cardiopulmonary resuscitation (CPR) training. In total from 2018 to 2023 at least 12.6 million people were trained, and 570.7 million people were reached, showing a variety of campaigns adapted to countries current situation and their culture. World Restart a Heart success is based on an annual collaboration between nations, organisations and communities, demonstrating its universal relevance and impact. Because of this it is able to adapt to varies different circumstances and presents an accessible and effective solution to a significant global health problem, saving many lives over the years by promoting bystander CPR.

Keywords: World Restart a Heart, Out of hospital cardiac arrest, Cardiopulmonary resuscitation, Awareness campaign, Public health

Background

The International Liaison Committee on Resuscitation (ILCOR) World Restart a Heart (WRAH) initiative is dedicated to improving survival after cardiac arrest worldwide, through awareness campaigns and cardiopulmonary resuscitation (CPR) training. WRAH is spreading awareness on and around 16 October each year, through global social media, basic life support training and local campaigns, under the theme “All citizens of the world can save a life” and “Your two hands can save a life”. Over recent years it has become a year-round project,^{1,2} emphasizing the global reach of the initiative and the involvement of a huge number of countries, organizations, and communities. The WRAH initiative is constantly adapting to the possibilities and priorities in the different countries, their culture and to the current situation.

WRAH has its roots in the European Restart a Heart initiative founded in 2012. It was adopted as a global initiative by ILCOR in 2018, with more and more nations, organisations, and people taking part each year. WRAH provides a powerful reminder that quick and

easy action can significantly change the outcome of cardiac emergencies. It serves as a catalyst for widespread community involvement in CPR training. Bystander CPR plays a critical role in bridging the deadly gap between when a cardiac arrest occurs and when professional medical help arrives.

Out-of-hospital cardiac arrest (OHCA) is a highly significant worldwide public health problem, being the third leading cause of death in industrialized countries.³ The rate of survival after OHCA decreases by up to 10% per minute but can be improved with prompt and effective CPR for example with bystanders.^{4,5} It can take 8 to 12 min for emergency medical services (EMS) in most developed countries to arrive after an OHCA, but the brain of the victim already starts to die after approximately 3 to 5 minutes.⁶ Bystander CPR has a proven potential to provide the key solution for improving the rate of survival after an OHCA.⁷

The five top messages of the 2021 European Resuscitation Council (ERC) resuscitation guidelines, chapter “Systems Saving Lives” contain the following recommendation: “National resuscitation councils, national governments and local authorities should: engage with WRAH. Raise awareness of the importance of bystander CPR

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and automated external defibrillator (AED). Train as many citizens as possible".⁸ It is based on the ILCOR Consensus on Science with Treatment Recommendations for lay CPR training and interventions to increase bystander willingness to perform CPR.⁹ Furthermore, in the BIG FIVE strategies for survival following out-of-hospital cardiac arrest from 2020, which highlight the most important interventions to enhance survival, WRAH is named in point one 'Community programs to increase bystander CPR', which is associated with a three-fold increase in survival from sudden cardiac arrest.¹⁰ The 2020 American Heart Association (AHA) Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care also include recommendations for efforts to increase the ability and willingness of members of the general public to perform CPR.¹¹ Thus, the recommendation of CPR training for laypersons is consistent in the most recent international consensus statements and guidelines. Laypersons are generally able to perform CPR after brief instruction or guidance from an instructor and have the ability to improve the outcome of an OHCA markedly.¹² All these recent publications point to the importance of increasing bystander resuscitation rates for improving survival, and the ERC guidelines and the BIG FIVE explicitly name ILCOR WRAH as one instrument to do that. AHA and ERC are two specific examples. However, the principles of WRAH have been adopted globally as part of the guideline process.

The aim of this article is to show the adaptability of the campaign and of the trainings to each country's current situation and their culture over the last years and how it remained active despite difficult situations (e.g. pandemic, war).

Box 1

For this narrative review, a literature search of PubMed using the search terms "World Restart a Heart" and "WRAH" (February 2024) resulted in 28 and 18 articles, respectively, of which 16 and 10 were determined to be unrelated to the initiative (they did include the words world and restart a heart in the article but had no mention of the campaign or CPR trainings or did include the abbreviation WRAH but this meant something else e.g. weedy rice at Asian high latitudes). Due to overlapping results, the literature search ended with 10 eligible articles.

In addition, new data for the most recent years as well as additional publications were provided by the international network of WRAH collaborators. For 2023 the representatives were asked to enter their collected data regarding their region in an online survey and check it again in the final manuscript. We do not know how the individual countries and organizations collected the data.

European Restart a Heart Day (ERHD) marks the beginning

The ERC launched the first European Restart a Heart idea in 2012 as a strategy to combat OHCA and raise awareness for the topic. It was launched in response to the Written Declaration signed by more than 50% of the 705 parliamentarians in the European Parliament, which recommended the introduction of a "European Cardiac Arrest Awareness Week".¹³ In the following year, 2013, the first ERHD was held in more than 20 different European countries with the theme "Children Save Lives". To mark the tenth anniversary, a KIDS SAVE LIVES event was held at the ERC Congress in Barcelona in 2023.

The development of World Restart a Heart

In 2017 the ERC presented the concept of WRAH to ILCOR, in order to expand the European success story. As a result, in 2018, the first ILCOR WRAH initiative was created and the original idea of ERHD

was therefore expanded to a worldwide level (Fig. 1). In this first year its message reached over 12.7 million people through social media and awareness campaigns, and over 675,000 people were trained in CPR worldwide.^{14,15} In 2019, 206 million people were reached through social media campaigns and 5.4 million people were trained in CPR under the slogan "iconic places".¹⁶ This involved promotion of WRAH with training held alongside locations such as the Colosseum in Rome, Sugar Loaf Mountain in Rio de Janeiro, and many other iconic locations. In the following year, the COVID-19 pandemic limited the amount of face-to-face training but WRAH was still a successful social media campaign. This time, the hashtag #MySongCanSaveLives enabled famous musicians and composers to support the messaging with music that had the same beats per minute as the recommended rate for chest compressions. In 2021, more than 2.2 million people were trained face-to-face and at least 302 million people were reached by the WRAH global collaboration. The hashtag used for this year was #CPRsavedmylife, and this enabled survivors to promote the importance of CPR.¹⁷ In 2022, WRAH reached over 50 million citizens, including training over 630,000 people from 194 countries face-to-face, with the tag line "CPR – Everyone deserves the opportunity".¹⁸

In 2023 over 3.2 million people were trained face-to-face and showed once again the adaptability of the WRAH to different situations and different countries worldwide (Fig. 2).

In total, through different adapted campaigns all over the world, at least 12.6 million people were trained, and 570.7 million people were reached through different WRAH campaigns from 2018 to 2023.

All WRAH data for face-to-face training provided is based upon self-reported data from the individual councils or organizations. While this cannot be evaluated independently, the reporting method was the same every year and councils were asked to verify it each year, so the data and the trend can be considered reliable. Clearly it is possible that many more people were trained or heard the messaging. Social media data is based on the use of the relevant hashtag #worldrestartaheart.

The adaptability of the WRAH campaign

Over the years, various events have been held via social media, face-to-face, mass training, national media, etc. and reached millions of people in almost all countries of the world. Each year, the events were individual, creative and adapted to the current situation. This enabled the WRAH's message to be actively spread even during a global pandemic. Examples of successful implementation in diverse cultural and geographical contexts are listed in the following.

In 2018, several activities were planned around the world under the "Hands Only" theme. For example, a two-month mobile tour in five states in the USA, CPR training in shopping malls in Arabia, and promotional activities supported by the Prime Ministers in Australia and New Zealand. The greatest impact in this year was reported in the United Kingdom, where CPR, based on our activities, became a mandatory part of the English school curriculum.¹⁴

For WRAH 2019, all seven ILCOR member organizations (American Heart Association, European Resuscitation Council, Heart and Stroke Foundation of Canada, Australian and New Zealand Committee on Resuscitation, Resuscitation Council of Southern Africa, InterAmerican Heart Foundation, and Resuscitation Council of Asia) participated as well as other organizations. In this year, social media campaigns had the most impact and reached 206 million people.¹⁶

Advances in technology have also played a key role in promoting CPR awareness and training. Individuals can now learn and practice CPR at their own pace through virtual reality simulations, mobile

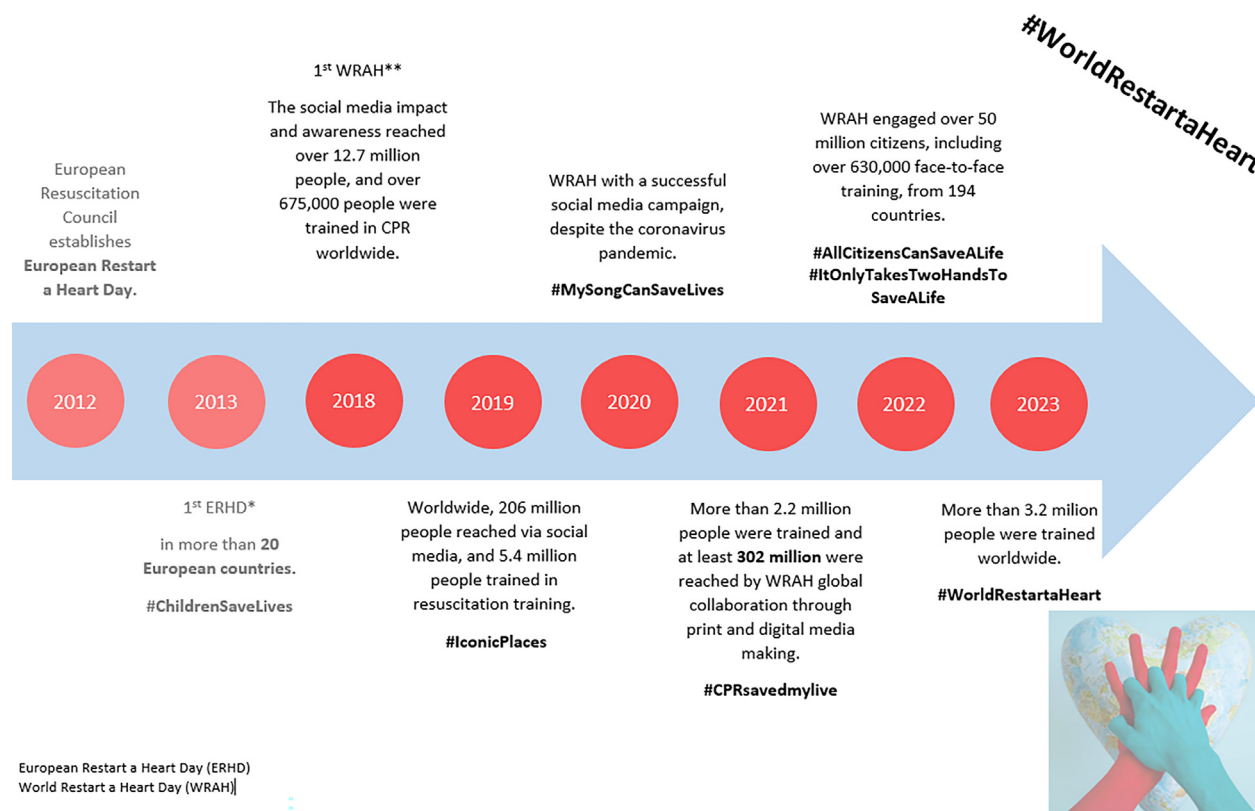


Fig. 1 – World Restart a Heart initiative – Timeline including logo.

applications, and online resources. These methods can reach a broader audience and empower communities with life-saving skills by complementing traditional training methods.

In 2020, there were no mass training events possible due to the global COVID-19 Pandemic. Therefore, most activities in this year focussed on activities that could easily be done at home, like video competitions, virtual reality apps, livestreams or digital resuscitation training. The “#MySongCanSaveLives” campaign proved to be highly successful in this year. It involved reaching out to well-known national and international artists whose songs have a beat that matches the rate for resuscitation (100–120 BPM). These artists were then invited to share their songs on their social media platforms using the hashtag #MySongCanSaveLives. The hashtag was used to spread the message to all of their followers on and around 16 October. Several renowned artist participated, including the Vienna Philharmonic Orchestra, David Garret, Andrew Lloyd Webber and many more.¹⁷

In 2021, and still because of COVID-19, WRAH continued to be primarily digital, putting the spotlight on survivors. In this year, using the hashtag #CPRsavedMyLife, stories of CPR survivors who are living because of bystander CPR were shared through social and print media platforms. Online, in-person training and awareness campaigns were organized all over the world. The growing partnerships to spread the mission with many new resuscitation councils and organisations joining the ILCOR’s seven constituent councils (e.g. the International Federation of Red Cross and Red Crescent Societies (IFRC) and the World Federation of Societies of Anesthesiologists (WFSA)), was one of the most significant features of WRAH 2021.¹

The 2022 “CPR – Everyone deserves the opportunity” WRAH initiative once again reached high numbers of people due to live in-

person demos, webinars, television and radio activities. The campaigns combined hands-only CPR instruction and awareness. This campaign was very much adapted to the current situation in each individual country, as the pandemic was no longer relevant in every country. The audience targeted for in-person and distance CPR training was diverse, including all age groups and people from many different professional backgrounds, with a special emphasis on training children.¹⁸

In 2023, different campaigns and projects for the WRAH happened worldwide. Special projects for WRAH included social media campaigns on Tik Tok in Greece, an App reach of 11,490 people in South Africa, a flashmob and the first WRAH in Romania, massive training events in Peru, the training of the whole Gujarat Police department of 65,000 people in India and the “Students Save Lives” initiative in Sri Lanka, where medical students were trained to become future trainers in CPR. In the UK, a training session has been held at the East London Mosque, which was widely covered by the South East Asian press. The awareness sessions were offered in English, Bengali and Urdu. This year the United Arab Emirates trained people with special needs in 22 Arab Countries, such as disabled people, deaf and hard of hearing people, autism families, as well as orphans, widows and elderly homes. The Ukraine in particular has chosen a special and adapted campaign in times of the current war situation. They have focused on veteran organizations and trained them in CPR, which has helped to remove many myths surrounding the topic and reduced the fear of providing first aid. In New Zealand a training event at a lower socio-economic area high school with high numbers of Maori and Pasifika students has been held and trained 13–14 year old boys. Maori and Pasifika are disproportionately affected by cardiac

| Continent | Country/Region | Organisation | People trained in-person | People witnessed live in-person demos | People attended webinars |
|------------------|----------------------|--|--------------------------|---------------------------------------|--------------------------|
| Africa | South Africa | Resuscitation Council of Southern Africa | 564,239 | N/A | N/A |
| Asia | India | Indian Resuscitation Council Federation [IRCF] | 1,152,505 | 1,709,725 | 452,238 |
| | Singapore | Singapore Resuscitation and First Aid Council | 3,200 | 3,200 | N/A |
| | Sri Lanka | Sri Lanka Resuscitation Council | 7,450 | N/A | N/A |
| | United Arab Emirates | Arab Resuscitation Council | 5,102 | 2,356 | 2,100 |
| Australia | New Zealand | New Zealand Resuscitation Council | 300 | N/A | N/A |
| Europe | Austria | Drück Mich! – Arbeitsgemeinschaft für Notfallmedizin | 2,500 | 10,000 | N/A |
| | Belgium | Belgian Resuscitation Council | 2,685 | 5,820 | N/A |
| | Czech Republic | Czech Resuscitation Council | 1,000 | N/A | N/A |
| | Denmark | Danish Resuscitation Council | 5,877 | 5,877 | N/A |
| | Germany | German Resuscitation Council | 8,000 | N/A | N/A |
| | Greece | KIDS SAVE LIVES - TA PAIDIA SOZOUN ZOES | 3,000 | N/A | 30,000 |
| | Hungary | Hungarian Resuscitation Council | 450 | 300 | N/A |

Fig. 2 – World restart a Heart (WRAH) Data collected and summarized from the data sent by the collaborators, own compilation.

arrests in New Zealand. This shows once again how adaptable WRAH is and how it is modified every year by different countries to suit their individual current situations. In this year in total 3.27

million people witnessed live in-person demos or awareness sessions and more than 487,000 people attended webinars all around the world (Fig. 2).

| | | | | | |
|----------------------|--------------------------|---|-----------|-----------|---------|
| | Italy | Italian Resuscitation Council | 1,000 | 5,000 | N/A |
| | Malta | Malta Resuscitation Council | 794 | 794 | N/A |
| | Romania | University of Medicine and Pharmacy Grigore T Popă Iași, | 500 | 300 | N/A |
| | United Kingdom (UK) | Resuscitation Council UK | 30,000 | N/A | N/A |
| | Ukraine | All-Ukrainian NGO "All-Ukrainian Council of Resuscitation and Emergency Medical Care" | 130 | N/A | N/A |
| North-America | Canada | Heart and Stroke Foundation of Canada | 7,700 | 1,132 | 170 |
| | United States of America | American Heart Association | 45,000 | 565,236 | 1,738 |
| South-America | Brazil | KIDS SAVE LIVES BRAZIL | 1,888 | 6,114 | 2,668 |
| | Chile | Resuscitation Committee Chilean Society of Anesthesia | 476 | N/A | N/A |
| | Perú | InterAmerican Heart Foundation | 600 | 1,500 | 500 |
| Worldwide | | The International Federation of Red Cross and Red Crescent Societies (IFRC) | 1,433,915 | N/A | N/A |
| In Total | | | 3,278,311 | 2,317,354 | 489,414 |

Fig 2. (continued)

WRAH is also regionally linked to other awareness activities taking place in each country, e.g. the week of resuscitation "*Woche der Wiederbelebung*" in Germany in September,¹⁹ and in the USA an entire month "*American Heart Month*" is also dedicated to the topic of resuscitation each year in February.²⁰

The adaptability of the WRAH initiative has been shown through special campaigns over the last years. The United Kingdom found an association between the campaign and the improvement of bystander CPR rates. Therefore, they adapted their campaigns especially

for places with higher need.²¹ Another example of WRAH's adaptability is demonstrated through its campaigns during the COVID-19 Pandemic and the current situation in the Ukraine. Despite the ongoing war, this country has initiated a new project to promote awareness and to educate more laypeople in bystander CPR. In New Zealand, some posters and social media campaigns are also translated into Maori, to connect their culture to the topic.²²

The countries participating in the initiative support and inspire each other also through regular meetings to foster a thriving cam-

paign through the exchange of diverse cultures. In recent years, many other countries such as Germany, the UK and India or the United Arab Emirates have cooperated to create a global awareness campaign.

Conclusion

The ILCOR WRAH Initiative is helping to save countless lives by promoting a culture of preparedness and encouraging widespread lay CPR training. The global WRAH campaign manages to adapt their methods to different situations every year and to each country, showing a variety of campaigns adapted to their current situation and their culture. The real worldwide impact of WRAH transcends geographic boundaries and underscores the universal importance of being ready to respond when seconds count and when communities come together on and around 16 October each year.

CRedit authorship contribution statement

N. Rott: Writing – original draft. **L. Reinsch:** Writing – original draft. **B.W. Böttiger:** Writing – review & editing, Conceptualization. **A. Lockey:** Writing – review & editing, Conceptualization.

Declaration of competing interest

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Nadine Rott works for the German Resuscitation Council and is a member of the ILCOR communication committee and the editorial board of Resuscitation plus.

Lina Reinsch does not declare any conflict of interest.

Bernd W. Böttiger is Co-Chair of ILCOR WRAH Working Group, treasurer of the European Resuscitation Council (ERC), Founder of the ERC Research NET, Chairman of the German Resuscitation Council (GRC), Member of the „Advanced Life Support (ALS) Task Force of the International Liaison Committee on Resuscitation (ILCOR), Former Member of the Executive Committee of the German Interdisciplinary Association for Intensive Care and Emergency Medicine (DIVI), Founder of the “Deutsche Stiftung Wiederbelebung”, Federal Medical Advisor of the German Red Cross (DRK), Member of the Advisory Board of the “Deutsche Herzstiftung”, Co-Editor of “Resuscitation”, Editor of the Journal “Notfall + Rettungsmedizin”, Co-Editor of the Brazilian Journal of Anesthesiology. He received fees for lectures from the following companies: Forum für medizinische Fortbildung (FomF), ZOLL Medical Deutschland GmbH, C.R. Bard GmbH, Becton Dickinson GmbH, Boehringer Ingelheim.

Andrew Lockey is Co-Chair of ILCOR WRAH Working Group, Vice President of Resuscitation Council UK. Member of the Resuscitation plus Editorial board.

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We would like to thank all the WRAH Collaborators that helped with gathering numbers for the different countries and regions of the world and are organizing trainings and activities in their region.

Appendix

WRAH Collaborators¹

| Last name | First name | Country | City |
|---------------------|------------------------|----------------------|-------------------------|
| Al-Hilali | Zehra' | United Arab Emirates | Dubai |
| Böttiger | Bernd | Germany | Cologne |
| Caruana | Marius | Malta | Santa Lucija |
| Cassan | Pascal | France | Paris |
| Chakra Rao | Siddha Sc | India | Kakinada |
| Cimpoesu | Diana | Romania | Iasi |
| Dovhan | Tetiana | Ukraine | Kyiv, Vinnytsia |
| Edara | Lokesh | India | Tenali |
| Escalante-Kanashiro | Raffo | Perú | Lima |
| Fleckner | Naja | Denmark | Copenhagen |
| Gandhi | Dr Atul | India | Ahmedabad |
| Garg | Rakesh | India | New Delhi |
| Hoover | Amber | USA | San Antonio, TX |
| Kelly | Barbara | Canada | Toronto |
| Khalifa | Gamal Eldin | Egypt | Cairo |
| Kovács | Enikő | Hungary | Budapest |
| Lim | Swee Han | Singapore | Singapore |
| Lockey | Andrew | UK | Halifax |
| Mear | Teghan | Wellington | New Zealand |
| Nakagawa | Naomi Kondo | Brazil | São Paulo |
| Nanda | Prama | Belgium | Antwerp |
| Orlob | Simon | Austria | Graz |
| Ossama | Bassinte | France | Paris |
| Reinsch | Lina | Germany | Cologne |
| Rott | Nadine | Germany | Cologne |
| Sales | Monica | US | Dallas, Texas |
| Siddha | Surya SC Chakra Rao | India | Kakinada |
| Smith | Aldus | South Africa | Potchefstroom |
| Stefanakis | Anastasios | Greece | Kassandraia, Chalkidiki |
| Truhlar | Anatolij | Czech Republic | Hradec Kralove |
| Valderrama | Antonieta | Chile | Santiago |
| Wijesuriya | Nilmini | Sri Lanka | Colombo |

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