SCIENTIFIC LETTER

25 years of paediatric cardiopulmonary resuscitation courses in Spain

25 años de cursos de reanimación cardiopulmonar pediátrica en España

Dear Editor:

The Spanish Group on Paediatric and Neonatal Cardiopulmonary Resuscitation (GERCPPyN) is a multidisciplinary working group created in 1992 by the Asociación Española de Pediatría (Spanish Association of Pediatrics, AEP) and composed by physicians that are members of its affiliated societies of paediatric intensive care, neonatology, paediatric emergency medicine and primary care. One of its key objectives is to promote and expand course in cardiopulmonary resuscitation (CPR) in Spain. To this end, the group develop a structured and standardised course curriculum including multiple activities among which we would highlight the design and development of theoretical and practical courses at different levels—basic life support, intermediate life support, advanced life support, neonatal CPR, refresher courses and instructor courses—aimed at the general population, parents of at-risk children and students and professionals in different health care fields, also developing the contents for these courses. The learning objectives of the courses are recognising children at risk of cardiac arrest, preventive measures, basic knowledge and skills in CPR and development of the necessary psychomotor skills to perform CPR manoeuvres in a quick, coordinated and sequential fashion in newborns, infants and older children. The GERCPPyN developed the expansion of the paediatric CPR courses through the creation of teaching groups, the appointment of representatives in each autonomous community and the establishment of an accreditation system to ensure the quality of CPR courses.

To study the activity carried out in the past 25 years, we conducted a retrospective study through the review of the records of courses accredited by the GERCPPyN between 1994 (date of the first workshop) and December 2019. We included courses in paediatric advanced life support (PNALS), paediatric and neonatal intermediate and basic life support with automatic external defibrillator (PNIBLS-AED), CPR certification renewal courses (CPRCR) and CPR instructor courses (CPRIT). We did not include courses conducted outside of Spain. We analysed the number of courses offered and number of trained individuals in each province and autonomous community, and the ratio of the number of courses to the size of the population as an approximation of the number of health care professionals that these courses are for. We analysed the trends in courses and compared the 1994–2009 and 2010–2019 periods.

In these 25 years, there were a total of 1788 courses (1367 on PNALS, 338 on PNIBLS-AED, 14 for CPRCR and 69 for CPRIT) received by 39 671 trainees (30 797 on PNALS, 6858 on PNIBLS-AED, 312 for CPRCR and 1704 for CPRIT).

Fig. 1 presents the temporal trends in courses and trainees. When we compared the 2 periods, we found a significant increase in the number of courses in the past 10 years (from 46 ± 28 to 106 ± 28 a year; P < 0.01) and the number of trainees receiving them (from 1088 ± 670 to 2227 ± 445 a year; P < 0.01). In recent years there has been an increase in the number of courses on heartsaver CPR, which evinces the adaptation of CPR education to the needs of health care professionals. On the other hand, we have to highlight the small number of renewal courses, which may be explained by trainees taking the complete course again and providers not undergoing renewal courses at regular intervals.

Fig. 2 presents the distribution of courses and trainees per autonomous community in relation to the number of inhabitants, revealing substantial regional differences. There are several limitations to our study. First of all, while most courses in paediatric CPR in Spain have been delivered by members of the GERCPPyN, we were not able to document every such course because some institutions have not gone through the process of accreditation. Secondly, we did not assess the quality or outcomes of the instruction nor the satisfaction of course participants with the education received.

In conclusion, the GERCPPyN has succeeded in expanding CPR courses to the entire territory of Spain, although with an uneven geographical distribution, although it has...
yet to achieve the institutionalization of paediatric CPR course in health care and education organizations. It is a dire situation that certification in paediatric CPR is not compulsory for residents in paediatrics, paediatricians and other health care professionals that may have to manage a paediatric victim of cardiac arrest. Therefore, measures must be adopted to reinforce and institutionalise teaching groups and ensure equal access to paediatric CPR courses, in addition to establishing systems to ensure refresher courses at regular intervals.

Figure 1 Temporal trends in the number of courses and trainees in paediatric life support. Comparison of 1994–2009 and 2010–2019 periods. PALS, paediatric advanced life support; PILS, paediatric intermediate life support.
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