

Immediate Care Training in Ireland, 2002-2013: A Potential Link between High Uptake Rates and Effect

Abstract:

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Abstract

Recent data suggest GPs contribute to successful resuscitation of cardiac arrests in the community. This paper examines uptake of Immediate Care training by GPs over a 12 year period. Data was collated on all courses and attenders (2002-2013). 244 cardiac, trauma and paediatric courses were held with 4247 attendances by 2069 individuals, including 1790 (86.5%) doctors. Of these 1648 (92.1% of all doctors) were GPs or GP registrars who generated 3585 days of attendance (84.4% of the total); 1270 attended more than one course. Between 2006 and 2013, an average of 219 (range 186-261) GPs/GP registrars attended at least one course each year, representing around 8% of all GPs in Ireland. A subset of these GPs has been shown to have a significant success rate in cardiac arrest care; there may be links between uptake of training and the clinical effectiveness of care provided.

Introduction

The role of general practice in the management of cardiac arrest in the community is increasingly well recognised¹. Our group recently reported five-year data from the MERIT (Medical Emergency Responders Integration and Training) Project in which 495 GPs in Ireland reported 272 cardiac arrests with resuscitation attempts, with return of spontaneous circulation in 32% and discharge from hospital in 18.7%. MERIT is a structured development of an established general practice training programme in Immediate Care. From 2006, investment by the Health Service Executive, Pre-Hospital Emergency Care Council and Department of Health enabled the provision of standardised defibrillators, training and support to GPs throughout the country. The MERIT study and others have identified the key roles of local availability, willingness to provide care in an emergency and appropriate training, and equipment as key components of the general practice contribution to the care of cardiac arrest in the community². Little information has been published on the uptake of training in emergency care by GPs in Ireland or elsewhere. This paper reports the uptake of Immediate Care training by GPs and other doctors in Ireland during the period 2002-2013. Information on the frequency and types of Immediate Care training undertaken by GPs provides significant insight into the capability of general practice to contribute to the care of key emergencies in the community. This is particularly relevant in countries like Ireland or Scotland in which scattered remote and rural communities often depend on primary care resources in emergencies, before the arrival of scarce ambulance service resources. The availability of a database of initial Immediate Care training and training updates which extend for more than a decade is an important resource in providing such insights. It may also provide insights into the broader issue of uptake of Continuing Medical Education opportunities by GPs.

The framework of Immediate Care training at the Centre for Emergency Medical Science has been reported previously^{8,9}. One-day courses are provided in cardiac, trauma, paediatric and anaphylaxis care to Advanced Life Support scope of practice. Course content is practical, skills oriented, is based on current international best practice and is linked to national Clinical Practice Guidelines^{10,11}. Course content focuses on care in community settings and is delivered in close collaboration with ambulance service practitioners. Other courses are available to Basic Life Support scope of practice but are not reported here. Courses are primarily oriented and promoted to general practitioners but are also open to practice nurses and registered Advanced Paramedics. Ireland has approximately 2,500 GPs who provide comprehensive care within a mixed public-private model of care for a population of approximately 4.3m people¹². Specialist training in general practice is four years in duration; the final two years are spent in training general practices by GP registrars (approximately 120 per year during this period). Continuing medical education is a core requirement for all GPs registered with the Medical Council of Ireland but limited data is available on the uptake of the many types of CME available^{13,14}.

Methods

Course participants are asked to provide basic demographic and professional data when registering for courses. Attendance data for all Immediate Care cardiac, trauma and paediatric courses carried out by CEMS from 2002 to 2013 were collated and analysed to explore attendance, courses undertaken, professional characteristics of those attending and patterns of repeat attendance. Missing data is reported at relevant points. Ethics approval was granted by the Human Research Ethics Committee, UCD.

Results

Course registration data is available for the 12 year period 2002 to 2013. Table 1 summarises the numbers and types of individual courses. In all, 244 cardiac, trauma and paediatric courses were held during the period, with 4247 attendances by 2069 individuals; 2117 (49.9%) attendances were at cardiac and 1816 (42.8%) attendances at trauma courses. Of those attending, 1790/2069 (86.5%) were registered medical practitioners, 126/2069 (6.1%) were registered nurses and 50 (2.4%) were registered Advanced Paramedics. 1648 individuals were GPs / GP registrars (79.7% of all attendees and 92.1% of all doctors). GP registrars made up 541/1648(32.8%) of all GPs attending. Of 1648 GPs, 1270 (76.1%) attended more than one course and only 378 (22.9%) had attended a single course. GPs generated 3585 days of attendance over the period (84.4% of the total, mean 299 days per year). Of the 1263 GPs who specified, 55% were female. Of the 1204 GPs who specified, 406 (33.7%) qualified before 1991, 299 (24.8%) qualified between 1991 and 2000, 490 (40.7%) qualified between 2001 and 2010 and 9 (0.7%) qualified after 2010. Figure 1 indicates individual doctor attendance by year and demonstrates the high proportion of GPs among doctors taking these courses.

Of the 1790 doctors taking part, 460(25.7%) attended one course, 976 (54.5%) attended two courses and 320 (17.9%) attended three to five courses; 34 (1.9%) doctors attended between six and 17 courses. Of note, between 2006 and 2013 (the operating period for MERIT), this averaged 219 GPs or GP registrars (range 183-261) attending at least one course per year, approximately 8% of all doctors working in general practice in Ireland. Of the 1648 GPs, 419 (25.4%) were identified as GP leads for the MERIT practices in which they work. Three distinct groups are included among the 419; those who attended an IC course between 2002 and the date of joining MERIT (N=137, 32.7%), those who joined MERIT on the date of their first course (N=241, 57.5%) and those who joined MERIT before attending their first course (N=41, 9.8%). MERIT GPs are more frequent attenders at IC courses (mean = 2.8 courses) than non-MERIT GPs (mean = 1.8 courses). Additional information was provided by 1359 doctors, of whom 958 (70.5%) are currently (2014) on the Medical Council's Specialist Register, 318 (23.4%) are on the General Division and 77(5.7%) are on the Trainee Specialist Division. Of these, 947 provided their speciality; 910 (96.1%) were general practitioners; 17 other disciplines are represented among the remainder.

Discussion

This study provides a 12 year overview of participation by GPs in a specific CME activity in Ireland. It demonstrates that around 8% of all GPs in the country participate in these courses each year and that many GPs take multiple types of courses; they also repeat training, sometimes on many occasions. The data indicate the broad spread of participants across the life cycle of general practice - GP registrars make up almost a third of course participants, participants are spread across several decades of years of qualification and around 70% of participants had entered the Medical Council's Specialist Register by 2014. This suggests career long engagement by GPs with care of emergencies in the community and the potential for training to match evolving needs. The data suggest the high level of ongoing commitment by GPs to the provision of emergency care in their communities, an activity which is not routinely contracted for or remunerated by any health services agency in the country. Cardiac and trauma training are the most popular areas, indicating the focus of clinical demands on GPs. Although Immediate Care training has been available in

Ireland since the late 1980s, MERIT's establishment in 2006 provided, for the first time, integration between training, standardisation / funding of equipment and data collection on clinical incidents. From 2006 onwards, this study indicates a high and sustained level of engagement by GPs with Immediate Care training, suggesting that such integration may have a positive effect on the involvement of GPs in this work. It is also noteworthy that a third of the participants in MERIT had already attended IC courses in the four years before the structured framework was launched. MERIT GPs also attend courses more frequently than non-participants in MERIT. Many GPs attending these courses were not associated with MERIT and therefore received none of the structural and academic supports provided by MERIT; it is impressive that in the absence of such supports, those GPs continued to train in this area and, in many cases, to provide practice defibrillators from within their own practice resources.

The clinical effectiveness of continuing medical education has been explored in general practice as in other disciplines; however limited evidence is available to link CME completion with improved clinical performance. A 2012 Cochrane Systematic Review of the effectiveness of audit and feedback concluded that small but potentially important improvements might occur in professional performance¹⁵. In 2013, Bird et al¹⁶ reported improved diabetes care in the US, following implementation of an education programme among family physicians¹⁶ and Butler et al reported a highly effective intervention to reduce inappropriate antibiotic prescribing¹⁷. However, links between CME and care in emergencies have not been demonstrated to date. The MERIT five-year data published in 2013 on the involvement of GPs from this population in cardiac arrest care in the community shows a significant level of Return of Spontaneous Circulation (ROSC) and discharge from hospital. The high level of uptake of training by the same population of GPs suggests a positive impact from training undertaken by GPs on the clinical care they provide. It is also noteworthy that the clinical data from MERIT reported higher levels of involvement by GPs in remote and rural areas in the management of cardiac arrest than their urban counterparts. While the current study does not have information on practice locations for those attending training, the locations of courses over the 12 year period strongly suggests that GPs in rural areas of Ireland attend more courses and attend more frequently. This may again suggest a link between training uptake and clinical effectiveness.

Further research will explore the availability and use of defibrillators in both MERIT and non-MERIT practices and examine the drivers for practice involvement in the care of cardiac arrest in local communities. The potential strengthening of links between GPs and the National Ambulance Service in a more co-ordinated response to cardiac arrests is currently underway; the identification of enablers (and barriers) for GPs to participate in such schemes is essential and is the basis of ongoing research. This study suggests enthusiastic, sustained uptake of relevant training by GPs throughout the country, even without such structures. This study demonstrates a high level of sustained commitment by Irish GPs to developing and maintaining their skills in the care of life-threatening emergencies.

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