

# Virtual training in the practical management of emergencies in primary care: making a virtue out of necessity

Emer Forde , Aurelia Butcher, Adam Fraser, Simon Phillips, Matthew Turner

GP Centre, Bournemouth University, Bournemouth, UK

## Correspondence to

Dr Emer Forde, GP Centre, Bournemouth University, Bournemouth BH8 8GR, UK; eforde@bournemouth.ac.uk

Received 15 March 2021

Accepted 21 May 2021

Published Online First 2 June 2021

The COVID-19 pandemic has significantly impacted on doctors' education and opportunities for professional development with almost all education now offered on virtual platforms. Houghton *et al*<sup>1</sup> have outlined how this poses a particular challenge for teaching the practical aspects of medicine compared with theoretical, declarative knowledge. However, in their article they encourage medical educators to embrace these changes and 'make a virtue out of necessity'. We share an example where being forced to move to a virtual platform improved doctors' training in the practical management of medical emergencies in the community, and has led to a permanent change in how we will deliver this training in future years.

General practitioners (GPs) have a responsibility to provide prompt and effective care when attending to life threatening emergencies in their surgeries. These are relatively uncommon and previous research has shown this is an area where some doctors lack confidence and competence.<sup>2-4</sup> In the current National Health Service crisis, with stretched resources, it is particularly important that GPs are equipped to manage time critical emergencies, because GP surgeries are deemed a place of safety and 999 ambulances can be redirected to other emergencies, thereby delaying transfer to secondary care for patients in GP settings.

In previous years, the Dorset GP training scheme provided classroom based training in managing medical emergencies for all final year GP trainees. However, in 2020 all GP education moved online and we trialled the feasibility of in-house training for managing emergencies, such as meningitis, anaphylaxis, hypoglycaemia and asthma. Five experienced GP medical educators ran workshops for 33 GP trainees. The trainees were asked to be in their surgeries during the training session, if possible, and have access to the emergency equipment in their building. Their GP trainers were also informed in case a real emergency occurred during the session. Unfortunately due to practical constraints (eg, trainees shielding, GP practices not having adequate space on the training day) only 16/33 (49%) trainees were in their surgeries and the others joined from home. Trainees participated in groups with at least 1 GP trainee working from their surgery.

Scenarios were introduced using role-play (eg, a severely asthmatic patient, febrile child with purpuric rash), and participants were requested to demonstrate how they would manage the emergency using the equipment that was actually

available in their surgery. For example, if a trainee said "I would give a nebuliser" they were asked to show the group how their nebuliser would be set up and medication administered. Educators facilitating each workshop also had access to medication and equipment, and trainees working from home were asked to talk the facilitator through the steps required to, for example, set up a nebuliser, turn on oxygen, administer benzylpenicillin or put someone in the recovery position.

In the week before and after the training, participants were asked to rate their confidence on three questions on a nine point Likert scale:

1. Overall, how confident are you in the practical management of emergencies if they occurred within your GP practice? (1=no confidence, 9=very confident).
2. We would like to understand how confident you are in certain areas. First, do you know 'in theory' how to manage these emergencies? that is, if you were asked in an exam, would you know what you should do and what medication you should give? (1=no confidence in my knowledge, 9=very confident in my knowledge).
3. Do you have the ability to practically manage these emergencies? that is, if they actually happened in your surgery, and you were the only GP there, would you be able to find the equipment you need and administer emergency treatment? (1=no confidence in my ability to practically manage this emergency, 9=very confident in my ability to practically manage this emergency).

Overall, GP trainees rated themselves more confident in the practical management of emergencies after (7.3/9) compared with before the training (5.3/9), unpaired t test,  $p < 0.01$ . Trainees' confidence improved in their theoretical knowledge (7.0–8.0/9) and practical abilities (6.1–7.8/9). 91% participants rated the training as good/very good and 100% rated it as relevant/very relevant. GP trainees were asked 'what was useful?' and their qualitative feedback highlighted the practical aspects of the training. Representative feedback included:

To be able to run through the scenarios as if they happened in real life  
Looking at how the oxygen cylinders, nebulisers, etc work was very useful  
Finding all the bits at the practice. Practical advice on what to do for certain emergencies



© Author(s) (or their employer(s)) 2021. No commercial re-use. See rights and permissions. Published by BMJ.

**To cite:** Forde E, Butcher A, Fraser A, *et al*. *BMJ Simul Technol Enhanc Learn* 2021;**7**:648–649.

Knowing basic things like what plugs into what and where, preparation of drug dose rather than flapping around  
Good scenarios and practical tips (even for those of us at home)

GP trainees were also asked ‘what was less useful?’. Twenty-seven per cent referred to doing it virtually rather than face-to-face and others highlighted that more advanced notice would have been helpful. Our experience mirrors Houghton *et al*'s<sup>1</sup> suggestions that making expectations clear, being prepared for things to go wrong (eg, facilitators having back up equipment) and personalising the approach are essential for the success of virtual training, particularly in the practical aspects of medicine.

Overall, GP trainees felt that virtual training had educational value, particularly as it gave them the opportunity to practice using their own equipment in their own environments. We have argued previously<sup>2,3</sup> that in-house, simulation based training is the gold standard for managing emergencies in the community.<sup>4,5</sup> The only means to offer this simultaneously to groups of clinicians, working in a different surgeries, is via a virtual platform.

Necessity has led to a positive change in our GP curriculum. Rather than the previous classroom based teaching, we will continue running in-house, simulation based teaching for medical emergencies via a virtual platform every year. Training within the environments where emergencies actual occur is the best way to highlight organisational, equipment and system issues that may prevent the delivery of rapid and effective care.

**Contributors** EF led the project, conceptualisation, methodology, evaluation, writing and editing. All other authors contributed to methodology, delivery of training, review and editing.

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent for publication** Not required.

**Provenance and peer review** Not commissioned; internally peer reviewed.

This article is made freely available for use in accordance with BMJ's website terms and conditions for the duration of the covid-19 pandemic or until otherwise determined by BMJ. You may use, download and print the article for any lawful, non-commercial purpose (including text and data mining) provided that all copyright notices and trade marks are retained.

#### ORCID iD

Emer Forde <http://orcid.org/0000-0001-5253-8572>

#### REFERENCES

- 1 Houghton N, Houston W, Yates S. Cross-disciplinary perspectives on the transition to remote education. *BMJ Simul Technol Enhanc Learn* 2021;7:586–9.
- 2 Forde E, Bromilow J, Jackson S, *et al*. Managing emergencies in primary care: does real-world simulation-based training have any lasting impact? *BMJ Simul Technol Enhanc Learn* 2019;5:57–8.
- 3 Forde E, Bromilow J, Wedderburn C. Practical management of emergencies in primary care: taking simulation out of the classroom and into real-life environments. *BMJ Simul Technol Enhanc Learn* 2018;4:43–4.
- 4 Eastwick-Field P. No more tick box resuscitation training: simulation in the surgery. *Br J Gen Pract* 2017;67:25.
- 5 Eastwick-Field P, Lawrence J. In situ simulation for general practice staff is better preparation for meeting medical emergencies than traditional basic life support training. *BMJ Simul Technol Enhanc Learn* 2020;6 (Suppl).