

Challenges and opportunities to diabetes and endocrinology training during and beyond the COVID-19 pandemic

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Abstract

The COVID-19 pandemic posed unprecedented new challenges to diabetes and endocrinology (D&E) training. We reflect from our local experience on its impact and lessons we can learn.

Necessary restructuring of clinical services resulted in more general medicine and less inpatient specialty exposure. Outpatient clinic opportunities were reduced as clinics were postponed and virtual consultations became more frequent. Training opportunities such as local teaching and conferences were cancelled, and academic training often put on hold. Together these had a significant impact on training in D&E.

However, the necessary restructuring can also be used to change D&E training for the better. Virtual consultations could improve opportunities for clinic attendance as physical space is a lesser issue. Remote access to clinical systems should be more widely available, thus promoting flexible working for trainees. The necessity for virtual teaching has seen the emergence of on-demand services and the option of online attendance. Barriers to attending teaching, such as travel time and leave, are a lesser issue than ever before, particularly for conferences. The wellbeing of doctors is also being supported increasingly after the pandemic.

The lessons we learn from this pandemic should be used to transform the face of D&E training and improve flexibility and job satisfaction. Such solutions can be applied to other current and future demands on specialty training. Copyright © 2022 John Wiley & Sons.

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Key words

training; registrar; COVID-19; opportunities; challenges

The National Health Service (NHS) relies on junior doctors in training to help deliver inpatient medical care. Through this service, trainees are able to gain experience and competence. The massive disruption to normal clinical practice brought about by the COVID-19 pandemic has exacerbated existing challenges in balancing health service provision and junior doctor training. The majority of trainees reported negative effects on their training during the first wave of infections, with those based in areas of higher COVID burden worst affected.^{1–3}

Here we explore the challenges for postgraduate diabetes and endocrinology (D&E) training in North East London faced during the pandemic, examine some of the solutions hastily put in place to mitigate those effects, and discuss how the response to the COVID-19

crisis could represent an opportunity for innovation.

Challenges

With rising COVID cases, significant changes to hospital staffing were required in order to provide safe patient care. Alteration of rota patterns, restructuring of clinical areas and staff redeployment were all introduced seemingly overnight. Rota changes frequently involved an increase in 'out of hours' work, as well as a move away from specialty team structures. This reduced trainee exposure to specialty-specific learning opportunities, including clinic attendance and taking referrals; such changes were not unique to D&E trainees, but were also reported by trainees in other specialties.^{4,5}

COVID-19 admissions predominated, while patients with other acute medical problems avoided

coming to hospital.⁶ In London, non-COVID emergency admissions fell by 21%.⁷ This led to a reduction in clinical case variety, despite a necessary increase in trainee commitment to general medicine over this period. Hyperglycaemic emergencies, such as diabetic ketoacidosis, were encountered more frequently during the pandemic,⁸ but the significant changes to hospital structure and staffing meant that such patients were often no longer all under direct care of the inpatient diabetes medical team. Furthermore, redeployment of the diabetes inpatient specialist nurses (DISNs) to general ward nursing duties exacerbated the situation; the DISN was no longer available to see all diabetes inpatients throughout the hospital, identify those requiring specialist review or support junior trainees in diabetes management.

The NHS response to COVID-19 also had dramatic effects on outpatient care. As the majority of D&E specialty training occurs in the outpatient clinic setting, D&E trainees were particularly affected. Many non-urgent follow-up appointments were deferred. From March to December 2020, face-to-face hospital outpatient appointments in England were reduced by over 40%, while remote consultations increased more than 5-fold compared to the previous year, in part to comply with infection control and social distancing measures.⁷ These changes have persisted following further COVID waves. Trainees had fewer opportunities in outpatients to practise examination and experience clinical signs, and also faced new challenges in engaging with remote consultations. Virtual consultations, both telephone and video, were already established locally in some consultant clinics, but most NHS doctors were not used to delivering care in this way; training in virtual consultation and communication is not yet widely available and hospital IT facilities are often inadequate. In our experience, additional difficulties may be posed by local factors in the community, including

social deprivation, variable technological access and literacy, and language barriers.

Academic specialty training activities were severely disrupted by the COVID-19 pandemic. Teaching sessions, training courses and conferences were halted during the peaks and some have since only resumed remotely. Technological challenges similar to those faced in virtual clinics affected remote teaching, and ensuring sufficient protected time and facilities to attend can be difficult. Even when such barriers are overcome, engagement with online teaching can be harder than with teaching in person.⁹ Furthermore, a valuable opportunity for peer-to-peer interaction and networking is diminished, as suggested by the perceptions of trainees at conferences in the USA.¹⁰

Training courses and examinations have now restarted; however, serial cancellations during pandemic peaks resulted in a backlog. In many cases, these are a requirement for progression through training, such as the Specialty Certificate Examinations (SCEs), or form part of mandatory and statutory training. Priority is being given to those whose progression would be most affected by further delay, but this issue may be slow to resolve in the absence of additional courses or increased capacity.

We recognise a similar impact on undifferentiated trainees aspiring to D&E specialisation. Many such core medical trainees were unable to complete MRCP during the pandemic and now face increased competition for examination dates to ensure eligibility for progression to further training. This is in addition to disruption of workplace-based training and teaching, and difficulties fulfilling curriculum requirements caused by structural change in secondary care, for example outpatient clinic attendance. The occurrence of the pandemic coincided with the redesign of the two-year Core Medical Training (CMT) programme to the three-year Internal Medical Training (IMT) programme, and these disruptions to training and progression have led to

either demand for the creation of additional IMT3 stand-alone years or CMTs being left without a route into specialty training.

Clinical research has been markedly affected by COVID-19 disruption and the longer-term impact is yet to be seen. When the pandemic first hit, around 90% of trainees undertaking academic placements or doctorates had to abruptly cease research activity for clinical redeployment.¹¹ Valuable opportunities to present their research work at national and international meetings were lost and, for some, research funding expired during redeployment periods. The resulting delays may reduce opportunities for academic training overall and/or necessitate extensions to existing projects and their funding.¹¹

The pandemic has placed a huge strain on the psychological wellbeing of an already stretched workforce. Enormous disruption to clinical work and training as described has led to increased incidence of a variety of mental health problems within the medical workforce worldwide.¹² In addition, D&E trainees were likely to have direct contact with COVID-19 patients, which appears to be a significant risk factor for depression and anxiety.¹²

Solutions and opportunities for change

While much of the restructuring of services, systems and training was implemented out of necessity in the face of the COVID-19 pandemic, opportunities now exist to capitalise on these changes to improve training provision and experience.

One of the most prominent changes to NHS hospital clinical practice during the pandemic was the rapid expansion of virtual consultations. While online outpatient D&E consultations had previously been available locally on a small scale, showing feasibility and benefits,^{13,14} trainee involvement had been limited. With video consultations now established throughout NHS outpatient care, trainees have the opportunity to use these routinely.

Traditionally, trainees' participation in clinics has been limited by availability of clinic space and rigid clinic time-tabling. Virtual clinics, whether video or telephone, are not subject to the same restrictions. They also do not require nursing or receptionist support so can be delivered in the office or even at home. While there are still added benefits to face-to-face reviews, the flexibility offered by virtual consultations should facilitate greater trainee participation in outpatient clinics.

The introduction of telemedicine and flash glucose monitoring in recent years has made remote consultations even more effective. As people with diabetes are considered clinically vulnerable, exposure to COVID is best minimised where safe and possible. The pandemic saw further innovations to facilitate virtual diabetes outpatient consultations, such as home collection of capillary blood samples for HbA_{1c} and creatinine and urine for microalbumin measurement which are then posted by the patient to the laboratory.¹⁵ These advances should serve as a stimulus for further training in the use of newer remote diabetes technologies; trainees could then support their incorporation into diabetes care in the community.

Integrated diabetes care is an area of D&E in which trainee involvement is often lacking. In many localities this has involved regular face-to-face meetings between primary and secondary diabetes health care professionals for education and case discussion, supporting diabetes care in the community and providing rapid secondary care referral when necessary. In our own unit, these meetings moved online very successfully during the pandemic. Attendance increased due to ease of access and the meetings have since remained virtual. Protected training opportunities in integrated care are a crucial part of D&E trainee development and it is hoped that such online meetings will in future offer D&E trainees greater experience in community diabetes and supporting primary care.

KEY POINTS

- The COVID-19 pandemic demanded an unprecedented restructuring of NHS clinical services, reducing trainee exposure to diabetes and endocrinology (D&E) specialty work and resulting in lost educational opportunities
- Virtual consultation in D&E outpatient settings was rapidly made more available to reduce risk and comply with infection control requirements, and has since become a mainstay of NHS clinical practice. This has potential to improve trainee engagement in outpatient settings by providing more flexible and extensive learning opportunities and should be maximised
- Remote working could also facilitate focused training and participation in outpatient work, avoiding duplication of 'on-site' responsibilities
- The emergence of virtual teaching and virtual conferences, as well as 'on demand' services, could improve equity of access to learning opportunities across the UK
- Wider uptake of these initiatives could go some way in addressing current and future demands on D&E specialty training

A lasting shift towards a hybrid of working from home and in the workplace has been demonstrated in the wider economy and could benefit medical training. Some trainees have already been granted remote access to clinical systems, but this should be made available to all to enable remote and flexible working.¹⁶ Productivity may increase by minimising the duplication of responsibilities that occurs when 'on-site', particularly from inpatient duties such as answering referral bleeps and conducting ward reviews. Working from home could also provide important protected time for engagement in teaching, quality improvement and administrative tasks. Overall, there is a potential to improve flexibility, efficiency and trainee satisfaction in the longer term.

The necessity for all teaching to be virtual during the pandemic has posed significant barriers to recent training. However, virtual teaching in the future could be beneficial. The option of virtual attendance improves equality of access to international conferences, where funding, travel and the time required become less of an issue. On both a global and national scale, equity of access is improved and geographical variability is reduced. Locally, a 'Pan-London' integrated teaching programme and network for London IMTs was well-received by trainees: in post-course feedback 86% reported

digital teaching was as effective as face-to-face, compared with 43% pre-course.¹⁷ A regional geriatric specialty training programme also demonstrated improvement in trainee confidence following each session.¹⁸ Providing teaching virtually to large numbers of trainees in different localities overcomes the potential problem of insufficient senior doctors to deliver training locally and reduces the associated costs and administrative burden.¹⁹

The pandemic has also seen several medical societies increase 'on demand' services, e.g. the Society for Endocrinology, Association of British Clinical Diabetologists, and Royal College of Physicians. Content including conference recordings and individual webinars are now often available for months after an event. This improves access for all professionals but particularly trainees, for whom access to study leave and budgets can be more difficult.

Simulation-based teaching for learning clinical skills is a popular format among trainees, e.g. in improving ability to manage diabetes and endocrine emergencies.^{20,21} During the pandemic, traditional small-group simulation was halted due to infection control restrictions. This led to the emergence of alternative teaching methods which adapted simulation with the use of remote technologies to provide feedback, such as Simulation via Instant

Messaging – Birmingham Advance (SIMBA) for teaching outpatient D&E cases.²²

Diabetes structured patient education programmes such as DAFNE (Dose Adjustment For Normal Eating) have been modified from face-to-face to online delivery.²³ This innovation not only helped patients access education during the pandemic, but has also been important in facilitating trainee attendance, an essential training requirement.

While the range of online and virtual training resources has surged, it is likely a variety of formats including face-to-face meetings will be required to suit individual learning styles. Similarly, not all patients will be suitable for virtual consultation. Just as we individualise patient treatments, a choice of consultation types and training methods should be made available in order to achieve the best outcomes.

Physical and mental wellbeing, so often neglected in medical careers in the past, have emerged as key themes during the COVID-19 pandemic, with an increased appreciation of the importance of personal wellbeing and activities outside of work. This has heralded the emergence of Wellbeing hubs, on-site psychological services and other forms of support for health care professionals in many hospitals. It is vital that mental health remains a priority for doctors at all career stages.

Conclusion

The impact of the COVID-19 pandemic on physician training in the United Kingdom has been unprecedented. The reduction in clinical exposure to specialty cases and the loss of teaching opportunities during

the pandemic have been devastating. However, virtual consultations in particular have the potential to revolutionise D&E training, increasing involvement in outpatient clinics, offering more flexible working and hopefully improving job satisfaction. The reformatting of teaching and training opportunities, including conferences, may improve access for trainees from all regions and overcome some geographical barriers. Doctors’ wellbeing has begun to be addressed directly, which should set a trend for future support. Overall, this makes for a potential transformation in D&E training with a myriad of exciting opportunities.

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