Case Study

Difficulties faced by GP trainees in a semi-rural surgery in North Wales during the Coronavirus pandemic

Yan Jack Chung
Year 4, Medicine, Cardiff University School of Medicine
Email: ChungYJ1@cardiff.ac.uk

Abstract

This project aims to explore the difficulties encountered by general practice (GP) trainees in a rural area during the COVID-19 pandemic to identify areas of training that can be improved to allow less disruption should future pandemics occur. To do this, I observed two GP trainees in a surgery in North Wales from October 2020 to April 2021 and conducted two semi-structured interviews. Trainees encountered difficulties mainly attributed to resource availability, geographical location, elderly demographics, disrupted training and assessments. Findings suggest that GP training should incorporate pre-determined protocols for reorganising training in the event of a pandemic and focus more on developing trainees' ability to manage stress, loneliness and diminished resources or service availability.

Abbreviations

A&E – Accident & emergency
AKT – Applied Knowledge Test
CCT – Certificate of completion of training
COVID-19 – Infection by Sars-CoV-2
CSA – Clinical Skills Assessment
FeNO – Fractional-exhaled nitric oxide
GP – General practice
HEIW – Health Education Improvement Wales
IT – Information technology
PPE – Personal protective equipment
RCGP – Royal College of General Practitioners

Introduction and aims

The COVID-19 pandemic disrupted medical education in ways not seen for some time. However, it is unavoidable that similar pandemics will occur again.[1] The disruption caused from March 2020 onwards shows that this is unsustainable for the healthcare system. Therefore, it is important we understand how medical training is disrupted so that corrective measures can be put in place. This prevents another pandemic from jeopardising the training of future medical practitioners.

At the same time, there are well-known difficulties to practising medicine in a rural setting which, when combined with the disruption caused by the pandemic, would present unique challenges to doctors. There is little literature on this particular niche but, with future pandemics likely,[1] the execution of training has implications for recruitment and retention in rural general practice.

This study aims to identify difficulties faced by GP trainees during the pandemic, methods developed to overcome them and ways GP training can be improved.

GP training[2,3,4,5]

General practice training is overseen by the Royal College of General Practitioners (RCGP) but, in Wales, it is delivered by Health Education Improvement Wales (HEIW), effectively the Welsh Deanery for specialty training. Specifics differ around the UK but training usually lasts three years and involves 18 months each in a hospital and a GP surgery. Trainees also need to pass workplace-based assessments; the Applied Knowledge Test (AKT) which is a written exam, and the Clinical Skills Assessment (CSA), which is a hands-on clinical assessment. Due to COVID-19, the CSA was replaced with consultation recordings. Trainees must send off 10 recordings of consultations on specified topics for assessment.

In the GP surgery, the trainee will be guided by an experienced GP with further qualifications in training. The trainees I observed had weekly tutorials hosted by their training supervisors on topics they request, and regularly have time reserved for self study. The result is a certificate of completion of training (CCT).

Method

The study was conducted through overt observation in consultations with two GP registrars in a surgery in North Wales, supported by two semi-structured interviews in October 2020 and February 2021. The questionnaires for the interviews were made by the author himself. Questionnaire 1 (**Appendix A**) was used in October 2020 while questionnaire 2 (**Appendix B**) was used in February 2021. Findings were reviewed and common themes and ideas (called codes) were identified (**Appendix C**). This was done because the codes are then reviewed, allowing overarching themes and common ideas to be identified as results. The themes and overarching ideas were also reviewed alongside the responses given by the two trainees so additional insights can be identified that further our understanding.

Results

The trainees I observed were both based in the Bangor stream and in a semi-rural practice. Both started their general practice rotations in early 2020. Before that, one worked six-month rotations in accident & emergency (A&E), paediatrics and care of the elderly, while the other rotated in A&E, obstetrics and gynaecology, and psychiatry. When the study began, both already started recording consultations and attempted the AKT soon afterwards.

There were many difficulties that arose from changes implemented due to COVID-19. Due to the need for social distancing, the CSA was replaced with a recorded consultation assessment (RCA). The RCA caused difficulties with finding patients presenting with the required complaints and keeping consultations within a strict 10-minute limit. The online system used in portfolio management (for recording workplace-based assessments) was also changed during the pandemic, and trainees experienced difficulties migrating content between the old and new platforms which, alongside the RCA, added to their frustrations that the RCGP "don't have any idea of what clinical work is and what it's like on the ground". According to one trainee, he has "more things to do during the year" and "tried to migrate entries across from the old portfolio to the new one, which hasn't worked really well and so now it's impossible to find your old entries", describing the RCGP as "incredible".

Trainees were pleased they could sit their AKT in Autumn 2020 and both passed first attempt. One trainee was pleased that online lectures were able to cover a wide range of topics, from pathology to the everyday business and legal aspects of being a GP. Both trainees sang the praises of their helpful training leads. However, they were unhappy with the administration side of HEIW, such as the poor quality of phone support and conflicting guidance on the requirements regarding their assessments. They were also unhappy that there was a period at the beginning of the pandemic where in-person lectures were halted and they did not receive teaching until lectures resumed online after several weeks, with the topics missed never taught to them afterwards.

Outside of training itself, the GP trainees found that phone consultations added some difficulties to their practice. More specifically, despite the advantages, the lack of visual cues hampered the assessment, diagnosis and management of some patients. Trainees treated some patients based on the empirical diagnosis without performing examinations. As telephone consultations were still relatively new at the time of the study, trainees and their fully-qualified colleagues both worked together and exchanged ideas to improve their clinical practice.

Both trainees overcame the lack of visual cues by keeping their threshold for face-to-face consultations low, bringing in more patients for physical examinations than their fully-qualified colleagues. There were also methods introduced to overcome the lack of visual cues in some patients, for example patients with dermatological lesions could send in pictures instead, although this was not applicable to all conditions. Trainees also expressed an even-lower threshold for paediatric cases to avoid relying fully on a collateral history, corresponding with published literature.[11]

The demographics of rural areas also affect daily practice. There is a larger proportion of elderly,[12] which the trainees felt was harder to manage because of additional comorbidities and contraindications to certain treatments. Both have received outright refusals for admission from patients "for fear of catching COVID" as one trainee put it, and had to factor the distance the patient lives from hospital into consideration when admitting.

Trainees also took larger roles in managing patients as services were less available, in fitting with the literature.[15,19] For example, gonorrhoea swabs (which were orange) were not available in the surgery, so trainees had to make do sending off samples using chlamydia swabs instead (which were yellow). Certain diagnostic tests were also mentioned as not being available, such as fractional-exhaled nitric oxide (FeNO) for asthma. To compensate, trainees and their fully-qualified counterparts alike used alternative investigations and monitored the responses to specific medications to support their diagnoses. However, not every trainee was disappointed, one saw it as a good opportunity for further development, saying "I probably got much more from it" than during normal times.

A surprising challenge was the loneliness felt by the trainees, who mention that they saw family less often than normal. The increased reliance of trainees on colleagues helped foster deeper relationships which was bolstered by the greater sense of community and better work-life balance associated with rural training posts,[19] going some way to countering loneliness.

Discussion, implications for future GP training and limitations

As the assessments including the CSA, RCA, portfolio and AKT are all managed by the RCGP, it was not surprising that the complaints were more directed towards the RCGP than HEIW. Both trainees mentioned that there was a period where they had no lectures at the start of the pandemic. This can be prevented in future by moving to online learning entirely and training more staff members on information technology (IT) skills, allowing this aspect of training to progress smoothly. In fact, studies show that trainees are open to keeping some training online, even after the pandemic.[6,16] Another option would be to communicate to all staff and trainees a standard protocol for how the provision of training will change if face-to-face sessions were halted again.

Telephone consultations are becoming increasingly common. Despite its advantages,[14] the lack of visual cues makes full assessments of patients more difficult. The role of visual cues in assessment and diagnosis is highlighted by the poor correlation between in-person and telephone consultations for the same patients.[13] Unfortunately, the problems posed by a lack of visual cues can only be solved by providing visual cues. Aside from the aforementioned reduced thresholds for face-to-face appointments, other options that could be explored include video consultations and home visits. These areas can be given further emphasis during training due to their increased importance.

Despite the doubts both trainees expressed about their quality of training, both passed their AKT on their first attempt. This shows that the learning objectives determined by the RCGP were met. They worried that with less patient contact, online learning would not sufficiently meet their learning objectives. However, online learning has on multiple occasions and in different specialties shown itself sufficiently capable, although it is not suitable for all specialties[17] and downsides to it, such as reduced participation and a lack of in-person interaction, can contribute to worry.[7]

Healthcare inequality and unequal resource distribution were pre-existing issues[19] the pandemic exacerbated.[20] This is not limited

to the UK and is also seen in other countries, with some American trainees being encouraged to reuse single-use personal protective equipment (PPE),[7] and minorities experiencing higher rates of unemployment, psychiatric illnesses and self-harm.[20] Being relatively young, both trainees were not concerned about their own infection risk but were worried about infecting others, similar to trainees of other specialties.[21] With the ever-present potential for future pandemics, GP training should prioritise managing with reduced availabilities of resources or secondary services.

Training for reduced resource availability or secondary services can take many forms. Since both trainees were in resource-poor areas, they would have benefitted from knowledge of cheaper and less resource- or time-intensive methods of investigating diseases. Efforts to improve trainees' knowledge of physiology and anatomy can reduce dependence on imaging, and increasing their experience with various conditions can allow a greater use of "spot diagnoses", referring to an intuitive recognition of patterns of disease presentation.[22] A study by Heneghan et al[22] also highlights the use of risk scores, which could reduce the number of patients sent for unnecessary investigations. Understandably, these methods are likely less accurate than the use of more specialised diagnostic investigations but would help reduce the burden on (and resources consumed by) such investigations.

Loneliness can have a big impact if lockdowns are once again mandated in future pandemics. It affects the elderly and those living in rural areas more and carries both health and financial consequences.[10] It is also important to note that loneliness also affected clinicians (including trainees), but this was helped by the deeper relationships[9] they had with their colleagues and the better work–life balance associated with rural posts.[19] Therefore, a greater emphasis must be placed on developing a trainee's mental resilience so they can manage both loneliness and the uncertainties of disrupted training, preventing them from further increasing the burden of mental health services.[8] This is especially true for urban trainees, who averaged higher anxiety and stress levels than rural trainees.[18]

There are many factors thought to affect mental resilience. A publication by the United States Marine Corps[23] in 2019 highlighted the importance of unique experiences and interaction with diverse ranges of people as having important roles in training individuals capable of "mental adaptation, thinking outside-the-box…and challenge their perceived world views". Despite being a military publication, these traits are also applicable to doctors of all specialities. A systematic review[24] links hobbies, certain personality traits, workplace freedom and a lighter workload with higher resilience scores.

Although factors such as personality and hobbies are difficult to change, there are many areas that can be addressed to improve the resilience of clinicians. Trainees should be allowed to maintain a healthy work–life balance to engage in hobbies or broadening experiences (ideally with appropriate funding). A change in undergraduate medical education may also be needed, to include more time for enriching experiences (such as longer elective placements) and work alongside various colleagues with different cultures and experiences through exchange programmes with non-medical or even non-academic institutions to produce future doctors able to mentally adapt and think "outside-the-box". This may increase the duration of medical education and GP training but would likely be repaid with fewer sick days taken for mental health in future.

This study does not represent all trainees in North Wales because of the small sample size of two and confinement to a semi-rural and heavily Welsh-speaking area with a majority-Caucasian population. Because the two trainees work at the same surgery, they can influence each other's opinions. Other factors such as the atmosphere and culture of the surgery can also affect their experiences. It is also difficult to generalise the results to other parts of the United Kingdom, or the world, due to the differences in management under different NHS trusts and varying degrees of resource availability, demographics and geographical limitations. Further studies can be done on GP trainees in other parts of Wales and the rest of the United Kingdom to determine if GP trainees in different parts of the country face the same difficulties. The suggestions provided also cannot be generalised to other specialties that require greater levels of practical training.[17]

Conclusion

The combination of the pandemic and a rural setting posed unique difficulties to the two trainees affecting their teaching and practice. Both of these were crucial elements to their training, for which they developed various solutions to overcome. The findings also highlighted the importance of curriculum improvement to increase the ability of trainees to manage under these circumstances and minimise training disruptions future pandemics cause. This should specifically aim for a smoother transition from in-person to online teaching, learning to manage under resource limitations, adapt to the use of telephone consultations and a greater focus on mental resilience.

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Contribution statement Yan Jack Chung was solely responsible for collecting, analysing and interpreting all data involved in this case study under the guidance of his supervisor. He was also solely responsible for drafting, finalising and providing final approval for the inclusion in INSPIRE, and is responsible for the integrity of this work as a whole.

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Appendix

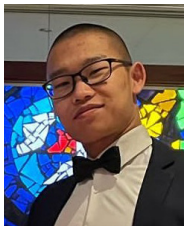
Appendix A – Questionnaire 1

1. Why did you choose to do your GP training in Bangor?
2. What parts of GP training have you already done so far?
3. Is there anything you can do in GP training here that you can't do anywhere else and vice versa?
4. What difficulties do you feel being in a rural environment gives you?
5. How has COVID changed the way your training was done?
6. are there any other difficulties COVID had given you outside of training?
7. Have you found ways to overcome the difficulties mentioned above?
8. Did anything nice come out of COVID?
9. What is the hardest part of GP training up to this point?
10. What has the deanery done well and what has it not done well?

Appendix B – Questionnaire 2

1. How do you learn and retain information right now?
2. Are there other difficulties in a rural environment you've noticed since we last spoke?
3. Last time you mentioned you weren't able to see many patients due to COVID. Has this changed?
4. Are there other difficulties due to COVID that you've noticed since we last spoke?
5. Have you found ways to overcome the difficulties mentioned above?
6. Did anything nice come out of COVID?
7. You mentioned last time that the hardest thing about GP training was _____. Is that still true?
8. What has the deanery done well and what has it not done well?

Yan Jack Chung



Jack Chung is a current 4th year medical student studying at Cardiff University. He was born and raised in Hong Kong and has never studied in the UK before until he came for college. He has a keen interest in emergency medicine, and outside of medical school his other interests include international relations and military history.

Appendix C – Findings from observations and overarching themes

Codes	Themes
• Less patients seen face-to-face • Training disrupted and experiences vary depending on which specialties they are in during their hospital rotations • Annoyance at RCGP for changing the system used to manage their portfolio in the middle of a pandemic, adding to confusion • Difficulty finding cases relevant for their case recordings they need to submit as specific diseases are required and are not common, and difficulty in gaining retroactive consent from patients that are found to meet the requirements halfway through the consultation • Period of no teaching during the start of the pandemic when transitioning from in-person to online lectures	Training difficulties related to COVID/ COVID-induced changes
• Blatant refusal of certain patients to be admitted to hospital • Patients waiting a long time for certain services such as scans, and trainees having to manage them and their expectations in the meantime • Spirometry and peak flow cannot be done in the surgery	Difficulties in practice related to COVID
• Learning from trial and error with phone consultations • More difficult reassuring patients over the phone than face to face • Difficulty fully assessing children just via phone • Patients not picking up the phone on multiple call attempts • Patients often not being at home during calls, and usually not given a specific time window to expect a call	Difficulties with remote consultations
• Lower availability of mental-health services • Getting used to having different self-referral mental health support options and charities available locally • Taking a larger role in patient care due to the lower availability of services • Some diagnostic testing, equipment not available	Resource availability
• Decision to admit more complicated due to some patients living very far from main hospitals • As many houses in rural areas are named and not numbered, some trainees have had difficulty finding the right houses, especially in the pouring rain • Heavy snowfall over Christmas made travelling to the surgery or for house visits more difficult, especially in more mountainous areas • Cannot see family very often	Difficulties related to geographical location
• A larger proportion of elderly patients that also tend to have more comorbidities and are less able to tolerate certain treatments • Loneliness and mental health being more prevalent in older populations living rurally	Difficulties related to demographics of rural areas
• AccuRx system to allow patients to send pictures in of rashes, sores etc. but quality varies • Only giving 2–3 attempts at calling to not take time from other patients • Bring children and babies in more often to assess them better • If diagnostic tests not available, alternative tests are used if available or their response to treatment is monitored • Trainees know what each other need and give them relevant cases	Methods to overcome difficulties
• Phone line for HEIW only open for a limited time, calls are not always answered	Administration difficulties