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# Covid-19 Epidemic Impact on Clinical Training in Irish GP Training

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**Abstract**

***Aim***

To describe the effect of the Covid pandemic on the general practice workplace based learning of GP training in Ireland.

***Methods***

A prospective national survey of GP trainees who were in their GP practice placements on three separate occasions throughout the winter pandemic of 2020/2021

***Results***

The average response rate to the three surveys was 19.4%. As the pandemic worsened, the number of face to face consultations dropped so that 51% (n=41) of trainees were seeing less than 5 patients face to face by the third survey. Conversely, the number of telephone/video consultations rose so that by the third survey 54% (n=44) of trainees were conducting more than 16 consultations per day remotely. Examinations and GP presentations expected to be daily occurrences diminished as the pandemic grew more severe, such that by the third survey 24-25% of trainees had not conducted a respiratory examination or dealt with new/unexpected hypertension in the previous month.

***Conclusion***

This study demonstrates abrupt change to the normal course of their training which was experienced by Irish GP trainees as a result of Covid, with examples from clinical practice. Adaptions of the training programme helped mitigate against the effects of the pandemic.

## Introduction

The clinical learning environment has been described as the foundation of postgraduate medical education[1]. The quality of the clinical learning environment can be a predictor of the later quality of care provided by graduates[2]. The development of expertise of a professional is thought to be related to the amount of domain specific “deliberate practice” accumulated by individuals throughout their careers[3].

The declaration of Covid-19 as a world pandemic[4] led to an abrupt change in General Practice in Ireland[5] as elsewhere[6]. Face to face consultations significantly decreased and telephone consultations significantly increased. The types of problems presenting to GPs changed, with a decrease in non-Covid related consultations from vulnerable patient groups[5,6]. Just prior to the onset of the Covid pandemic, there were on average 29 daily consultations per GP, 10% of these being remote (telephone or video consultations)[7]. At the height of the pandemic as many as 58% of all consultations in Irish General practice were remote consultations[5], but this is likely to have stabilised to a lower figure.

GP educators and trainees also adapted rapidly to change in the educational environment. In a report from the UK, the range of clinical cases seen by trainees was reduced, chronic disease reviews were lost and the consultation process was changed from predominantly face to face consultation to predominantly telephone and video consultation[8]. However, this was a short report from one region only, conducted early in the pandemic.

This research paper specifically documents the effect of Covid -19 on the clinical learning environment in General Practice training.

## Methods

This is a national prospective questionnaire survey conducted on three dates during the first pandemic winter. The whole population of 404 Irish third and fourth year GP trainees were included. Demographic data included gender, year of training (third or fourth year registrar), location of training and whether fulltime or less than fulltime and all information was anonymous. Participants were asked to reflect on the number of face-to-face consultations, phone consultations, video consultations, time spent in a community Covid assessment hub and how many patients were seen if in a hub during the last month.

Information about the experience of participants in the month preceding the survey in common physical examinations and procedures was then gathered: antenatal care, managing hypertension, and respiratory examinations in both children and adults long acting reversible contraception (LARC), cryotherapy, management of corneal abrasions, and removal of earwax procedures. These were chosen to be a sample of common GP physical examinations and procedures.

Data collection, via survey monkey was at three separate time points over winter 2020: 27th October 2020, 25th November 2020 and 13th January 2021, which straddled the peak of that winter's pandemic. Survey data was analysed using Microsoft Excel. Approval for this study was obtained from the Human Research Ethics Committee of University Hospital Galway on 24th September 2020.

**Results**

The response rates were 19.5% (79 responses), 18.8% (76 responses) and 20% (81 responses) for the first, second and third survey respectively. 69.5% (n= 164) were female, 51.7% (n=122) were in their third year of training and 91%(n=221) were in fulltime training, characteristics which are consistent with the full national cohort of trainees. Every county in Ireland was represented in at least one of the three surveys.

The 236 responses from the three surveys demonstrate that face to face consultations diminished as the severity of the pandemic increased between October and January. In the first survey 34% (n=27) of trainees were seeing 16 or more patients face to face daily. This figure dropped to 4% (n=3) by the third survey. Conversely, in the first survey, 16% of trainees were seeing 5 or less patients face to face each day, but by the third survey, this figure increased to 51% (n=41).

The proportion of trainees who consulted with patients remotely, by telephone or video increased, less dramatically, over the three surveys. 38 trainees (48%) were conducting > 16 consultations per day remotely in the October survey, and this had risen to 44 (54%) trainees conducting >16 consultations a day by phone/video in January.

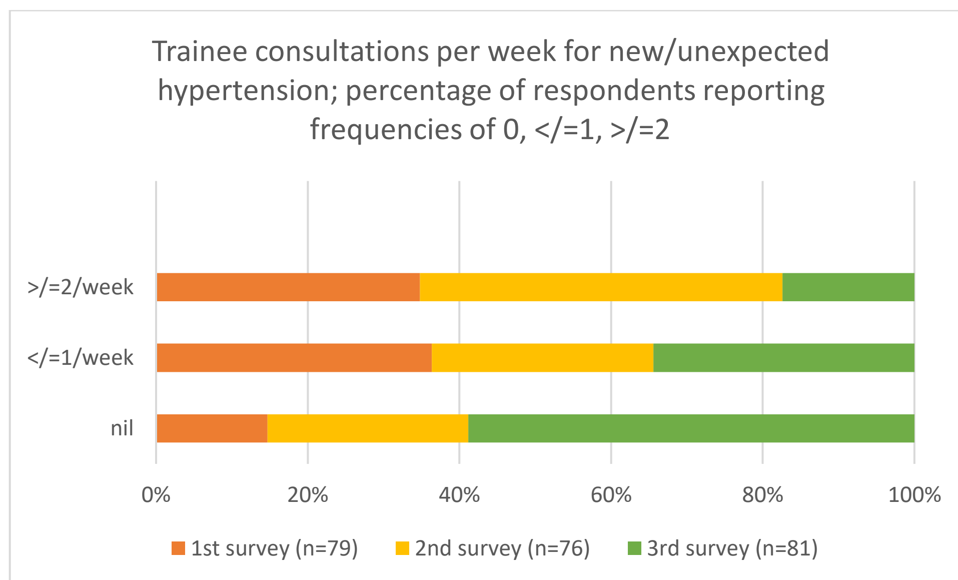
A minority of respondents, the peak being in the third survey at 21% (n=17) also worked sessions in a Covid community hub during the pandemic. Never was the number of patients seen face to face in the Covid community hub above 10, with 67%, 56% and 72% in the 1st, 2nd and 3rd survey respectively seeing no patients face to face while in a Covid hub. Trainees did not conduct remote consultations in the hub.

Trainee exposure to common physical examinations is shown in Table 1. Prior to the Covid pandemic, respiratory examinations of adults and children were a daily activity for Irish GP trainees. This table shows that around a quarter of trainees were doing no paediatric respiratory exams in a week during the first winter of the Covid pandemic. In contrast routine antenatal care was continuing and frequency of consultation seemed not to change over the study time period. In regard to common physical examinations, the most striking finding is that diagnosis of or unexpected presentation of hypertension reduced as the severity of the pandemic increased as shown in Figure 1.

***Table 1:*** *No respondents (%) who conducted common GP consultations (frequency per week) in the previous month.*

| Consultation type | **Frequency** | 1st survey (n=79) | 2nd survey (n=76) | 3rd survey (n=81) | Overall ave (n=236) |
|---|---|---|---|---|---|
| | | | | | |
| Respiratory | **Nil** | 22 | 11 | 23 | 56 (24%) |
| examination | **</= 1/week** | 41 | 38 | 45 | 124 (52%) |
| in children | **>/= 2/week** | 16 | 27 | 13 | 56 (24%) |
| | | | | | |
| Respiratory | **Nil** | 12 | 11 | 18 | 41 (17%) |
| examination | **</= 1/week** | 31 | 30 | 34 | 95 (40%) |
| in adults | **>/= 2/week** | 36 | 27 | 29 | 92 (39%) |
| | | | | | |
| Routine | **Nil** | 4 | 13 | 7 | 24 (10%) |
| antenatal | **</= 1/week** | 42 | 34 | 44 | 120 (59%) |
| care | **>/= 2/week** | 23 | 33 | 30 | 86 (36%) |
| | | | | | |
| Newly diagosed | **Nil** | 7 | 9 | 20 | 36 (15%) |
| or unexpected | **</= 1/week** | 56 | 45 | 53 | 154 (65%) |
| hypertension | **>/= 2/week** | 16 | 22 | 8 | 46 (20%) |
| management | | | | | |

***Figure 1:*** *Trainee consultations per week for new/unexpected hypertension.*



Trainee exposure to common procedures in Irish General Practice is shown in Table 2. For two of these procedures, long acting reversible contraception (LARC) and cryotherapy, as the pandemic progressed, the number of trainees who had no exposure to these consultations increased, and the number of trainees who had exposure more than twice a week diminished. These procedures would be expected to be encountered at least weekly in Irish General Practice prior to the pandemic.

***Table 2:*** *No respondents (%) who participated in common GP procedures (frequency per week) in the previous month.*

| Procedure | **Frequency** | 1st survey (n=79) | 2nd survey (n=76) | 3rd survey (n=81) | Overall ave (n=236) |
|---|---|---|---|---|---|
| | | | | | |
| LARC | **nil** | 24 | 25 | 41 | 90 (38%) |
| | **</= 1/week** | 41 | 38 | 38 | 117 (50%) |
| | **>/= 2/week** | 14 | 13 | 2 | 29 (12%) |
| | | | | | |
| Cryotherapy | **nil** | 32 | 31 | 42 | 106 (45%) |
| | **</= 1/week** | 40 | 38 | 36 | 114 (48%) |
| | **>/= 2/week** | 7 | 7 | 2 | 16 (7%) |
| | | | | | |
| Corneal abrasion | **nil** | 42 | 37 | 46 | 125 (53%) |
| | **</= 1/week** | 37 | 38 | 35 | 110 (46.5%) |
| | **>/= 2/week** | 0 | 1 | 0 | 1 (0.5%) |
| | | | | | |
| Ear wax removal | **nil** | 28 | 24 | 33 | 85 (36%) |
| | **</= 1/week** | 41 | 42 | 46 | 55 (29%) |
| | **>/= 2/week** | 10 | 10 | 2 | 22 (9%) |

*Free text Comments*

The number of comments submitted per survey were 20 in the first, 9 in the second and 12 in the third. The comments were analysed by three of the researchers, (CM, DB, HK) and who identified four recurring themes: cognisance of experience lost, comment on the changed mode of consultations, workload, and peer support.

Lost experience opportunities were particularly felt for women's health, but also dermatology and physical examination in general. Several participants commented on the reduced exposure to LARC procedures. Another trainee commented 'I am glad I am a fourth year trainee; I gained some exposure to real life GP before the pandemic. Currently I am missing out on dermatology, minor injuries, paediatric and face to face psychiatric assessments.'

Comments noted reduced face to face consultation and increased telephone consultations: 'my patient contact has really fallen this lockdown', 'I feel my training is suffering from not seeing enough patients face-to-face', 'I am doing lots of phone calls and thus my time keeping skills for face to face patients are not improving'.

Comments noted an increase in workload in each of the surveys, and also a lack of support. Two comments also expressed concerns regarding being pregnant during the pandemic as a GP trainee.

The loss of face to face day release abruptly removed peer support for GP trainees. 'GP has probably become the most isolating of all the medical schemes'. 'I have really lost the support of my peers in GP practice' and 'I am no longer able to gauge my experience against others and no longer able to chat to my peers for general support'

**Discussion**

Disruption in higher specialty training due to the Covid epidemic has been reported for several specialties in a number of countries[9-15]. This study illustrates significant changes to training which occurred almost overnight in Irish GP training. GP trainees would have expected to see around 20 face to face patients per day. By the January survey 86.4% (n=70) of trainees were seeing 10 or less patients face to face per day. From a usual practice of a couple or a few telephone or video consultations per day, by the third survey 54% (n=44) of trainees were conducting more than 16 remote patient consultations per day. In previous research, GP trainees felt ill-equipped for telephone consultations on challenging clinical situations (e.g. breaking bad news)[16]. Additionally, a 2017 Cochrane review concluded that undergraduate and postgraduate syllabuses lacked specific training in telephone consultations[17].

Globally, hypertension and respiratory presentations are the top two most common conditions to be managed in primary care[18]. The frequency of respiratory examination was much reduced, with 76% (n=180) of trainees doing this in children not at all or less than once a week over the three surveys. Hypertension management decreased with the severity of the pandemic, but 75% of trainees still had exposure to this condition. Exposure to each of the procedures reduced as the pandemic worsened over the three surveys, but still the majority of trainees had some exposure to the procedures.

In addition to the effect of Covid on patient presentation patterns, the effect of the pandemic on trainee wellbeing must be considered. Even before the pandemic, GP trainees felt the loss of peer support when placed in a training practice compared to a hospital clinical learning environment[19]. Other specialty trainees worked up to 33% fewer hours due to Covid interruptions[13], but GP trainees noted an increased workload. While advice for pregnant doctors on patient contact had been clarified by March 2020[20], this was still a significant concern for pregnant GP trainees.

The response of the training body was to adapt the guidelines for award of the certificate of satisfactory completion of training. Training practices were requested to perform a guided review of the curriculum by the trainee with their trainer and to identify through this process of a list areas to which exposure was reduced. Focused case based discussion and role play was encouraged to address these areas with online educational resources provided. The course for the certificate in cardio-pulmonary resuscitation was partly conducted online. The most essential procedures were identified, and training sites were requested to focus on adequate training in these. Recorded video and telephone consultations were allowed in place of recorded face consultations for consultation analysis, with some sites increasing the training provided for telephone/video consultations. In addition, videoconferencing facilities were immediately made available so that day release could continue through video-conferenced weekly meetings.

Summative assessment continued and the exam pass rate did not alter. This may have been because the rapid adaption to the situation created new learning opportunities such as how to interpret and put into practice new evidence, how to adapt the practice to new demands, and effective health promotion. Also, there were many other resources made available to the whole General Practice community of which the trainees could also avail. Results from a separate survey of the opinions of GP trainees from all four years of training show that while the overall impact of the Covid pandemic was negative, ( an overall score of -1, IQR -2,1, in a range of -6 to +6), the maintenance of small group teaching by virtual meetings mitigated the effects of the pandemic[21].

The response of the training body may not have been enough. On the other hand, unlike other specialty trainees[9,13], GP trainees did not have their training interrupted as a result of the pandemic. The adaption of the discipline as a whole to the pandemic, both clinically[5] and educationally[9,22] was rapid.

The response rate was low, but was in keeping with similar surveys in GP[8,21] and other disciplines[10]. Trainees who particularly struggled with the pandemic may have been less inclined to respond, so the effect on their clinical experience may be greater than this study shows. The data was collected retrospectively and may have been subject to recall bias. This tends to lead to reporting of fewer events than actually occurred, but this effect is unlikely to alter the overall findings in this study of less clinical exposure as a result of the pandemic.

Like many other specialties, some of changes brought about by the Covid pandemic are here to stay[6]. GP training should plan that specific training in remote patient consultations be a universal element and should consider increased use of simulation. Most importantly, attention should be paid to reduction of isolation and support of the welfare of trainees.

**Declaration of Conflicts of Interest**:

Dr. Karena Hanley served as National Director and Dr. Aaron Brennan served as a regional assistant director of GP training during the data collection phase of this study. Each would have had some responsibility for adaptions to GP training due to Covid. The other authors have no conflicts of interest to disclose.

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**References:**

1. Weiss KB, Bagian JP, Nasca TJ. The Clinical Learning Environment: The Foundation of Graduate Medical Education. JAMA. 2013;309(16):1687-8.
2. Nordquist J, Hall J, Caverzagie K, Snell L, Chan M-K, Thoma B, et al. The clinical learning environment. Medical Teacher. 2019;41(4):366-72.
3. Causer J, Barach P, Williams AM. Expertise in medicine: using the expert performance approach to improve simulation training. Medical Education. 2014;48(2):115-23.
4. WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020 World Health Organisation2020 [Available from: https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020.
5. Homeniuk R, Collins C. How COVID-19 has affected general practice consultations and income: general practitioner cross-sectional population survey evidence from Ireland. BMJ Open. 2021;11(4):e044685.
6. Verhoeven V, Tsakitzidis G, Philips H, Van Royen P. Impact of the COVID-19 pandemic on the core functions of primary care: will the cure be worse than the disease? A qualitative interview study in Flemish GPs. BMJ Open. 2020;10(6):e039674.
7. Collins C, Homeniuk R. How many general practice consultations occur in Ireland annually? Cross-sectional data from a survey of general practices. BMC Family Practice. 2021;22(1).
8. Scallan S, Lyon-Maris J. The educational impact of COVID-19: views from UK GP educators and trainees. Education for Primary Care. 2020;31(5):328-9.
9. Yu C, Teh BM, Aung AK. COVID -19 significantly affects specialty training. Internal Medicine Journal. 2020;50(9):1160-1.
10. Hennesy O, Fowler A, Hennessy C, Nugent C, Joyce M. Covid 19 and Surgical training:Carpe Diem. British Journal of Surgery. 2020;107(12):e591.
11. Khan S, Mian A. Medical education: COVID-19 and surgery. British Journal of Surgery. 2020;107(8):e269-e.
12. Wood E, Ange B, Wyatt T. Residents' burnout in COVID 19 pandemic environment. Canadian Medical Education Journal. 2020.
13. Boekhorst F, Khattak H, Topcu EG, Horala A, Gonçalves Henriques M. The influence of the COVID-19 outbreak on European trainees in obstetrics and gynaecology: A survey of the impact on training and trainee. European Journal of Obstetrics & Gynecology and Reproductive Biology. 2021;261:52-8.

14. Chandra S, Laoteppitaks C, Mingioni N, Papanagnou D. Zooming-out COVID-19: Virtual clinical experiences in an emergency medicine clerkship. Medical Education. 2020;54(12):1182-3.
15. Choudhury N, Shoushtari A. Training Oncologists in the Time of COVID -19. The Oncologist. 2020;25(7):546-7.
16. Chaudhry U, Ibison J, Harris T, Rafi I, Johnston M, Fawns T. Experiences of GP trainees in undertaking telephone consultations: a mixed-methods study. BJGP Open. 2020;4(1):bjgpopen20X1010.
17. Vaona A, Pappas Y, Grewal RS, Ajaz M, Majeed A, Car J. Training interventions for improving telephone consultation skills in clinicians. Cochrane Database of Systematic Reviews. 2017;2017(2).
18. Finley C, Chan D, Garrison S, Korownyk Cea. What are the most common conditions in primary care? Canadian Family Physician. 2018;64:832 -41.
19. Ferguson J, Wakeling J, Cunningham DE. General practice training in Scotland: the views of GP trainers and educators. Education for Primary Care. 2014;25(4):211-20.
20. Rimmer A. Covid-19: doctors in final trimester of pregnancy should avoid direct patient contact. BMJ. 2020:m1173.
21. Homeniuk R, Rouse M, Collins C. The impact of Covid-19 on GP registrar training in Ireland: a survey of trainees. Education for Primary Care. 2022:1-2.
22. Theoret C, Ming X. Our education, our concerns: The impact on medical student education of COVID-19. Medical Education. 2020;54(7):591-2.