

The COVID-19-forced transformation of general practitioner training from face-to-face to online delivery



A qualitative study of participants' experiences

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Background and objective

Outside the clinical space, face-to-face education essentially stopped when the COVID-19 pandemic started, largely substituted by online education. This provided an opportunity to explore general practice registrar and educator views about the benefits, challenges and enablers of both types of educational delivery.

Methods

This qualitative study included 45 registrars and medical educators from across Queensland, Australia. Transcripts of five focus groups and 22 semi-structured interviews were analysed thematically using the Framework Method.

Results

Major themes focused on social connection, learning engagement, content delivery, and time and space in relation to education. Other themes included technology, unplanned learning, learning safety and pastoral care. Face-to-face education was viewed more positively than online education, but many suggested ways to enhance online education.

Discussion

The importance of social connection dominated and underpinned many other themes identified as central to achieving safe and effective vocational general practitioner education.

GENERAL PRACTICE is the foundation of primary healthcare in Australia, as 83% of Australians visit their general practitioners (GPs) at least annually.¹ Well-trained GPs have been shown to reduce morbidity and mortality and redress some of the socioeconomic determinants of health.^{2,3}

Registrars in general practice training have to meet the specialist competencies, curriculum and training standards of one of two specialist colleges – The Royal Australian College of General Practitioners (RACGP) and/or the Australian College of Rural and Remote Medicine (ACRRM).

The core skills and competencies of general practice are broadly stated as: holistic person-centred care, which is ethical, equitable, innovative, evidence based, meeting the needs of geographically diverse populations and Aboriginal and Torres Strait Islander peoples, while respecting teaching, research and regulatory bodies.⁴ ACRRM extends its practice to include hospital and emergency care.⁵

General practice registrar (GPR) training has traditionally used the apprenticeship model, with face-to-face (FTF) education via clinical supervision by GP supervisors in training practices and educational activities delivered by experienced GP medical educators (MEs).

Historically, online learning (OLL) for vocational general practice training had been limited to the Remote Vocational Training Scheme (RVTS), distance education activities and digitally connected learning modules. OLL has since grown because of technological advancements, improved internet connectivity and exploration of telehealth.

The onset of the COVID-19 pandemic changed general practice training rapidly in March 2020, when public health directives mandated social distancing and limited FTF interactions, triggering widespread implementation of telehealth and online education in general practice training. This created a window of opportunity to explore the educational experiences of MEs and GPRs regarding benefits, challenges and enablers of FTF and online education.

When planning this research, a literature review exploring FTF and online educational modalities found that most studies were about medical student and allied health professional training, with very few in vocational general practice training.

Brown et al interviewed 26 senior GPs and GP medical educators, who emphasised the importance of relational-based education to build professional identity, using interactive small groups to build communication, noting that the added expense of small groups could be offset by moving factual knowledge delivery to OLL.⁶ A survey study found that inexperienced and younger GPs needed the feedback from FTF education, but older, experienced GPs liked the flexibility of OLL combined with working lives. FTF benefited communication, relationship building and skills acquisition.⁷

Research about using OLL to teach GPs to be MEs found that extra time, more support and additional technical skills training were needed for OLL to be effective.⁸

Emergency medicine online simulations improved single, acute hospital emergency competencies but were problematic to apply to complex chronic disease presentations found in general practice.⁹

Many students had OLL substituted for clinical placements.^{10,11} Responses cited flexibility, poor internet connections, knowledge gained, engagement, social connection, distractions, and the inability to transfer some clinical areas to OLL.¹⁰⁻¹² One rural medical school showed success in a blended model of training GP supervisors of students, starting with FTF and focusing on practice-based learning feedback and teaching skills in general, with good effect.¹³

Evaluation of tertiary students' perspectives in Australia and the USA showed OLL created less engagement, motivation, feedback, collaboration, communication skills and satisfaction, but more convenience, internet problems, webinar fatigue, use of home for work and reduced interest in study.¹⁴⁻¹⁶

One undergraduate study found more questions were asked and answered in heavily moderated OLL chats when compared with FTF, which increased

interactions,¹⁷ and a systematic review found coaching, simulations and academic and mental support improved learners' wellbeing and performance. However, this was at a greater expense, requiring more time and needing smaller groups; communication, technology and distractions were problematic.^{10,18} The learners preferred to return to FTF when the opportunity arose.¹⁰

Training structure pre and post COVID-19 pandemic

Australian General Practice Training (AGPT) is funded by the Commonwealth Government of Australia to address doctor maldistribution and rural health inequities through nine general practice regional training organisations (RTOs). Delivering to the standards of the RACGP and ACCRM, these RTOs train all GPRs (including RVTS GPRs) over 3-4 years, to Fellowship completion. In the two RTOs involved in this study, General Practice Training Queensland (GPTQ) and James Cook University General Practice Training (JCUGPT), registrars are grouped geographically into smaller training hubs to enable them to meet regularly in FTF training sessions. MEs (staff of RTOs) provide workshops in central locations, regular training hub educational sessions and External Clinical Teaching Visits (ECTV), observing consultations between GPRs and patients in the clinic.¹⁹ This is additional to GPRs' practice-based training by GP clinical supervisors.

Prior to the COVID-19 pandemic, Term 1 typically started with FTF teaching at an orientation workshop, lasting 1-2 days, for urban, rural or remote GPRs. Subsequently, FTF teaching continued in smaller training hubs for half a day every fortnight. Some rural and remote GPRs had more OLL options, with weekly/fortnightly education delivered as distance education, such as weekly 1.5 hour sessions via videoconferencing (Zoom), plus asynchronous online modules. However, GPRs had some additional FTF interactions during workshops, ECTVs or ME visits.

The aim of this study was to find out the perceptions of MEs and GPRs about online

and FTF RTO-led education, prior to and during the COVID-19-induced changes, in relation to the benefits, challenges and enablers of each, with the aim of finding the best of both educational modalities.

The findings could be used to guide the development, planning and delivery of safe and effective general practice training models in the future.

Methods

Research design

A qualitative approach using online focus groups (FGs) and interviews was adopted to explore the perceived benefits, challenges and enablers of FTF and online education from Queensland MEs and GPRs who had experienced both types of general practice education, before, during and after the pandemic.

The Framework Method was chosen for the analysis.²⁰⁻²²

The research team included GP MEs, academic GPs and RTO research officers, with a mixture of experience in general practice vocational training and/or qualitative research.

Recruitment

Participants were GPRs and MEs recruited by email invitation from the two RTOs in Queensland responsible for vocational general practice training (GPTQ and JCUGPT) to obtain a mix of urban, regional, rural and remote participants.

All MEs, and GPRs in their first year of general practice-based training in 2019 and/or 2020, were eligible to participate. Participants gave consent using an online form, which included demographic questions to assist purposive sampling, enabling different perspectives and contexts. Participants received a gift voucher to thank them for their voluntary participation.

Data collection

Stage 1: Focus groups

A series of online FGs, lasting one hour, were conducted with GPRs and MEs respectively. FGs were facilitated by the research officer; other members of the research team assisted where possible. FGs were limited to a maximum of six

participants. Three FGs were conducted with GPRs (n = 15), and two FGs were conducted with MEs (n = 8).

The FG question guide explored participants' experiences of FTF and online teaching and learning (MEs included ECTVs), and their perceptions of the benefits, challenges and enablers of each type of delivery.

Audio-recordings were professionally transcribed and de-identified before they were shared with research team members.

A preliminary analysis of the transcripts identified key issues, which informed the question guide for the semi-structured interviews (SSIs).

Stage 2: Semi-structured interviews

SSIs of up to 45 minutes' duration were conducted online by the research officer, audio-recorded and professionally transcribed and de-identified. The interviews delved further into key emerging themes and topics identified from the FG discussions, including teaching and learning strategies, preparation, learner engagement, energy, safety of learning, pastoral care, social connections, peer norming, concentration, retention of learning, conversations and unplanned learning. Also explored were time and space issues relating to travel, time and demarcation between home, clinic and education.

Perspectives about the type of content that suited FTF and online education, the frequency, and the timing of RTO teaching, and the training support MEs received and/or needed were sought.

Data analysis

Analysis of the FG and interview data was undertaken sequentially using the Framework Method, which included the following processes:²¹⁻²³

1. Familiarisation (reading transcripts, making notes about recurrent themes)
2. Identifying a thematic framework (by identifying key issues, concepts and themes raised by participants, informed by theory, questions and team discussions, inductively and deductively)
3. Indexing (applying thematic framework, coding the transcripts)

4. Charting (rearranging the data and thematic framework, then charting to create order and summarise)
5. Mapping and interpretation (to describe, create categories, define concepts, explain findings and how themes relate to each other.

Every author read some/all FG and interview transcripts (familiarisation). Three team members (RL, JS, MS) worked collaboratively, identifying a thematic framework from FG data, which was updated using the interview transcripts. They independently read all transcripts and discussed the key issues and concepts raised. The coding framework was developed using both inductive and deductive processes, finalised after SSI data were processed, and discussed and developed with the team before completion.

RL, JS and MS undertook the initial indexing, charting and mapping processes, followed by discussion and interpretation with the team.

NVivo was used by the research officer to assist with coding, indexing and charting.

Results

Participants

Twenty-three participants attended five FGs, and 22 participants completed an SSI (Table 1). Many participants had little or no experience of OLL prior to the pandemic, with the exception of rural and remote GPRs and MEs, who were experienced in OLL.

Focus group and interview findings

Analysis of FG and interview data identified similar dominant themes from both MEs and GPRs (Appendix 1; available online only).

Online education

MEs and GPRs mostly emphasised the challenges and enablers of online education. Both groups identified challenges, dominated by the themes of learning engagement and content delivery, followed by difficulties with social connection, technology, time and space, and then learning safety.

I fear a world where all [general practice] training goes to online training. That would be a very sad day, because a lot of what we achieve from our sessions is relationship based ... as important as the applied professional knowledge and skills ... should be done face to face. [Male ME Urban]

GPRs in rural and remote areas expressed a time and space benefit from staying at home or clinic and not spending time on travelling.

GPRs in remote areas who were expecting OLL from the start of training described more OLL benefits with fewer challenges but also expressed more benefits of FTF delivery than their rural/regional or urban counterparts. By contrast, MEs providing remote education expressed more OLL challenges.

MEs noted that formal training in online delivery was largely absent, compared with that offered for FTF education. Their skills were predominantly learned on the job with support from peers. Existing online organisational systems created to overcome the tyranny of distance in rural and remote areas of Queensland were perceived to assist in the rapid implementation of online delivery, which was not experienced in other locations.

Appendix 2 (available online only) presents key online education challenges identified by MEs and GPRs, with illustrative quotes.

MEs were more likely than registrars to talk about online education problems and difficulties providing learning safety and pastoral care, as well as solutions to content delivery, ways to improve learning engagement and social connection.

Registrars were more likely than MEs to report difficulties with learning engagement and time and space. Suggested strategies to improve online delivery of vocational general practice education included having an initial FTF meeting, icebreaker activities at the beginning of each session, moderator and/or technical support at every session, the flipped classroom approach, smaller group sizes (eg 4-6 registrars), breakout rooms and developing ME skills and technology.

Appendix 3 (available online only) presents potential enablers to online education identified by participants.

Both MEs and registrars reported benefits of online education in relation to time and space, the convenience and accessibility of being home based or accessing education sessions at work during lunch breaks (which reduced the impact on both workforce and income). Participants noted the time efficiency in terms of both reduced travel time and shorter but more frequent training sessions. The convenience and time saving appeared more beneficial for rural/remote registrars:

It cuts down ... travel, which takes up a lot of time. So, it's a lot easier for me to

... say ... 'I'm going to have an hour off to do teaching', rather than say 'I'm going to have three days off', because that's what it takes to travel to central locations ... So that's been very positive for me.

[Male ME Remote]

Additionally, MEs reported benefits of OLL in relation to content delivery, including accessibility for trainees in rural and remote areas, the potential for increased efficiency of some sessions and opportunities for innovation. One ME talked about the ability to deliver content to a whole district instead of multiple

small hubs but at a cost of OLL becoming very didactic.

Another ME noted how the change to online delivery provided an opportunity to review and rework learning objectives and content that had been unchanged for years. Activities such as examination preparation and ECTVs were adapted to run online successfully:

[ECTV done online] felt more natural for both trainee and patient, could pretend the ME was not there. A pleasant surprise that it worked so well.

[Male ME Regional]

Table 1. Number and demographics of general practice registrar and medical educator study participants

	General practice registrar (n)	Medical educators (n)	Total (n)
Focus group and semi-structured interview participants	26	19	45
Focus group participants	15	8	23
Semi-structured interview participants	11	11	22
Regional training organisation			
James Cook University General Practice Training	11	6	17
General Practice Training Queensland	15	13	28
Gender			
Female	15	14	29
Male	11	5	16
Age group (years)			
20-29	13	0	13
30-39	10	3	13
40-49	3	10	13
50-59	0	4	4
≥60 years	0	2	2
Geographical location(s) of participants' workplace(s)			
Urban/metropolitan	10	9	19
Regional	5	6	11
Rural	10	7	17
Remote	1	3	4
Exposure to online learning prior to the COVID-19 pandemic			
Nil or little	18	15	33
Moderate or great	8	4	12

Face-to-face education

Participants mostly commented on the benefits, and occasionally the enablers, with little mention of any challenges. The overwhelming benefits identified by both GPRs and MEs were social connection and learning engagement. GPRs further reported benefits in relation to unplanned learning, time and space, then content delivery, while MEs reported benefits in terms of content delivery, pastoral care/assessment, learning safety and communication (Appendix 4; available online only).

While FTF education was predominantly preferred to OLL, there was a sense that if a group had met FTF first, it could continue some of its learning journey online. It was acknowledged that didactic content-laden topics were more suitable for online delivery, unlike practical or procedural skills. Some sessions were considered not suited to online delivery, such as ethics, communication and mental health skills, because of the need for learners to feel safe and to gain the required level of general practice expertise.

Blended synchronous learning (where FTF and online students are combined in one classroom environment) was poorly regarded by participants.

Discussion

The COVID-19 pandemic drove many abrupt and chaotic changes, including a dramatic shift to OLL instead of FTF, presenting an ideal opportunity to explore the perspectives of MEs and GPRs about the benefits, challenges and enablers of OLL and FTF education. A literature review found there was a paucity of research in the space of vocational general practice training.

Some unique features of vocational general practice training include the sudden relative isolation from peers (as opposed to hospital-based vocational training), the need for rapid decision making based on GP clinical evaluation, and the very 'human' nature of the role of GPs providing continuing holistic, person-centred care, founded on ethical and socially responsible practice,⁴ requiring more than fact-based knowledge.

In response, the approach to vocational general practice training has traditionally relied on small-group FTF education, peer-to-peer learning and mentorship to develop knowledge, skills and expertise.

The research findings from participants across a range of geographical settings suggest it would be highly challenging to deliver vocational general practice training solely online without some FTF contact. All participants, particularly those already familiar with online education, stressed the importance of at least some prior FTF contact to establish a connected community of practice peer group for registrars. Prior FTF contact also allowed MEs to enable effective communication, relationship building and assessment of registrars' needs, achieve ongoing effective mentoring and diminish isolation.

This study found that FTF education was predominantly preferred as it advantaged social connection, learning engagement, content delivery, learning safety, pastoral care and the setting up of functional peer support groups. The social connection preferences may have been accentuated by the impacts and isolation of the COVID-19 pandemic on GPs.

By contrast, OLL created many challenges for MEs and GPRs, predominantly in relation to learner engagement, content delivery, technology and social connection, and some relating to time and space (eg some learners reported logging in online from home or work did not allow them to be in the right mindset to learn or process the content).

Important enablers to OLL included strategies to support group work, such as having smaller numbers (4–6) in registrar groups and more MEs or extra support staff to provide moderation of online chats and break-out groups, along with more technical support and extra training for educators. MEs in rural areas were more likely to be trained and delivering OLL pre-pandemic than their urban colleagues.

Some educational topics were considered poorly suited to OLL, such as ethics, communication and mental health skills, but better suited to FTF teaching and learning, where learners can feel safe in a community of practice peer group and teachers can provide pastoral care if required.

The findings echoed issues identified among undergraduate medical students.¹² GPRs and MEs talked a lot about tiredness in a similar context to 'webinar fatigue'¹⁶ and 'digital fatigue'.¹⁰

This study purposively recruited a sample of participants from the two RTOs that provide all vocational general practice training across Queensland, with MEs and GPRs from a range of geographical locations. These RTOs, similar to all Australian RTOs, follow the same curriculum and training requirements for Fellowship of the RACGP and/or ACRRM. Given this, and that the findings are in keeping with the available literature, it would seem likely that our findings are generalisable to MEs and GPRs across Australia.

Future research could evaluate appropriately blended educational modalities constructed in response to participants feedback for potential use in future general practice training.

Other areas worthy of future research include evaluating online ECTV in more depth and the additional vocational training needs for telehealth consulting.

Conclusion

The rapid pivot to online delivery of vocational general practice education in 2020 as a result of the COVID-19 pandemic enabled general practice training to continue when FTF education was largely not possible.

Online and FTF education modalities have different benefits and challenges, making each more suited to particular places or objectives. However, some FTF education appears essential for general practice training to be socially connected and safe for all concerned.

The insights from this study, about the benefits, challenges and enablers of online and FTF education, may inform future vocational general practice training to adopt the best of both modes of educational delivery, with adaptation to suit the variety of training objectives and locations.

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