
Article:
King, R.L. orcid.org/0000-0003-4012-0202, Carolan, C. and Robertson, S. (2024) COVID-19: a catalyst for change in remote and rural advanced clinical practice - a qualitative study. Journal of Integrated Care: Practical evidence for service improvement, 32 (1). ISSN 1476-9018

https://doi.org/10.1108/JICA-03-2023-0014

COVID-19: a catalyst for change in remote and rural advanced clinical practice. A qualitative study

Journal:	*Journal of Integrated Care*
Manuscript ID	JICA-03-2023-0014.R1
Manuscript Type:	Article
Keywords:	advanced clinical practice, remote and rural settings, Covid-19, remote consultations, online training, primary care

COVID-19: a catalyst for change in remote and rural advanced clinical practice. A qualitative study

Abstract

Purpose

To explore the sustainability of innovations introduced during the Covid-19 pandemic in remote and rural primary care advanced clinical practice.

Design/methodology/approach

An exploratory qualitative study of eight key stakeholders from Scottish remote and rural primary care advanced practice (three policy makers; five advanced practitioners). Data was collected using semi-structured interviews during 2022 and analysed thematically.

Findings

Advanced practice in remote and rural primary care is characterised by a shortage of doctors, close-knit communities and a broad scope of practice. Covid-19 catalysed changes in the delivery of healthcare. Innovations which participants wanted to sustain include hybrid working, triage, online training and development, and increased inter-professional support networks.

Originality

Given current healthcare workforce pressures, identifying and sustaining innovations which will support and retain staff is imperative. Hybrid consultations and online access to training, development and support should be sustained to support the remote and rural advanced practice workforce. Further research should explore the sustainability of innovations introduced during the Covid-19 pandemic in other care contexts.

Practical implications

Findings provide valuable insights into how best to support remote and rural advanced practice which may have implications for retaining healthcare professionals. They also identified useful innovations which could benefit from further investment.

Keywords

Advanced clinical practice, remote and rural settings, Covid-19, remote consultations, online training, primary care, qualitative interviews

Introduction

Primary care has been at the frontline of the response to the Covid-19 pandemic (Verhoeven *et al.,* 2020), with advanced clinical practitioners (ACP) integral to primary care teams (Torrens *et al.,* 2020). Organisations responded rapidly to implement changes in

service delivery to protect patients and staff from infection (Turner *et al.,* 2022). This study explores innovations adopted during the Covid-19 pandemic and how they were sustained in primary care advanced practice in remote and rural settings.

Background

ACPs working in primary care include clinicians from a variety of professional backgrounds; such as nurses, physiotherapists and paramedics. In Scotland, ACPs are trained at Master's level over two to three years with variations in study time and clinical support. The role requires advanced knowledge, skills and attributes, including prescribing, and incorporates the four pillars of clinical practice, education, leadership and research (Strachan and Hoskins 2019). In 2019, the remote and rural population of Scotland was just over 300,000 (6% of the total population), inhabiting 70% of the total land mass (Scottish Government, 2019). Data from Public Health Scotland (2019) shows that in 2018 there were 190 ACPs in the North of Scotland (which incorporates the Highlands and Islands) out of a total of 611 ACPs across Scotland.

Some of the challenges experienced by ACPs across the UK include increased clinical responsibility and accountability and variable clinical supervision (Wood *et al.,* 2021a). Moreover, studies of primary care ACPs in remote and rural settings have highlighted further challenges such as managing complexity, working in multiple roles, isolation and the need for greater specialist-generalist training, and inter-professional knowledge sharing (McCullough, 2022, Strachan and Hoskins, 2019, Owens, 2019). There have been calls for further research into the scope of practice of ACPs in remote and rural settings (McCullough, 2022) and factors that aid transition into the role and promote continuing education (Owens, 2019).

Covid-19 has exacerbated work challenges for ACPs, with concerns about lack of resources to protect staff, and increased workload (Wood *et al.*, 2021a). However, amidst these pressures, there have been opportunities for innovative practice. One notable innovation was the immediate transition from face-to-face, to remote consultations (telephone, video and e-consultation) to mitigate infection risk (Greenhalgh *et al.,* 2021).

Pre-pandemic, Scotland was an early adopter of remote consultations via a national strategy to reduce service inequality and carbon emissions (Wherton *et al.,* 2021). This proved timely as, within four months of the pandemic (March-June 2020), video consultations increased from around 330 to 17,000 per week in Scotland (Wherton *et al.,* 2021). Problems implementing remote consultations for clinicians and organisations included cost, impacts on the consultation and staff wellbeing through working in isolation and reduced access for digitally excluded patients (Greenhalgh *et al.,* 2021, Turner *et al.,* 2022).

Opportunities for innovation through the Covid-19 pandemic have been highlighted internationally, for example in outpatient settings (Driver *et al.* 2021), and elderly care in the community (Rasiah *et al.* 2021, Franzosa *et al.* 2021). However, less is known about how remote and rural primary care ACPs have experienced new ways of working, in light of their unique scope of practice and support needs (McCullough, 2022, Owens, 2019). This study explored the sustainability of innovations introduced during the Covid-19 pandemic in remote and rural primary care advanced practice.

Methods

A descriptive, qualitative exploratory study design, appropriate when eliciting people's experiences and perspectives (Seale, 2018), was used. Snowball sampling (Seale, 2018) enabled recruitment of key stakeholders, in education, policy and practice, involved in remote and rural primary care advanced practice in the Highlands and Islands of Scotland. Initial contact was made via two gatekeepers based in higher education in the Highlands and islands who sent emails, with participant information sheets and consent forms to 11 individuals in their advanced practice networks. Those interested, contacted the research team directly to ask questions and arrange an interview. Eight agreed to take part and three did not respond.

Semi-structured interviews were undertaken by a nurse researcher with clinical and research experience in advanced practice. Key issues in policy and research informed topic guide development, which was piloted with an ACP to ensure clarity (see Box 1).

Eight participants were interviewed at a time and place convenient to them; face-to-face (n=6), virtually via google meet (n=2). Data was collected July-August 2022. Interviews were audio recorded (duration: 38-90 mins, average 52 mins), transcribed and anonymised by the research team prior to data analysis.

Data was managed using Quirkos software (version 2.5.3) and analysed using Braun and Clarke's (2021) six steps of reflexive thematic analysis; familiarisation; data coding; generating initial themes; developing and reviewing themes; refining, defining and naming themes; and writing the report. RK developed initial codes and categories then sense-checked these with CC and SR prior to generating the final themes.

Malterud *et al*.'s (2016) concept of information power rather than data saturation was applied to the sample size of eight. This takes account of the study aim, sample specificity, application of established theory, quality of dialogue and method of analysis when considering adequacy of the sample and data.

Rigour was enhanced through the provision of a detailed description of the study design and research team discussions, including those relating to data discrepancy during data analysis. Reporting follows the consolidated criteria for reporting qualitative research (COREQ) (Tong *et al,* 2007).

Ethical considerations

Written informed consent was obtained prior to data collection. Participants were given a choice of online or face-to-face interviews and the researcher adhered to local Covid-19 guidance. Ethical approval was obtained from the University Research Ethics Committee [Ref: 046867].

Findings

Due to the small sample size and risk of identifying participants, we have provided limited demographic data to ensure anonymity. Of the eight participants, most were nurses, and one was a paramedic. Five were ACPs; two with management responsibilities (ACP-M1 and ACP-M2) and three with mainly clinical responsibilities (ACP-1, ACP-2 and ACP-3), one was a

part-time lecturer. Three participants were policy makers in primary care advanced practice education and policy development (Policy-1, Policy-2, and Policy-3). Most were female (female=7, male=1) and all were white British.

Thematic analysis generated two key themes (see Table I).

Theme 1. Context of remote and rural advanced practice

Remote and rural advanced practice is shaped by policy changes and medical workforce shortages. The context is characterised by close-knit communities and difficult access to resources, with implications for ACPs' scope of practice, training and support.

Drivers for introducing ACPs in remote and rural settings

Changes in healthcare policy, alongside workforce pressures, have driven the introduction and advancement of ACP roles in primary care in the Highlands and Islands of Scotland:

'There's been a big push to increase advanced practitioner numbers, a shift in skill mix …in the last 5-10 years there has been a move away from having GPs to having ANPs in remote and rural areas… Shetland has 17 inhabited Islands, some have ANPs on them, and they're it. They have really gone for the model of having the ANP as the main health provider on the Island, there would have traditionally been a GP." Policy-1

The new primary care policy on investment in advanced roles was recognised as timely as the pandemic put significant pressure on services:

"The new GP contract was timely with Covid-19. It has served to create advanced practice pharmacists, advanced physiotherapists, and nurses. This has provided resilience and leadership, wider use of the roles, greater supervision." Policy-3

However, enthusiasm for widespread advancement of ACP roles was not uniformly shared:

"My concern is that ANPs are the new shiny penny, we don't need ANPs everywhere. We have PNs [practice nurses] who are really valuable, we don't need them all to become ANPs…. That's what the GPs want because they need help with the same day stuff because they're swamped." Policy-3

Relational Closeness: everyone knows everyone

Working and living in remote and rural settings in small close-knit communities poses unique challenges. Participants described how it can blur boundaries between life at work and life outside of work. It was evident that clinical decisions could become a topic of discussion in the local community and could potentially impact on professional reputation:

"I worry about what they [patients] think of me. You don't want to lose rapport, but we need to be firm. They go and tell the whole community about you, we know that happens…. I think we worry too much about what patients think." ACP-1

In the past, very easy access to GPs existed and one ACP described that those expectations were difficult to change:

"I came here years ago and the whole of the [islands] were split into a few GP practices, they were a small, a very informal system where people would just turn up at the surgery. In more rural areas, it was even more informal; if you needed help at 3am you'd bang on the doctor's door." ACP-2

This context was identified as posing unique challenges to ACPs working in remote and rural areas; and subsequently has been included in a bespoke ACP training programme:

"We have identified additional competencies that people need. One additional competency is the values and principles of working in a remote and rural area. All the social aspects of working in a small community." Policy-2

Scope: additional risk related to remoteness

All participants described the unique challenges faced by ACPs from the finite nature of available resources and harsh geographical environments.

"Good support is a long way away and we have three ambulances on the whole island. A car crash today used up two of those ambulances." ACP-2

"We often hear concern from rural practitioners, they like to be trained for the 'what if'; 'what if the helicopter can't get to them and I'm with a sick baby'. They will be supported at a distance, but you could be alone for a day or two days." Policy-1

Furthermore, ACPs reported preparedness to work outside their usual workplaces to support other services when required. For example, some described supporting nearby ambulance services, in addition to usual clinical workload:

"We're 40 mins from the nearest acute hospital and would be on call to respond to anything alongside the ambulance service; cardiac arrests, traffic accidents, anaphylactic children, all sorts of things, just because it's such a huge area to cover. Back at the surgery we would be doing unscheduled care, minor injuries and on-call for home visits and care homes, so it's a huge role." ACP-3

There was an emphasis on the importance of having a breadth of knowledge and experience to manage any healthcare condition:

"In nurse training you are very much streamlined into adult or mental health nursing, so when you go out to the remote and rural areas, it puts people off, particularly in the small

communities, if you're not able to treat a sick child…. The same with mental health, they don't see themselves as mental health practitioners." Policy-2

However, despite the breadth of the scope of practice described by ACPs, those in management and policy stressed the importance of boundaries:

'There has to be a ceiling of care somewhere because they're not GPs, they're advanced practitioners with advanced skills' ACP-M2

'From an employer point of view there's a limit and there's a job description and there have to be boundaries.' Policy-1

This poses a tension for ACPs; on the one hand their scope of practice has boundaries, but on the other hand they may have to manage a wide range of eventualities with limited support and resources.

Training requirements for remote and rural advanced practice

Those involved in designing training for remote and rural ACPs recognised the breadth of knowledge and skills required for clinicians to manage a wide range of potential scenarios:

"They might only see something once every 5 years and they need to know what to do with it… One of the things that was highlighted to us was paediatrics, clinicians didn't feel they had a lot of experience in effective assessment and clinical decision making.' Policy-1

"We've identified core additional skills required to have confidence to practice in these remote and rural areas... for example; palliative care, emergency care across the age spectrum, older people, managing comorbidities, prescribing safely." Policy 2

ACPs in remote and rural settings have been introduced to support the medical workforce. They work in a unique context which brings a range of challenges to the role. These are a consequence of both a closeness to community members and also an isolation from support and resources.

Theme 2. Sustaining innovations introduced during Covid-19

Examples of how the pandemic has expedited new ways of working for ACPs in remote and rural primary care include increased remote consultations, triage, remote access to training and changes to support networks. Participants reflected on their hopes to sustain these innovations.

Covid-19; a catalyst for change

Participants agreed that changes in the delivery of primary care, and professional acceptance of change, were expedited by the pandemic. This included policy level changes, such as ACPs ability to sign fitness for work notes:

"Covid actually made everybody more open and enthusiastic about change, they weren't so reluctant to change. That's the one thing I noticed about the pandemic, we were all changing the flow of where patients went and it used to be 'that's not our job, that's not our area', but suddenly there was a collective responsibility about how we could do this." ACP-M2

"There have been a lot of positives, even such as the legislation change for sick notes [fit notes]; Covid is partly to thank for that." Policy-3

"You always think there'll be a resistance to change but people seem to be getting on with it." ACP 2

Hybrid models of care delivery

Remote consultations were implemented at the start of the pandemic to avoid infection transmission. Although there was a choice to undertake these via video or telephone, ACPs in this study preferred telephone consultations due to a lack of reliability of video conferencing technology.

"The first thing was telephone clinics which we never did before, although you might have spoken to patients on the phone. That was scary to start with because it's so much easier to see patients." ACP-1

"Video consultations weren't successful, due to IT connections being so variable, so it wasn't worth it. So, we have phone clinics booked in." ACP-M1

For some in managerial or policy positions, this reluctance to use video consultation was seen to be more about clinician preference than reliability:

"There is still a tendency in primary care not to use video, they want to use the phone instead". ACP-M2

"Covid exponentially increased the use of video conferencing, but telephone has been the preferred choice of primary care practitioners". Policy-3

Challenges engaging with remote consultations existed for some patients. ACPs found it easier or preferable to offer face-to-face appointments if there was significant dissatisfaction or problems undertaking a comprehensive verbal assessment:

"Some patients get annoyed when you talk on the phone, but we tell them we've been doing this a while now. Sometimes I just give in and say ok come in." ACP-1

"You might ask over the phone, what's been happening? …..they [relatives]reply, 'he's not right', what do you mean not right? 'He's nay well. He's not been well a while'. Then you ask to speak to the patient 'I'm nay well'." ACP-2

Hybrid working allowed clinicians and patients to choose the most appropriate method of consultation. There were instances where, due to issues around risk and prescribing stewardship, it was felt that face-to-face consultation would be the best option:

"At the beginning of lockdown, it was all remote. I found that quite difficult because, as a nurse prescriber, I want to assess my patients before I prescribe for them. I was always taught as a nurse prescriber, never ever prescribe for a patient unless you've personally assessed them…Yesterday I had seven infected leg bites. I prescribed for every single one, …I probably wouldn't have prescribed for them all if I'd see them face-to-face". ACP-3

Remote consultations were so successful that they became the first choice for some clinicians. There was also recognition by ACPs and those in policy roles that, for some patients, remote consultations are preferred due to convenience, saving both time and travel:

"I recently shadowed a very experienced ANP in the Highlands…He does all of his consultations over the phone… He said they had changed their way of working during Covid and decided not to go back". ACP-3

"We found that people like not having to go to the surgery, those who are working and don't feel the need. We have more opportunity to have different types of conversation, also e-consults which are asynchronous, makes it more convenient for some." Policy-3

Triage; creating certainty

Non-clinical reception staff were trained in 'triage', following developed protocols.

"The plan for triage came up overnight, the protocol is very clear, and there was a rota. When patients phone up, they are asked for clinical information." ACP-1

Telephone triage provided ACPs with valuable insight into the reason for consultation, removing some uncertainty, and providing a sense of control.

"The phone clinic list has already gone through triage, so you have some information about what you're doing before you phone." ACP-M1

However, some concerns about patients' perspectives of telephone triage were voiced:

"Some patients don't like it, we hear in the hairdresser and supermarket- "you can't see a doctor", but we know they can see a nurse or doctor if they want to. A lot of patients are fine with it and are getting used to it." ACP-1

All participants were keen to retain telephone triage and the associated sense of certainty it created by informing the consultation:

"Now you only see a patient face-to-face if it's deemed appropriate or if patients insist on it, which some of them do. You're never going to change that, but at least we have an idea of why they're coming in. I wouldn't like to go back to not knowing. Nobody would like that. We're really happy with it". ACP-1

Supportive relational networks

Isolation through home working and clinical uncertainty during the pandemic, exposed the importance of good inter-professional support. Some participants described anxieties caused by a lack of face-to-face clinical assessment, and the need to discuss concerning symptoms with colleagues.

"I found it quite scary at first because people had lots of respiratory symptoms. I was phoning the GPs a few times. We had to make decisions without seeing them and give worsening advice." ACP-1

There was recognition that, in some areas, clinical support was not so well developed or readily available, creating challenges for ACP decision-making, further highlighting the importance of support networks:

"In remote and rural settings, prescribing in particular, it's really difficult because some of these ACPs in very remote places are not supported by GPs, they're completely independent and having to think on their feet." ACP-3

Others valued being part of local online support networks for ACPs developed at the start of the pandemic:

"A support network is important. That's something that's come about since the start of Covid, well the group I'm involved in, for exchanging ideas etc." ACP-3

Access to online training and development

Pre-pandemic, ACPs from remote and rural areas faced long journey times to access relevant in-person training, limiting educational opportunities. However, this changed during imposed travel restrictions:

"There's been a shift in culture in terms of delivering online courses. The islands previously used remote learning for years, but pre-pandemic, other areas did not use it so much…A meeting in Glasgow, for someone in the Shetland or the Western Isles, would be a two-day trip, a day to travel and a day to get back. That's absolutely changed overnight. The door has just opened. Previously if it was done remotely, it was done poorly, but that has changed literally overnight." Policy-1

For one participant involved in teaching, the benefits of adapting to remote education were clear; they planned to sustain these changes to provide equitable access to training:

"I was sent home with a laptop and two big monitors and told to get on with it basically…The students are from all over Scotland and some are from the Islands which makes it difficult to attend so we've decided to continue it online, it works really well as it is. What would happen if we went back to face-to-face is that some would attend in person and others would attend remotely, so it wouldn't be the same experience for everybody". ACP-3

Clinical training supervision also moved to a remote service, not only protecting clinicians from infection, but also enabling equitable access across Scotland:

"Supervision is now online, so people don't have a long commute, and now the remote and rural people can access supervision, which has helped in terms of equity. Some from the Highland and Islands would never have attended. Nothing like a pandemic to get you into the right place!" Policy-3

Discussion

Findings reveal that ACPs in remote and rural settings work in a unique context, experiencing both a relational closeness to their communities and a physical distance from specialist resources and support. Similarly, previous studies of remote and rural healthcare found that clinicians often provided care for friends and neighbours, lacking anonymity and experienced isolation, challenging cultural contexts and a lack of resources (Owens, 2019, Martin *et al*., 2019).

Participants emphasised the need for ACPs to undertake bespoke training to develop an extensive range of skills and knowledge to prepare them for a wide range of eventualities. Strachan *et al* (2019), and Hubbard *et al* (2019), similarly identified that ACPs in rural areas manage more complex cases and often undertake multiple roles, with the centralisation of specialist services exacerbating the lack of access caused by poor transport and bad weather. Hence, ACPs broad scope of practice and unique social and geographical context underscores the need to develop specialist-generalist remote and rural postgraduate educational pathways; a strategy previously found to promote job satisfaction and retention (Owens, 2019).

This study also revealed a desire by participants to sustain positive changes introduced during the pandemic. They described key innovations introduced at the start of the pandemic including a triage system, remote consultations, and online learning opportunities; impressive changes in a context previously identified as difficult to achieve workplace transformation (Hubbard *et al.,* 2019). Although ACPs adapted to remote consultations, they found the lack of physical assessment and prescribing challenging, with resistance from some patients and disadvantages for others. This aligns with previous research demonstrating that support for remote consultations waned during the pandemic due to missed diagnoses, lack of a therapeutic relationship, and digital inequalities (Mroz *et al.,* 2021, Verhoevan *et al.,* 2020).

There was a desire by participants to continue providing hybrid options for consultations, a transformation dependent on several factors such as digital infrastructure, fair distribution of human and financial resources, training, and data security (Wherton *et al.,* 2021). Participants also valued the introduction of a triage system, which provided increased certainty to consultations in the context of complex clinical decision-making (Greenhalgh and Wieringa, 2011).

The transition to online training and supervision provided a more accessible and equitable experience to support ACP learning needs. In the context of working in isolation, ACPs valued the opportunity to discuss their decisions with experienced colleagues and valued the development of online networks. As a relatively new role which blurs the boundaries with medicine, it is crucial for ACPs to access relevant training and continuing development to inform decision making (Torrrens *et al.,* 2020; King *et al.,* 2021). This is consistent with previous research which identified the importance of effective clinical supervision for healthcare professionals in remote and rural areas (Martin *et al.,* 2019, Owens, 2019). Torrens *et al* (2020) similarly emphasised the importance of building collaborative relationships in the success of the primary care ACP role, while others highlight the impact of variable supervision on ACP-wellbeing (Wood *et al.,* 2021b). The autonomous nature of advanced practice requires efficient access to information and inter-professional support, particularly when making quick decisions about patient care (King *et al.,* 2021).

This study has identified a range of workplace transformations introduced during the Covid-19 pandemic, viewed positively by the remote and rural ACP workforce in Scotland. Future research should explore this important issue in other remote and rural contexts; with the aim of sustaining positive innovations that can promote job satisfaction and retention of primary care ACPs. It is also important to evaluate future initiatives that promote inter-professional knowledge sharing.

Limitations

Despite the small sample size, interviews enabled an in-depth understanding of experiences and views of participants in practice, education and policy. These findings, while not generalizable, will be transferable to similar remote and rural contexts.

Conclusion

National and international primary healthcare systems adapted care delivery in response to the Covid-19 pandemic. Findings suggest that, for remote and rural primary care advanced practice in Scotland, some innovations introduced during the pandemic were viewed positively. Hybrid consultations, triage, and online access to training, development and support should be sustained to enable the remote and rural ACP workforce to flourish and mitigate current pressures. Further research should explore the sustainability of innovations

introduced during the Covid-19 pandemic in other health and social care contexts and professional groups and their role in promoting workforce retention.

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Box 1. Interview topic guide

1. What is the role of ACPs in primary care in your area?
2. How has the scope of ACPs been determined?
3. How has the pandemic impacted care delivery?
4. How have primary care ACPs adapted their ways of working to meet patient need through the Covid-19 pandemic?
5. How have those changes impacted clinical practice?
6. How have those changes impacted patient care?
7. What would enable/support ACPs to sustain these innovations in practice?
8. Is there anything else you'd like to say about your role during the pandemic that hasn't already been covered?

Table I. Themes and sub themes

Theme		**Sub themes**
Theme 1	Context of remote and rural advanced practice	Drivers for introducing ACPs in remote and rural settings
		Relational closeness: everyone knows everyone
		Scope: additional risk related to remoteness
		Training requirements for remote and rural practice
Theme 2	Sustaining innovations introduced during Covid-19	Covid-19: a catalyst for change
		Hybrid models of care delivery
		Triage: creating certainty
		Supportive relational networks
		Remote access to training and development

Acknowledgements
The study has been funded by the Florence Nightingale Foundation, Stephanie Thompson Memorial Fund.