

BMJ Open What can general practice learn from primary care nurses' and healthcare assistants' experiences of the COVID-19 pandemic? A qualitative study

Alice Russell ¹, Gilles de Wildt,² Minka Grut,¹ Sheila Greenfield ³,
Joanne Clarke ³

To cite: Russell A, de Wildt G, Grut M, *et al.* What can general practice learn from primary care nurses' and healthcare assistants' experiences of the COVID-19 pandemic? A qualitative study. *BMJ Open* 2022;**12**:e055955. doi:10.1136/bmjopen-2021-055955

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2021-055955>).

Received 29 July 2021

Accepted 25 February 2022



© Author(s) (or their employer(s)) 2022. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

¹College of Medical and Dental Sciences, University of Birmingham, Birmingham, UK
²Institute of Clinical Sciences, University of Birmingham, Birmingham, UK
³Institute of Applied Health Research, University of Birmingham, Birmingham, UK

Correspondence to

Alice Russell;
anr745@student.bham.ac.uk

ABSTRACT

Objectives UK general practice has radically altered in response to COVID-19. The general practice nursing team has been central to these changes. To help learn from COVID-19 and maintain a sustainable nursing workforce, general practice should reflect on their support needs and perceptions of organisational strategies. This study aimed to explore primary care nurses' and healthcare assistants' experiences and perceptions of general practice, and the changes made to it, during the pandemic.

Design Exploratory qualitative study using semistructured interviews. Interview data were analysed using Braun and Clarke's 'codebook' thematic analysis.

Setting General practices in the Midlands, South East and South West England. Interviews were conducted in February and March 2021, as England began to unlock from its third national lockdown.

Participants Practice nurses (n=12), healthcare assistants (n=7), advanced nurse practitioners (n=4) and nursing associates (n=1) recruited using convenience and snowball sampling.

Results Three themes were identified. *Difficult changes* describes dramatic changes made to general practice at the onset of the pandemic, creating confusion and anxiety. *Dealing with change* characterises how negative emotions were intensified by fear of infection, problematic government guidance, personal protective equipment (PPE) shortages and friction with doctors; but could be mitigated through effective practice communication, peer support and individual coping strategies. *An opportunity for improvement* highlights certain changes (eg, the increased use of telehealth) that participants believed could be adopted long term to improve efficiency.

Conclusion General practice should learn from the COVID-19 pandemic to nurture the clinical role and resilience of nurses and healthcare assistants in the postpandemic 'new normal'. Robust PPE provision could enable them to undertake their patient-facing duties safely and confidently. Judicious implementation of telehealth could help preserve the practical and caring nature of nursing. Improving channels of communication and interprofessional collaboration could help realise their potential within the primary care team.

Strengths and limitations of this study

- Focus on nurses and healthcare assistants (who occupy a key frontline position within the primary care team but are under-represented in the literature) offers unique insight into the COVID-19 pandemic within UK general practice.
- Semistructured interviews enabled an in-depth, dynamic exploration of nurses' and healthcare assistants' nuanced personal experiences and perceptions.
- While any nurse or healthcare assistant working in English general practice during the pandemic was eligible to participate, convenience and snowball sampling resulted in participants being recruited only from the Midlands, South East and South West England; findings may therefore differ in other areas of England, devolved British nations and internationally.
- Recruitment using personal networks and lack of a nurse representative within the research team may have introduced bias into the recruitment process, study conduct and data interpretation. However, a reflexive and collaborative approach to data analysis helped improve study credibility.

INTRODUCTION

Background

General practice in the UK has radically altered in response to the COVID-19 pandemic.^{1–3} Within weeks of the first national lockdown (implemented in late March 2020),⁴ most non-essential care was suspended, allowing COVID-19 cases and essential services to be prioritised.^{5 6} In-person consultations shifted to be conducted almost exclusively using telehealth (information and communication technologies to provide care remotely).^{2 6–8} COVID-19 'hot hubs' (dedicated clinics for confirmed or suspected cases) were created to reduce infection transmission.^{3 5 6 9} As the gateway to the wider National Health Service (NHS) and given that most COVID-19 cases

are mild and managed in the community, these changes were critical to alleviate hospital workload.^{5 9}

The general practice nursing team has been central to these efforts. The team includes healthcare assistants (HCAs), nursing associates, practice nurses and advanced nurse practitioners (ANPs).¹⁰ Representing 17.1% of the general practice workforce and a key component of the primary care team (which also includes general practitioners (GPs), pharmacists, social workers and other health and social care professionals), they are responsible for an increasingly large clinical workload.^{10–12} Practice nurses autonomously manage patients with acute, chronic and social needs,¹⁰ supported by HCAs who independently undertake patient-facing activities such as health promotion and venepuncture.¹³ Nursing associates bridge the gap between HCAs and practice nurses.¹⁴ ANPs are highly educated and experienced nurses responsible for patients' complete clinical care.¹⁵

Nurses and HCAs remain key as COVID-19 evolves to endemic status.¹⁶ They must support patients to self-manage COVID-19 infection⁹; help address mental and physical sequelae of infection (including long COVID-19)^{9 17 18} and collateral damage of postponed care^{5 19}; administer and encourage uptake of vaccinations²⁰; and advocate for individuals vulnerable to the socioeconomic consequences of the pandemic.^{7 9 18 19} Handling these high workloads in a context of persistent global uncertainty places the nursing team at risk of burnout, anxiety, post-traumatic stress disorder or moral injury.^{21–23}

General practice should now reflect on nurses' and HCAs' experiences of the pandemic.^{9 18 24–26} Reflection can elucidate their unique responsibilities and support needs, critical to address the diminishing nursing workforce.¹⁰ The practical nature of nursing consultations meant a large proportion remained face to face during the pandemic (reported as 54%, in comparison to 10% of GP consultations).²⁷ This frontline position offers nurses insight into the realities of delivering care both in-person and via telehealth, and the tangible impact of the pandemic on patients. Reflection can therefore also help general practice assess its organisational strategies.

There is a substantial volume of international qualitative literature documenting nurses' experiences of the pandemic. Most of these studies are set in hospitals.^{25 26 28–36} Fewer studies focus on primary care nurses who, with differing responsibilities during the pandemic and moving forward, possess different insights. The most prominent theme captured is the feeling among primary care nurses of being placed at physical and psychological risk.^{24 29 37–39} This mainly arose from a lack of personal protective equipment (PPE), but was further compounded by inadequate preparation, rapidly changing clinical protocols and poor management support.^{24 28 37–39} It created anxiety and stress; to manage this, nurses valued standardised clinical protocols, educational resources and meaningful mental health support.^{25 29 37 40} The widespread implementation of telehealth is also recurrently discussed, with nurses raising concerns regarding

inadequate staff training and technology infrastructure, difficulty in clinical risk stratification when consulting remotely, and the risk of disadvantaging already vulnerable patient groups (such as the elderly or immigrant communities).^{35 36}

Differences in national primary care organisation and pandemic response mean these findings are not necessarily transferable to UK general practice. However, to the best of the authors' knowledge, there are currently no published qualitative studies exclusively examining UK-based primary care nurses' experiences of the pandemic. This study aims to address this gap by exploring nurses' and HCAs' experiences and perceptions of general practice, and changes made to it, during the COVID-19 pandemic. Findings can complement other studies of staff, patients and community organisations, aiding organisational learning from COVID-19.

METHODS

Study design

This exploratory qualitative study used semistructured interviews for an in-depth, dynamic exploration of personal experiences and perceptions from an ontologically constructivist and epistemologically interpretivist stance.^{41–43} Interviews were conducted in February and March 2021, as England began to unlock from its third national lockdown.

Setting

The study was set in the Midlands, South East and South West England. Compared with low death tolls and economic resilience of high-income countries such as New Zealand, China and South Korea,⁴⁴ the UK performed poorly in the initial stages of the pandemic.⁴⁵ As of January 2021, the UK had the fifth highest death toll globally.⁴⁶

Population and sampling

Any HCA, nursing associate, practice nurse or ANP working in English general practice during the COVID-19 pandemic were eligible to participate. Given time constraints of the study period and pressures of COVID-19 on staff availability, participants were identified by convenience sampling⁴⁷ (using the research team's pre-existing personal connections within primary care and a Twitter advertisement, yielding 19 participants) and snowball sampling⁴⁷ (yielding an additional five participants). Based on an assessment of 'information power',⁴⁸ anticipated sample size was estimated at 25 participants; a final sample size of 24 was agreed by the research team based on an in-situ assessment of the adequacy of the data.⁴⁹

Recruitment

A digital recruitment leaflet was provided to eligible participants: for convenience sampling, broadcasted via the Twitter advertisement or sent via email from the research team to personal contacts; for snowball sampling, sent via

Box 1 A summary of the interview topic guide

Personal and professional experiences of working in the pandemic (*prompts, if necessary*)

- ▶ Could you tell me about your experiences of the COVID-19 pandemic? (*personal, professional*)
- ▶ In your experience, how did general practice adjust to the COVID-19 pandemic?
- ▶ What do you think has been helpful for your work as a (job role) during the pandemic?
- ▶ What do you think has made for work as a (job role) more difficult during the pandemic?

Perceptions of management, support, and preparation of general practice (*prompts, if necessary*)

- ▶ How well prepared and supported have you felt by your practice? (*practice management, colleagues*)
- ▶ How well prepared and supported have you felt by the government and Public Health England?
- ▶ What is your opinion of how the UK government has dealt with the pandemic?
- ▶ Have you used any coping strategies during the pandemic?

Perceptions of changes made to general practice

- ▶ Of the changes made to general practice during the pandemic, are there any that you would like to see sustained long term?
- ▶ Of the changes made to general practice during the pandemic, are there any that you would not like to see sustained long term?

Perceptions of the challenges facing general practice

- ▶ What do you think are the major challenges now facing general practice?

email from existing participants. If interested, potential participants contacted the lead researcher (AR) directly using the contact details provided in the leaflet. AR provided a digital information pack (study information leaflet, consent form and demographic questionnaire) and opportunity to ask questions. Potential participants were given 24 hours to consolidate their decision; if still willing, a convenient time was arranged for interview. All potential participants sent the information pack agreed to participate. As a token of gratitude, participants were compensated with a £25 shopping voucher.

Data collection

Semistructured interviews were conducted via telephone or video call,⁵⁰ dictated by participant preference. Each participant was interviewed once by AR. Interviews were directed by a topic guide (box 1), ensuring important topics were covered while allowing exploration of novel ideas. The initial topic guide was based on the themes from existing literature.^{25–40} Clarity and focus of some questions were adjusted following a pilot interview with a practice nurse; the pilot interview was therefore not included in data analysis. Topics covered were personal and professional experiences of the pandemic; individual, practice and government support; changes made to general practice; and future challenges facing general practice.

To start each interview, a demographic questionnaire (supplementary material 1) was completed verbally. Precoded questions covered individual and practice characteristics; open questions explored participants' role in their practice and their practice population. This served to describe the study sample and contextualise participants' responses. Verbal consent was then taken, confirmed in writing by AR and audio recorded. Once consent was obtained, the interview recording began. At the end of each interview, participants were signposted to mental health services available to NHS staff. AR then recorded reflective field notes to supplement audio recordings.

Data analysis

Audio recordings were transcribed and anonymised. Demographic questionnaire data were analysed using descriptive statistics. Interview data were analysed using Braun and Clarke's six-step 'codebook' style of thematic analysis (TA).^{42 51} Transcripts were read and reread to achieve data familiarisation.^{42 51} The first five transcripts were double coded by AR and MG, who individually derived codes (analytic observations encompassing a single idea) and then collaboratively developed a coding framework.^{42 51} AR used this framework to code the remaining transcripts, using NVivo (V.12) for data management. Codes were arranged into candidate themes (a central organising concept of more complex meaning) using thematic maps.^{42 51} Candidate themes were then further refined and defined through discussion between researchers to give finalised themes.^{42 51}

Codebook TA was chosen as it retains the flexibility offered by 'reflexive' TA, allowing analysis to begin deductively (using the topic guide and themes from existing literature) but become increasingly inductive as deeper engagement with the data offers novel insights,^{52–54} while also incorporating some methods of 'coding reliability' TA, with use of multiple coders to develop a coding framework. The framework was iteratively adjusted throughout data analysis, and themes not predetermined before data analysis, facilitating efficient delivery of analysis without compromising the epistemological and ontological approach.^{52–54}

Transparency was maintained and reflexivity employed throughout the research process. AR is a female medical student with qualitative research training and experience of working in English general practice. AR was previously unknown to all participants. MG is also a medical student. GdW (a practising GP), SG (a medical sociologist) and JC (a research fellow with a focus on public health and health promotion) are all experienced qualitative researchers.

The 21-item Standards for Reporting Qualitative Research checklist was used as explicit and comprehensive criteria for writing this paper (supplementary material 2).⁵⁵

Patient and public involvement

Participants and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Table 1 The distribution of participant (N=24) and practice (N=18) characteristics

Participant characteristic	Category	%	n (N=24)
Professional role	Healthcare assistant	29.2	7
	Nursing associate	4.2	1
	General practice nurse	50.0	12
	Advanced nurse practitioner	16.7	4
Age	20–29	4.2	1
	30–39	16.7	4
	40–49	25.0	6
	50–59	45.8	11
	60–69	8.3	2
Gender	Female	91.7	22
	Male	8.3	2
Ethnicity	Asian or Asian British	12.5	3
	Black, African, Caribbean or black British	4.2	1
	Mixed or multiple ethnic groups	4.2	1
	White	79.2	19
Total years worked in healthcare	Median	19 (range 1–34)	
Total years worked in general practice	Median	6 (range 1–24)	
Hours worked per week	Mean	27 (range 10–37.5)	
Practice characteristic	Category	%	n (N=18)
Practice setting	Urban	27.8	5
	Suburban	55.6	10
	Rural	16.7	3
Practice size	Small (<5000 patients)	11.1%	2
	Medium (5000–15000 patients)	55.6%	10
	Large (>15000 patients)	33.3%	6
Number of patients	Mean	13500 (range 2000–30 000)	

RESULTS

Twenty-four interviews were carried out, 12 via video call and 12 via voice call, lasting an average of 36 min (range 23–52). Participants were recruited from 18 urban, suburban and rural practices in England, situated in the Midlands (n=11; 61.1%), South East (n=4; 22.2%) and South West England (n=3; 16.7%), with a maximum of three participants from a single practice. There were 7 HCAs, 1 nursing associate, 12 practice nurses and 4 ANPs. Participants had a mean age of 45.2 years (range 22–64) and were predominately women (n=22; 91.7%) and white (n=19; 79.2%). They had a broad range of professional experience (1–34 years within healthcare). Practices were mainly suburban (n=10; 55.6%); medium sized, with 5000–15000 patients (n=10; 55.6%); serving socioeconomically and ethnically diverse populations. Distribution of participant and practice characteristics is given in table 1.

TA identified three key themes, illustrated with their corresponding subthemes in figure 1. Themes are supported with participant quotes, presented in clean verbatim style to improve readability.

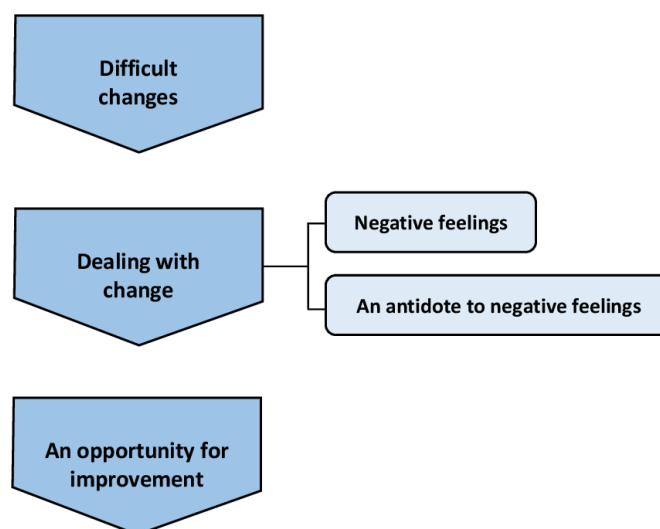


Figure 1 Themes and subthemes. The three key themes, and corresponding subthemes, identified in thematic analysis.

Difficult changes

All participants described dramatic changes at the onset of the pandemic, quickly implemented and very different to normal procedure, proving difficult to manage. The first major change was to delivery of nursing care. In-person care shifted to delivery via telehealth where possible and certain practical services (including aerosol procedures and cervical screening) stopped entirely. This reduced footfall to practices, allowing priority services (such as childhood immunisations) to continue more safely.

We had to make a lot of changes very quickly ... we went from being all patient-facing to ... very little patient-facing work ... all routine work stopped apart from the childhood immunisation programme and urgent care ... diabetes, asthma, chronic airways were all done on the phone. PN11 (large, urban practice)

The second major change was to infection control, with introduction of PPE, patient screening, social distancing and cleaning between patients. Patient flow was also altered, separating confirmed or suspected infectious patients from non-infectious or vulnerable patients.

We had ... designated ... rooms on the first floor for infectious patients to come in ... we had to literally overnight completely change our working practices, which was quite difficult. PN3 (large, urban practice)

Participants found the infection control changes particularly challenging. Rigorous cleaning between patients and organising socially distanced influenza vaccinations proved complex and time-consuming. Their frontline position subjected nurses and HCAs to problematic encounters with patients; for example, coming into practices while symptomatic with COVID-19 or refusing to wear a face mask.

Just the arguments with patients, “Put a mask on please”, “No ... you can’t make me ... it’s not the law”, [patients] waving these stupid lanyards. It’s just a nightmare. ANP1 (small, suburban practice)

Dealing with change

Participants characterised a range of negative emotions due to fear of infection, problematic government guidance, PPE shortages and friction with doctors. Various supportive strategies at management, colleague, and individual levels were identified as an antidote to these negative feelings.

Many participants described the unknown and potentially fatal nature of COVID-19 provoking fear. This was exacerbated by the PPE shortages most participants experienced (a few recalled consistently adequate supplies due to existing stockpiles or donations). All participants described subsequent improvement in supply, attributed to establishment of the centralised PPE portal.

It was just the anxiety and the uncertainty ... that was difficult to live with ... you’re watching news of nurses

dying and doctors dying and you just think ... I’m really frightened to go to work. PN3 (large, urban practice)

Fear was furthered still by problematic government guidance: non-existent or, if available, rapidly changing and unclear.

Everyday a new email would come out ... today we’re going to do this and then the next day no we’re not doing that anymore, we’re going to do ... something completely different ... having to be on top of things very quickly, it was exhausting. PN3 (large, urban practice)

Within this context, while many doctors were able to considerably reduce their patient contact by consulting remotely, the practical nature of many nursing tasks (such as childhood immunisations and urgent blood tests) meant most nurses continued to see patients in person. Half the participants (all either practice nurses or HCAs) described feeling vulnerable and overlooked when doing so. They vocalised resentment towards doctors, feeling they had shown inadequate awareness of or support for their concerns.

It was very scary ... we were a bit neglected ... we were kind of thrown into the lions’ den, see the patients and carry on as normal ... “we’re [the doctors] hiding in our rooms but you [the nurses/HCAs] see all the patients.” PN4 (medium-sized, suburban practice)

What annoys me is that the doctors ... they’ll do a telephone consultation with a patient but then they could be booked in with me the next day. So it kind of makes me feel like well their lives matter but mine doesn’t, you know? ... So that’s really, really annoyed me ... all the healthcare assistants that I know and nurses all feel exactly the same ... we’re all classed as second-best, we don’t matter. DPC5 (small, suburban practice)

An antidote to negative feelings

Participants highlighted certain strategies that helped ameliorate the difficult changes and negative feelings. Most notable was a culture of communication, cultivated by senior management (practice managers and GP partners) in three ways. First, filtering information—compressing guidelines to the necessary information and relaying this via virtual meetings or COVID-specific channels of communication—helped nurses and HCAs manage the large volume of constantly changing guidance.

We had meetings twice a day with updates because the updates were just constant ... they had a COVID email address so everything was condensed ... the practice manager would put everything together in a format, highlighting everything that you needed to look at, everything that the doctor needed to look at,

making it much, much easier for us. ANP4 (large, rural practice)

Second, maintaining open channels of communication and regularly touching base with staff helped allay feelings of fear, confusion and neglect.

Senior management are very good at stopping in the hall and asking how you are doing on a personal level, coming to your room coming and asking how things are going, I think communication wise they've been brilliant. PN2 (medium-sized, urban practice)

Third, listening to staff anxieties (eg, personal medical vulnerabilities or childcare responsibilities) was essential in order to address them.

I have a chronic disease ... so at first it was stressful, and I think talking about that with the management at work and just asking what needed to be put in place ... they were very proactive in terms of being aware of the medical needs and issues ... very, very supportive. PN2 (medium-sized, urban practice)

Aside from practice communication, peer support (offered in-person and online) was an important source of mutual understanding and camaraderie. Participants also employed individual coping mechanisms, including exercise and support from family and friends.

I've got a good group of nursing friends ... that has been a good space to debrief ... just being able to have someone else that gets it and just talk it out has been really helpful. PN2 (medium-sized, urban practice)

An opportunity for improvement

While recognising the challenges and drawbacks, almost all participants believed consolidating the implementation of telehealth, which was accelerated during the pandemic, could improve efficiency.

Participants agreed not all nursing encounters required a face-to-face consultation. They thought repeat prescriptions, medication reviews and non-practical elements of chronic disease and travel consultations could be effectively managed using telehealth. They also felt patients best suited to telehealth tended to be young, employed and technologically-literate.

Things like straightforward pill checks and women who've been on the same pill for quite a while ... it's nice and easy ... saves them coming in. PN4 (medium-sized, urban practice)

When applied to these scenarios and patients, most participants believed telehealth improved efficiency. It provided flexibility for patients and staff; reduced 'did not attend time'; encouraged patient self-management; and facilitated professional collaboration with other members of the primary care team and secondary care practitioners.

More telephone consultations ... could improve the working life of professionals in general practice because then they could maybe have a bit more flexibility in their life and work from home a bit if needed ... also flexibility for patients because they can just get a phone call, they don't have to come to the surgery. PN7 (large, rural practice)

However, participants felt certain nursing consultations needed to be in-person: those for health promotion, mental health and sexual health screening; or with elderly patients and non-English speakers.

I think doing those [sexual health screening] questions over the phone, we've realised doesn't work as well, just because people not wanting to say those things when they're on the phone. PN2 (medium-sized, urban practice)

The human element of nursing was also emphasised. A lack of non-verbal cues or a global impression of the patient complicated assessment of clinical risk and compromised holistic care. Additionally, many participants thought that in-person contact had inherent therapeutic benefit.

When you see a patient face-to-face, I think it's better because ... someone might say "oh I'm fine, I'm alright", but just looking at them you can tell that they're not. DPC5 (small, suburban practice)

Given the potential drawbacks, while most participants hoped telehealth would be maintained, almost all articulated the need for more face-to-face appointments than currently available. They also recognised the need for reliable technology equipment and training for staff.

DISCUSSION

This study found that the COVID-19 pandemic has been a stressful period for nurses and HCAs in general practice, aligning with international accounts of primary care^{25 27 29 35-37 39 56-58} and nurses' experiences in general.^{26 28 30-34 40 59-62} The necessity for meaningful and accessible short-term and long-term mental health support and continuous education and training are key recommendations in the literature.^{21-23 25 28 31 32 37 38 40 57 59} However, this study emphasised additional measures that could help to better support primary care nurses, HCAs and the wider primary care team.

Consistent PPE

The unknown nature of the virus created a strong fear of infection among participants in this study. This feeling is emphasised by nurses in other qualitative studies from the pandemic, who also describe fear intensified by the tenuous nature of PPE—of inadequate quantity (as described in this study) but additionally of uncertain quality.^{26 28 30-32 37-39} Literature from this pandemic and previous disease outbreaks suggests that the frontline

nature of their role may place nurses at higher risk of physical and psychological distress than other healthcare professions.^{26 32 33} Ensuring consistency in the quality and provision of PPE is critical to allow nurses to continue patient-facing activities confidently and safely.^{28 29 31 37–40 61} It could also help to mitigate the feeling of neglect vocalised by participants in this study.

Clear communication

Reflecting international nursing experience,^{24 25 27 29 32 48 57 58} the large volume of constantly changing guidance was another key source of stress for participants in this study. The literature emphasises the need for clear channels of communication.^{25 28–30 32 34 35 37} In this study and other accounts of primary care, this was best achieved through daily team meetings as means to provide consistent delivery of information as well the opportunity to share concerns and offer peer support.^{29 35 56 58} A recent international scoping review identified these functions as critical to enable resilience among healthcare professionals during the pandemic.⁶³

Interprofessional collaboration

Team meetings and touching base with staff contributed to a ‘culture of communication’, observed by participants in this study to help mitigate confusion and anxiety, nurture interprofessional relationships, and improve practice dynamics. European primary care practitioners also valued such communication, finding it to bring a sense of camaraderie.⁴⁰ Regular, reciprocal and informal communication has been recognised as the most important determinant of interprofessional collaboration (IPC) in primary care.⁶⁴ General practice should consider other strategies to improve IPC, both ‘top down’ or organisational factors (eg, developing formal processes to clarify roles or collaborative management structures) and ‘bottom up’ or interpersonal factors (eg, shared clinical decision making).⁶⁴ Given the complexity of IPC, dynamic nature of healthcare teams and volatile postpandemic healthcare climate, this will require further research.^{64 65} Improved IPC could help address friction between doctors and nurses and HCAs noted in this study and also in other UK and international studies from the pandemic.^{33 34 62}

Telehealth nursing

Nurses and HCAs in this study believed long-term implementation of telehealth could improve accessibility, flexibility and efficiency of care. These benefits are well-documented in existing literature.^{27 66–72} However, they also highlighted how telehealth risks compromising the practical, caring and holistic nature of nursing care. Given this, participants emphasised the need for balance between in-person and telehealth consultations, using the most appropriate mode for the given scenario and patient.

Strengths and limitations

A key strength of this study was its focus on the general practice nursing team, a critical component the primary

care team but under-represented in the literature. While any nurse or HCA working in English general practice during the pandemic was eligible to participate, sampling using convenience and snowball sampling⁴² resulted in participants being recruited only from the Midlands, South East and South West England, with some belonging to the same practice. This may limit the diversity of experiences captured, and findings may not be reflective of other areas of England, devolved British nations, or internationally. The use of personal networks and lack of a nurse representative within the research team may have introduced bias into recruitment, study conduct and data interpretation. Furthermore, given the time constraints of the study period, member validation was not deemed feasible. However, a reflexive and collaborative approach to data analysis helped improve credibility of study findings.⁴⁷

CONCLUSION

The COVID-19 pandemic has been a difficult period for nurses and HCAs in UK general practice, illuminating their support needs and emphasising their core professional values and responsibilities. General practice should use these lessons from COVID-19 to nurture the clinical role and resilience of nursing team. A consistent supply of high-quality PPE should be secured to allow nurses and HCAs to continue to engage in patient-facing activities without risk of physical and psychological stress. Better pathways of communication should be promoted to encourage timely, open, and consistent information sharing. This could involve regular practice meetings, which can also facilitate peer support and IPC. Other strategies to address friction between staff groups and improve IPC should be explored in research and practice. Finally, the use of telehealth nursing should continue judiciously, used for appropriate scenarios without supplanting in-person care, in order to preserve the practical and caring values of the profession. These strategies could better support nurses and HCAs in the postpandemic ‘new normal’, enabling them to realise their full potential within the primary care team.

Acknowledgements The authors would like to thank the interviewed nurses and healthcare assistants for sharing their invaluable insights and experiences. We would also like to thank the University of Birmingham and the Wolfson Foundation for their financial support.

Contributors AR, GdW and JC conceptualised the study and developed the methods and they also helped develop the interview topic guide. AR conducted participant recruitment and interviews. AR, JC and MG analysed the data, with contributions from SG. AR drafted the initial version of the manuscript, with critical revisions from JC, MG, GdW and SG. All authors read and approved the final manuscript. AR is the guarantor of the manuscript.

Funding This work was supported by the University of Birmingham and the Wolfson Foundation.

Competing interests None declared.

Patient and public involvement Participants and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Ethics approval This study involves human participants and was approved by University of Birmingham BMedSc Population Sciences and Humanities Internal Research Ethics Committee (reference number: IREC2020/1754345). Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available upon reasonable request. Data are available upon reasonable request. All requests for data should be made to the corresponding author. Due to the personal nature of the interview questions, participants were assured interview transcripts would remain confidential and not available in the public domain. Results of data analysis (the coding framework and results of thematic analysis) can be provided on reasonable request and agreement with the authors, to ensure that ethical and legal requirements are upheld.

Supplemental material This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

ORCID iDs

Alice Russell <http://orcid.org/0000-0002-4642-3696>

Sheila Greenfield <http://orcid.org/0000-0002-8796-4114>

Joanne Clarke <http://orcid.org/0000-0003-2563-5451>

REFERENCES

- Majeed A, Maile EJ, Bindman AB. The primary care response to COVID-19 in England's National health service. *J R Soc Med* 2020;113:208–10.
- Marshall M, Howe A, Howsam G, et al. COVID-19: a danger and an opportunity for the future of general practice. *Br J Gen Pract* 2020;70:270–1.
- Thornton J. Covid-19: how coronavirus will change the face of general practice forever. *BMJ* 2020;368:m1279.
- Institute for Government. Lifting lockdown: how to approach a coronavirus exit strategy, 2020. Available: https://www.institutefor.gov.uk/sites/default/files/publications/lifting-lockdown-how-approach-coronavirus-exit-strategy_1.pdf [Accessed 29 Apr 2021].
- Rawaf S, Allen LN, Stigler FL, et al. Lessons on the COVID-19 pandemic, for and by primary care professionals worldwide. *Eur J Gen Pract* 2020;26:129–33.
- Khan N, Jones D, Grice A, et al. A brave new world: the new normal for general practice after the COVID-19 pandemic. *BJGP Open* 2020;4:bjgpopen20X101103.
- Williams S, Tsiligianni I. COVID-19 poses novel challenges for global primary care. *NPJ Prim Care Respir Med* 2020;30:30:30.
- Monaghesh E, Hajizadeh A. The role of telehealth during COVID-19 outbreak: a systematic review based on current evidence. *BMC Public Health* 2020;20:1193.
- Park S, Elliott J, Berlin A, et al. Strengthening the UK primary care response to covid-19. *BMJ* 2020;370:m3691.
- Health Education England. The general practice nursing workforce development plan, 2017. Available: <https://www.hee.nhs.uk/sites/default/files/documents/The%20general%20practice%20nursing%20workforce%20development%20plan.pdf> [Accessed 30 Jan 2021].
- [dataset] Primary Care Workforce Team, NHS Digital. Data from: General Practice Workforce, England Bulletin Tables - November 2021. NHS Digital. Available: <https://digital.nhs.uk/data-and-information/publications/statistical/general-and-personal-medical-services/30-november-2021> [Accessed 06 Jan 2020].
- Purba AK. How should the role of the nurse change in response to Covid-19? *Nurs Times* 2020;116:25–8 <https://www.nursingtimes.net/clinical-archive/public-health-clinical-archive/how-should-the-role-of-the-nurse-change-in-response-to-covid-19-26-05-2020/>
- Care Quality Commission. Gp mythbuster 57: health care assistants in general practice, 2020. Available: <https://www.cqc.org.uk/guidance-providers/gps/nigels-surgery-57-health-care-assistants-general-practice> [Accessed 4 Feb 2021].
- Health Education England. What's a nursing associate? 2020. Available: <https://www.hee.nhs.uk/sites/default/files/documents/What%E2%80%99s%20a%20nursing%20associate%20-%20Leaflet.pdf> [Accessed 29 Mar 2021].
- Care Quality Commission. Gp mythbuster 66: advanced nurse practitioners (ANPs) in primary care, 2021. Available: <https://www.cqc.org.uk/guidance-providers/gps/gp-mythbuster-66-advanced-nurse-practitioners-anps-primary-care> [Accessed 4 Feb 2021].
- Torjesen I. Covid-19 will become endemic but with decreased potency over time, scientists believe. *BMJ* 2021;372:n494.
- Flynn D, Moloney E, Bhattarai N, et al. COVID-19 pandemic in the United Kingdom. *Health Policy Technol* 2020;9:673–91.
- Royal College of General Practitioners. General practice in the post Covid world, 2020. Available: <https://cached.offlinehpl.hpl.co.uk/NewsAttachments/PGH/General-Practice-post-Covid-RCGP.pdf> [Accessed 31 Jan 2021].
- Curtis HJ, Inglesby P, Morton CE. Trends and clinical characteristics of COVID-19 vaccine recipients: a federated analysis of 57.9 million patients' primary care records in situ using OpenSAFELY. *MedRxiv* 2021 <https://www.medrxiv.org/content/>
- Williams R, Jenkins DA, Ashcroft DM, et al. Diagnosis of physical and mental health conditions in primary care during the COVID-19 pandemic: a retrospective cohort study. *Lancet Public Health* 2020;5:e543–50.
- Greenberg N. Mental health of health-care workers in the COVID-19 era. *Nat Rev Nephrol* 2020;16:425–6.
- Greenberg N, Docherty M, Gnanapragasam S, et al. Managing mental health challenges faced by healthcare workers during covid-19 pandemic. *BMJ* 2020;368:m1211.
- Walton M, Murray E, Christian MD. Mental health care for medical staff and affiliated healthcare workers during the COVID-19 pandemic. *Eur Heart J Acute Cardiovasc Care* 2020;9:e241–7.
- Gray R, Sanders C. A reflection on the impact of COVID-19 on primary care in the United Kingdom. *J Interprof Care* 2020;34:672–8.
- Halcomb E, McInnes S, Williams A, et al. The experiences of primary healthcare nurses during the COVID-19 pandemic in Australia. *J Nurs Scholarsh* 2020;52:553–63.
- Chandler-Jeanville S, Nohra RG, Loizeau V, et al. Perceptions and experiences of the COVID-19 pandemic amongst frontline nurses and their relatives in France in six paradoxes: a qualitative study. *Int J Environ Res Public Health* 2021;18:6977.
- Murphy M, Scott LJ, Salisbury C, et al. Implementation of remote consulting in UK primary care following the COVID-19 pandemic: a mixed-methods longitudinal study. *Br J Gen Pract* 2021;71:e166–77.
- Villar RC, Nashwan AJ, Mathew RG, et al. The lived experiences of frontline nurses during the coronavirus disease 2019 (COVID-19) pandemic in Qatar: a qualitative study. *Nurs Open* 2021;8:3516–26.
- Halcomb E, Williams A, Ashley C, et al. The support needs of Australian primary health care nurses during the COVID-19 pandemic. *J Nurs Manag* 2020;28:1553–60.
- LoGiudice JA, Bartos S. Experiences of nurses during the COVID-19 pandemic: a mixed-methods study. *AACN Adv Crit Care* 2021;32:14–26.
- Cengiz Z, Isik K, Gurdap Z, et al. Behaviours and experiences of nurses during the COVID-19 pandemic in turkey: a mixed methods study. *J Nurs Manag* 2021;29:2002–13.
- Rathnayake S, Dasanayake D, Maithreepala SD, et al. Nurses' perspectives of taking care of patients with coronavirus disease 2019: a phenomenological study. *PLoS One* 2021;16:e0257064.
- Xu H, Stjernsward S, Glasdam S. Psychosocial experiences of frontline nurses working in hospital-based settings during the COVID-19 pandemic - A qualitative systematic review. *Int J Nurs Stud Adv* 2021;3:100037.
- Kelley MM, Zadvinskis IM, Miller PS, et al. United States nurses' experiences during the COVID-19 pandemic: a grounded theory. *J Clin Nurs* 2021. doi:10.1111/jocn.16032. [Epub ahead of print: 15 Sep 2021].
- Danhieux K, Buffel V, Pairen A, et al. The impact of COVID-19 on chronic care according to providers: a qualitative study among primary care practices in Belgium. *BMC Fam Pract* 2020;21:255.
- James S, Ashley C, Williams A, et al. Experiences of Australian primary healthcare nurses in using telehealth during COVID-19: a qualitative study. *BMJ Open* 2021;11:e049095.
- Crowley T, Kitshoff D, De Lange-Cloete F, et al. Primary care nurses' preparedness for COVID-19 in the Western Cape Province, South Africa. *Afr J Prim Health Care Fam Med* 2021;13:e1–8.

- 38 Ashley C, James S, Stephen C, *et al.* Primary health care nurses' perceptions of risk during COVID-19: a qualitative study. *J Nurs Scholarsh* 2021;53:689–97.
- 39 Wood E, King R, Senek M, *et al.* UK advanced practice nurses' experiences of the COVID-19 pandemic: a mixed-methods cross-sectional study. *BMJ Open* 2021;11:e044139.
- 40 Wanat M, Hoste M, Gobat N, *et al.* Transformation of primary care during the COVID-19 pandemic: experiences of healthcare professionals in eight European countries. *Br J Gen Pract* 2021;71:e634–42.
- 41 Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3:77–101.
- 42 Braun V, Clarke V. *Successful qualitative research*. London: SAGE Publications, 2013.
- 43 Bryman A. *Social research methods*. New York: Oxford University Press, 2012.
- 44 Abbasi K. Covid-19: Fatal errors, not fatalism, created UK's public health disaster. *BMJ* 2021;375:n2497.
- 45 Daly M. COVID-19 and care homes in England: What happened and why? *Soc Policy Adm* 2020;54:985–98.
- 46 [dataset] John Hopkins University. Data from: cumulative confirmed COVID-19 cases and deaths, world. COVID-19 data Repository by the center for systems science and engineering (CSSE) at Johns Hopkins University, 2022. Available: <https://ourworldindata.org/grapher/cumulative-deaths-and-cases-covid-19?time=2020-01-22.2021-01-30>
- 47 Patton M. *Qualitative research and evaluation methods*. London: SAGE Publications, 2002.
- 48 Malterud K, Siersma VD, Guassora AD. Sample size in qualitative interview studies: guided by information power. *Qual Health Res* 2016;26:1753–60.
- 49 Braun V, Clarke V. To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qual Res Sport Exerc Health* 2021;13:201–16.
- 50 Gray LM, Wong-Wylie G, Rempel GR. Expanding qualitative research interviewing strategies: Zoom video communications. *Qual Rep* 2020;25:1292–301.
- 51 Braun V, Clarke V, Weate P. Using thematic analysis in sport and exercise research. In: Smith B, Sparkes AC, eds. *Routledge Handbook of qualitative research in sport and exercise*. London: Routledge, 2016: 191–205.
- 52 Braun V, Clarke V. One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qual Res Psychol* 2020;1–25.
- 53 Braun V, Clarke V. Can I use TA? should I use TA? should I not use TA? comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. *Couns Psychother Res* 2021;21:37–47.
- 54 Byrne D. A worked example of Braun and Clarke's approach to reflexive thematic analysis. *Qual Quant* 2021;1–22.
- 55 O'Brien BC, Harris IB, Beckman TJ, *et al.* Standards for reporting qualitative research: a synthesis of recommendations. *Acad Med* 2014;89:1245–51.
- 56 Verhoeven V, Tsakitzidis G, Philips H, *et al.* 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:e039674.
- 57 Xu Z, Ye Y, Wang Y, *et al.* Primary care practitioners' barriers to and experience of COVID-19 epidemic control in China: a qualitative study. *J Gen Intern Med* 2020;35:3278–84.
- 58 Franzosa E, Gorbenko K, Brody AA, *et al.* "At Home, with Care": Lessons from New York City Home-based Primary Care Practices Managing COVID-19. *J Am Geriatr Soc* 2021;69:300–6.
- 59 Aughterson H, McKinlay AR, Fancourt D, *et al.* Psychosocial impact on frontline health and social care professionals in the UK during the COVID-19 pandemic: a qualitative interview study. *BMJ Open* 2021;11:e047353.
- 60 Vindrola-Padros C, Andrews L, Dowrick A, *et al.* Perceptions and experiences of healthcare workers during the COVID-19 pandemic in the UK. *BMJ Open* 2020;10:e040503.
- 61 Nyashanu M, Pfende F, Ekpenyong M. Exploring the challenges faced by frontline workers in health and social care amid the COVID-19 pandemic: experiences of frontline workers in the English Midlands region, UK. *J Interprof Care* 2020;34:655–61.
- 62 Bennett P, Noble S, Johnston S, *et al.* COVID-19 Confessions: a qualitative exploration of healthcare workers experiences of working with COVID-19. *BMJ Open* 2020;10:e043949.
- 63 Rieckert A, Schuit E, Bleijenberg N, *et al.* How can we build and maintain the resilience of our health care professionals during COVID-19? recommendations based on a scoping review. *BMJ Open* 2021;11:e043718.
- 64 Morgan S, Pullon S, McKinlay E. Observation of interprofessional collaborative practice in primary care teams: an integrative literature review. *Int J Nurs Stud* 2015;52:1217–30.
- 65 Mulvale G, Embrett M, Razavi SD. 'Gearing up' to improve interprofessional collaboration in primary care: a systematic review and conceptual framework. *BMC Fam Pract* 2016;17:83.
- 66 Liberati E, Richards N, Parker J, *et al.* Remote care for mental health: qualitative study with service users, carers and staff during the COVID-19 pandemic. *BMJ Open* 2021;11:e049210.
- 67 Sharma SC, Sharma S, Thakker A, *et al.* Revolution in UK general practice due to COVID-19 pandemic: a cross-sectional survey. *Cureus* 2020;12:e9573.
- 68 Thiagarajan A, Grant C, Griffiths F, *et al.* Exploring patients' and clinicians' experiences of video consultations in primary care: a systematic scoping review. *BJGP Open* 2020;4:bjgppopen20X101020.
- 69 Donaghy E, Atherton H, Hammersley V, *et al.* Acceptability, benefits, and challenges of video consulting: a qualitative study in primary care. *Br J Gen Pract* 2019;69:e586–94.
- 70 McKinstry B, Watson P, Pinnock H, *et al.* Telephone consulting in primary care: a triangulated qualitative study of patients and providers. *Br J Gen Pract* 2009;59:e209–18.
- 71 Powell RE, Henstenburg JM, Cooper G, *et al.* Patient perceptions of telehealth primary care video visits. *Ann Fam Med* 2017;15:225–9.
- 72 Verity A, Naidu D, Tzortziou-Brown V. Does total triage and remote-by-default consulting impact vulnerable groups: a pilot study. *medRxiv*2020:2020.11.04.20220046 <https://www.medrxiv.org/content/>

Demographic questionnaire

[To be completed verbally]



What can general practice learn from primary care nurses' and healthcare assistants' experiences of the COVID-19 pandemic? A qualitative study.



We would like to know some information about you before the interview, to help with understanding the data we collect in this study. Please answer the following questions that will be read out to you.

Participant identification number:

- How old are you?** _____ years old Prefer not to say
- What gender are you?** Male Female Prefer not to say
- What is your ethnic group?** Choose one section from A to E, then tick one box to best describe your ethnic group or background.

A. White

- English/Welsh/Scottish/Northern Irish/British
- Irish
- Gypsy or Irish Traveller
- Any other White background *[please state]*
- _____

B. Mixed/multiple ethnic backgrounds

- White and Black Caribbean
- White and Black African
- White and Asian
- Any other Mixed/multiple ethnic background *[please state]*
- _____

C. Asian/Asian British

- Indian
- Pakistani
- Bangladeshi
- Chinese
- Any other Asian background *[please state]*
- _____

D. Black/African/Caribbean/Black British

- African
- Caribbean
- Any other Black/African/Caribbean background *[please state]*
- _____

E. Other ethnic group

- Arab
- Any other ethnic group *[please state]*
- _____

Prefer not to say

4. **What is your role in general practice?** Healthcare assistant
 Nursing associate
 General practice nurse
 Advanced nurse practitioner
5. **How long have you worked as a nurse/HCA in total?** _____ years
6. **How long have you worked as a nurse/HCA in general practice?** _____ years
7. **How many hours, on average, do you work per week?** _____ hours
8. **Approximately how many patients are registered at your practice?** _____ patients
9. **Which best describes your practice's geographical setting?** Urban Suburban Rural
10. **What is the status of your practice?** General Medical Service
 Personal Medical Service
 Alternative Provider Medical Services
 Other [*please specify*] _____
 Don't know
11. **You mention that the practice you work at has [x] number of patients and is based in a [rural/suburban/urban] setting. Could you briefly tell me a bit more about the practice population?**
Prompts:
- *What is the ethnic profile of the practice population?*
 - *What is the socioeconomic profile of the practice population?*
12. **As an HCA/NA/GPN/ANP, could you briefly describe to me your main roles and responsibilities within the practice?**

Supplementary material 2. Standards for Reporting Qualitative Research checklist. A list of 21 items that are considered essential for complete, transparent reporting of qualitative research, aiming to facilitate judgements about the trustworthiness, relevance, and transferability of findings to other contexts or related literature.[56]

Item number	Topic	Item	Reported on page number
<i>Title and abstract</i>			
S1	Title	Concise description of the nature and topic of the study, identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended.	p. 1
S2	Abstract	Summary of key elements of the study using the abstract format of the intended publication.	p. 2-3
<i>Introduction</i>			
S3	Problem formulation	Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement.	p. 5-6: Background
S4	Purpose or research question	Purpose of the study and specific objectives or questions.	p. 6: Background
<i>Methods</i>			
S5	Qualitative approach and research paradigm	Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/interpretivist) is also recommended; rationale.	p. 7: Study design
S6	Researcher characteristics and reflexivity	Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability.	p. 9-10: Data analysis
S7	Context	Setting/site and salient contextual factors; rationale.	p. 7: Setting
S8	Sampling strategy	How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale.	p. 7-8: Population and sampling; Recruitment.
S9	Ethical issues pertaining to human subjects	Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues.	p. 7-8: Recruitment p. 22: Ethics statement

S10	Data collection methods	Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale.	p. 8-9: Data collection
S11	Data collection instruments and technologies	Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study.	p. 8-9: Data collection; <i>Topic guide in Table 1; Demographic questionnaire in Supplementary Material 1.</i>
S12	Units of study	Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results).	p. 11: Results
S13	Data processing	Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/deidentification of excerpts.	p. 9: Data analysis
S14	Data analysis	Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale.	p. 9: Data analysis
S15	Techniques to enhance trustworthiness	Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale.	p. 9: Data analysis
<i>Results/findings</i>			
S16	Synthesis and interpretation	Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory.	p. 12-17: Results; <i>Themes and subthemes outlined in Figure 1.</i>
S17	Links to empirical data	Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings.	p. 12-17: Results.
<i>Discussion</i>			
S18	Integration with prior work, implications, transferability, and contribution to the field	Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/ generalizability; identification of unique contribution(s) to scholarship in a discipline or field.	p. 18-19: Discussion
S19	Limitations	Trustworthiness and limitations of findings.	p. 20: Strengths and Limitations
<i>Other</i>			
S20	Conflicts of interest	Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed.	p. 22: Competing interests
S21	Funding	Sources of funding and other support; role of funders in data collection, interpretation, and reporting.	p. 22: Funding