Navigating Change and Crisis: an ethnographic case study of the digitalisation of general practice work between 2020-2024

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Abstract

Since 2020, changes in the organisation and delivery of UK general practice have been extensive and far-reaching. The widespread scale-up of remote and digital forms of working in UK general practice during the COVID-19 pandemic has driven the development of new routines and working styles, affecting how work is done, and the conditions in which it is completed, with repercussions for the wellbeing of the workforce. In the work reported here, I aim to build a more nuanced understanding of the impact of digitalisation on the kinds of work performed by patients and staff in UK GP practices, the impact thereof on staff wellbeing, and ascertain what further learning could be gleaned about how change and crisis are navigated in practice teams.

I conducted a narrative literature synthesis and a multi-sited ethnographic case study of UK GP practice, informed by the Eisenhardt method. To do so, I employed multiple qualitative methods to collect data from two in-depth ethnographic case study sites. I also collected and reanalysed previously collected qualitative data from eight comparative case study sites. I analysed these data at three sequential levels: inductively, thematically, and abductively, to build and extend theory in conversation with my data.

In this thesis, I make several novel contributions to empirical, methodological, and theoretical literature. I split my results on the impact of digitalisation during 2020-24 across four chapters. The first outlines the work that patients must now perform to achieve digital candidacy and craft a digital facsimile to access their GP practice successfully. The second looks at the impact on the work and wellbeing of support staff, highlighting the unique translational work they perform. The third describes the impacts on the whole practice team, and identifies new risks to their wellbeing: technostress, technosuffering, and relational strain. Finally, the fourth results chapter illustrates the organisational conditions that are most protective of staff wellbeing when navigating these kinds of change and crisis events and suggests a model for how these conditions can be constructed, maintained, or slip away. I have disseminated these findings to academic, public, policy, and practice audiences.

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Finally, to my participants and those who gave me access to your workplaces for this study, thank you for trusting me to tell this story. Thank you for allowing me to observe your working lives, hear about your experiences, and for sharing your insights on my results. I hope this thesis and its outputs do you justice.

Table of Contents

List of figures and tables

Figures

Tables

List of abbreviations and definitions

Accurx: Software company offering multiple digital products to GP practices, including software for triage, workflow management, appointment booking, questionnaires, staff messaging, and patient SMS messaging. SMS messaging is the most widely used element.

Anima: Software company offering platform products to integrate GP practice workflows into one system overlaying clinical systems like EMIS and SysmOne, including online consultations, EHRs, document processes, triage, appointment booking, questionnaires, data analytics, request dashboard, task automation, and staff messaging.

Babylon (GP at Hand): A now-closed digital NHS GP practice registered in North West London offering virtual consultations to patients in Birmingham via the Babylon Health software company, now bankrupt.

BJGP: British Journal of General Practice, a research journal.

BMA: British Medical Association, a trade union representing doctors and medical students.

BMJ: British Medical Journal, a research journal.

Burnout: Defined by the World Health Organization as a syndrome resulting from chronic workplace stress, causing feelings of exhaustion, distance, negativity, and reduced professional efficiency. [1]

CAG: The Confidentiality Advisory Group provide advice to the HRA on whether the use of confidential patient information in research studies should be approved or not.

CCG: Clinical Commissioning Groups were an NHS group responsible for commissioning a given area's healthcare services. Created in 2012, replaced in 2013 by Primary Care Trusts, and dissolved in 2022 to be taken over by Integrated Health Systems (ICSs). [2]

Cegedim: Software company offering a digital clinical system to GP practices, including appointment booking, patient contact, remote access, medical record access, decision support, task management, and reporting.

COVID-19: An infectious disease caused by the SARS-CoV-2 virus. [3]

Digitalisation: Adapting a process, routine, or system to be performed using digital technologies such as computers, software, and the internet.

Docman: Product of PCTI Solutions, a software company, which enables electronic document management and transfer in healthcare organisations (for example, sharing a discharge summary between a hospital and a GP practice).

ECG: Electrocardiogram, a test recording the electrical activity of a person's heart.

EDT: Electronic Document Transfer, the process in Docman for sharing clinical documents between healthcare organisations.

EHR: Electronic Health Record, a patient's digital medical record.

EMIS: Egton Medical Information Systems, a software company providing IT systems for GP practices, including storing patient information and medical records, work planning, appointment booking, and repeat prescription ordering.

Eva Health: A health technology company offering practice management software to GP practices, including an AI virtual data assistant, a vaccination platform, analytics, questionnaires, scheduling, patient and staff messaging, and e-prescriptions.

FTE/FT: Full-time equivalent/ Full-time.

GDPR: General Data Protection Regulation, a European Union (EU) law that governs how personal data is processed, stored, and used.

GP: General Practice (service/physical estate) or General Practitioner (doctor).

GPAD: GP Appointments Data, including data about scheduled activity and GP appointment usage in practices.

GPSS: General Practice Staff Survey.

HCRW: Health and Care Research Wales, the organisation responsible for approving all NHS and social care research taking place in Wales.

HCWs: Health Care Workers.

HR: Human resources.

HRA: Health Research Authority, the organisation responsible for approving all NHS and social care research taking place in England.

ICB: Integrated Care Board, NHS organisation which manages and plans healthcare services in a given area, established in 2022.

ICS: Integrated Care Systems, partnerships of health and care organisations in a given area to work together, including NHS organisations, local authorities, and voluntary, community and social enterprise services.

Informatica: Informatica Systems is a software company offering a digital system to support data collection, reporting, and auditing for programme targets.

Language Line: A healthcare company providing telephone translation services for the NHS.

LMICs: Low- and Middle-Income Countries.

Monkeypox (or MPOX): A disease caused by infection with the monkeypox virus. [4]

MSDIT: Medical Sciences Division Information Technology, divisional IT support services at the University of Oxford.

NHS: National Health Service.

NHS App: App intended to provide a secure way for NHS patients to access various NHS services via a smartphone.

NHS Digital: Part of NHS England, the technology partner of the NHS.

NHS England: Publicly funded healthcare system in England

NHS111: Urgent patient access route for assessment and triaging, either online or over the phone.

PCN: Primary Care Network, a group of GP practices that work together across a local area.

PIS: Participant Information Sheet.

PPIE: Patient and Participant Involvement and Engagement.

PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-Analyses.

PT: Part-time

PubMed: Searchable database of research literature.

RBD2: Remote-by-Default 2.

RCGP: Royal College of General Practitioners, the professional organisation representation general practitioners in the UK.

REC: Research Ethics Committee

SMS: Text messaging service.

SPCR: School for Primary Care Research, a school within the National Institute for Health and Social Care Research.

Strep-A: Group A streptococcus, a bacterium which can cause mild to severe infections.

The Health Foundation: An independent charity focused on health and healthcare for people in the UK.

The Nuffield Trust: An independent not-for-profit think-tank focused on improving healthcare in the UK.

TPP/SystmOne: The Phoenix Partnership is a software company which offers SystemOne, a clinical computer system for patient management and storing patient data and electronic health records.

TUTOR-PHC: Transdisciplinary Understanding and Training on Research – Primary Health Care, an international training programme for the next generation of primary health care leaders.

UK: United Kingdom.

WONCA: the World Organization of Family Doctors, an international group aiming to foster high standards of care in general practice globally.

1 Introduction

1.1 Defining the problem and purpose of the study

This DPhil thesis presents the design and findings of a multi-sited ethnographic case study of UK GP practices between June 2022 and February 2024, which has sought to understand how digitalisation during the multiple crises of 2020-24 changed the kind of work performed in GP practices by patients and staff, and the impact on staff wellbeing. In doing so, I have also learned about how teams in GP practices do (or do not) navigate the impacts of change and crises more broadly.

Hwang and Lichtenthal distinguish two types of crises: abrupt (a sudden significant change to the established 'normal') and cumulative (something that has built up over time). [5] During my period of interaction with the field, UK GP practices experienced multiple abrupt and cumulative crises, technological innovations, and incremental changes to work roles, processes, routines. The central framing abrupt crisis during my fieldwork was the COVID-19 pandemic. In response to this central crisis in 2020, UK GP practices faced a mandate to introduce 'remote by default' care, integrating digital innovations to enable digital and telephone access, triage, and consultation solutions, as well as digitalised and automated practice tasks and workflows. [6, 7]

Practices had to achieve this digitalisation alongside the additional workload of adapting to lockdown restrictions, delivering COVID clinics and vaccination drives, and dealing with a growing backlog of non-COVID clinical needs; [8, 9] a reduced workforce due to shielding, temporary sickness, or burnout; [10-14] and subsequently a post-lockdown increase in patient contact; [15] as well as a loss of public confidence in general practice following adverse press. [16] This unprecedented acute crisis occurred against a backdrop of various cumulative crises including severe workforce shortages due to losses of skilled clinical and support staff to retirement, emigration, or career change, especially in socio-economically deprived areas; [8, 17] an associated rise in new organisational roles such as allied professionals and physician associates; [17, 18] and an increase in the complexity and fragmentation of workflows. [19-21]

Throughout my data collection, there were other additional abrupt crises that had to be managed, including temporary staff shortages (e.g. through illness or burnout), [10-14]

difficulties in recruitment and frictions with new technologies, [21] an outbreak of Strep A, a growing supply and demand gap, [17] and location/population-specific access problems. [22-26] The integration of complex processes and technological changes to the function of daily practice work in the context of multiple abrupt and cumulative crises has a human cost, as I explore throughout my results.

1.2 Research question and objectives: an adaptive strategy

The design of this DPhil project, as with many, has changed over the course of its unfolding. Following the literature review described in Chapter 2, it was clear that this was a rapidly developing area and that space for necessary adaptations had to be built into the design of the project. This meant that I had the flexibility to adapt to my context as I learned about it. It is useful to reflect briefly on what changes I made and why, and the value of flexibility and reflexivity when approaching this topic.

The initial focus of this research project was on the impact of the pandemic and the mandated digitalisation of care organisation and delivery on the working conditions and wellbeing of GP practice staff (including all clinical and support staff).

The original research question was:

How did the pandemic and the digitalisation of work affect the working conditions and wellbeing of GP practice staff?

Given I was informed by Eisenhardt's approach to case study research (explained in section 3.2), I was aware that this question may not be the 'right' one for my case as it developed. [27] This is especially common with this kind of inductive study, which embraces the transformation or multiplication of research questions through the process of data collection and analysis. [27] Indeed, the research question and focus of the thesis evolved during the empirical work, allowing me to deliver on additional objectives that were uncovered as relevant through the scoping discussions, literature review, and during the process of collecting data and being 'in the field'.

Scoping discussions conducted between November 2021 and March 2022 drew my attention to specific issues that would then inform my view of the field. For example, talking to several reception and administrative staff attuned me to the impact of the

pandemic and digitalisation on support staff and how these roles had been re-formed by new digital structures – including new digital tasks and renamed roles to reflect their expanded responsibility (such as patient coordinator). Likewise, talking to stakeholders in my local Integrated Care Board (ICB) prompted me to be aware of the processes by which Primary Care Networks (PCNs) and individual GP practices are offered training for new ways of working and support for their wellbeing. Talking to practice managers about how work is recorded and represented to NHS England prompted me to pay attention to what work was or was not recorded, and why.

The literature review, discussed in Chapter 2, focused on 1) what was known about workload and wellbeing in general practice staff during and following digitalisation and the initial pandemic; 2) the gaps in how and what data were being collected from GP practices; and 3) what staff members were being included in that collection. This review was conducted at a time when literature on COVID-19 was still rapidly emerging, and thus the issues of focus in my initial research (wellbeing and working conditions) were present, though often as side-topics in broader studies. It revealed a gap in the literature around the representation of support staff's views and experiences in general, particularly regarding digitalisation and working through the pandemic. Additionally, there had not been any ethnographic studies of the whole GP practice team during the pandemic-driven digitalisation of UK general practice, nor studies explicitly focusing on the wellbeing or working conditions of GP practice staff. The review also reinforced the issue that routinely collected data on GP practice work (e.g. appointment times, number of appointments, times to referral) did not capture the full spectrum of work performed by practice staff.

My experiences in the field also (re)shaped my research. Whilst the digitalisation of primary care and the COVID-19 pandemic were the initial framing crisis and change events under analysis, there were multiple layered and co-occurring crises and changes ongoing throughout my period of primary data collection, which lasted from June 2022 to March 2024 (with secondary data from as early as November 2021 included in the analysis). To name a few: a staffing recruitment and retention crisis, supply and demand shortfalls, complexifying patients, staff sicknesses and burnout, chronic underfunding, changes to technologies and providers thereof used in daily practice functions, network

failures, hardware and software failures, winter pressures, COVID variants, a Monkeypox epidemic, an outbreak of Strep-A, major policy changes, rearrangements of meso-level organisations e.g. PCNs, practice leadership changes, disruptive or abusive patients, acutely unwell patients, and patients that struggled to access care remotely. In brief, I learned that UK general practice is a context undergoing constant change and frequently facing multiple layered crises. These events affected all kinds of work performed in GP practices; that which is performed by patients, support staff, managerial and leadership staff, and clinical staff. Early on, it also became evident that relational dynamics within and between teams were important in how teams did or did not collectively navigate change amidst crises. I expand more on this developmental process in section 3.9.1, which describes my inductive analysis.

As a result, during my ethnographic study, I reconceptualised my project as a study empirically examining how work in UK GP practices had been affected by the digitalisation of general practice during the crises occurring from 2020 to the end of my data collection, how they affected staff working conditions and wellbeing, and what helped staff to navigate these the effects of these changes and crises successfully. My reformulated research questions were:

1. How did digitalisation during crises affect work in UK GP practices?
2. What was the effect on staff working conditions and wellbeing?
3. How did GP practice teams navigate these changes and crises?

I had five key aims:

1. Identify how digitalisation during the crises of 2020-24 have affected the work performed in GP practices (by patients and staff)
2. Understand the impact of these changes on staff working conditions and wellbeing
3. Identify what organisational traits supported practice teams to better navigate change and crisis
4. Engage specifically with under-represented staff groups
5. Enable meaningful public engagement with the study findings

1.3 Structure of the thesis

This introduction has described the problem that my DPhil study has been focused on, some grounding in the relevant literature, and introduced my methodological approach. Over the coming chapters, I will describe my narrative literature review (Chapter 2). I will then outline in depth my ontology, methodology, methods, and use of PPIE in the overall design of my study (Chapter 3). In Chapter 4 I will present my summary of results, describe my overall dataset, and my reflections on the field. Chapters 5-8 constitute the results of my main empirical study, in which I sought to explicitly meet aims 1-4, listed above. I first focus on how digitalisation during 2020-24 changed the nature of work performed by patients and the new digital candidacy thresholds required of them, whereby they must be able to craft accurate and convincing 'digital facsimiles' for adjudication by practice staff (Chapter 5). In Chapter 6, I then look at how the work required of support staff has been affected in this context and the unique translational work that they perform to support patients – particularly those who struggle to meet the threshold for digital candidacy or produce an accurate digital facsimile. In Chapter 7, I then look at how integrating and using these new digital tools (and their limitations) has affected the working conditions and wellbeing of staff across the practice (including support and clinical roles), specifically the new forms of technostress, technosuffering, and relational strain it has caused. In Chapter 8, I seek to understand what organisational practices are more (or less) supportive in helping practice staff navigate these changes and crises, and the new forms of stress, suffering, and strain they produce. This focuses on the value of a relational approach, theorising about how relational practices may be constructed, maintained, or eroded over time. Finally, in Chapter 9, I discuss these findings together, my approach to dissemination (meeting aim 5), and the implications for practice, policy, and future research, before making my concluding comments.

Throughout this thesis, I will refer to a simplified data collection and analysis process map, attached in Figure 1, to help guide the reader. At each relevant section, I will flesh out this model to illustrate that section in more depth. The full version of this map is also provided in Appendix 1.

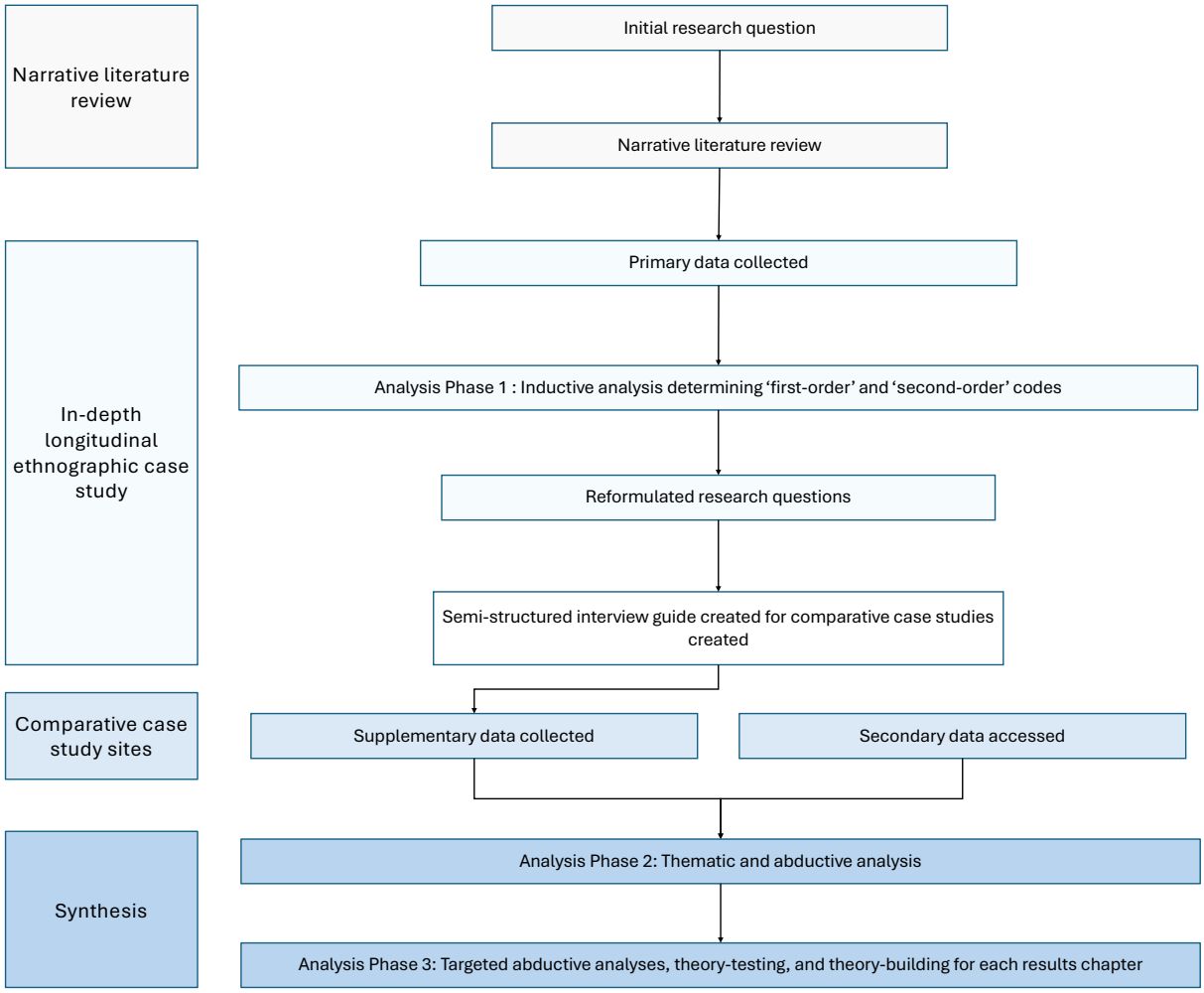


Figure 1: Simplified study process map

2 Narrative literature synthesis

2.1 Introduction

Before beginning my case study research, I conducted a narrative literature synthesis to understand the existing evidence base underlying my topic. At that point, my research question was yet to be reshaped by my experiences in the field (as discussed in Chapter 3), and thus, the review focused on my original research question, outlined in Figure 2

The aim at this stage was to understand the existing literature (and gaps therein) on staff wellbeing and working conditions in general practice between January 2020 to March 2022. This was focused on the 'acute' phase of the pandemic in 2020, and the 'new normal' as it was in 2022 when my empirical data collection would begin. In Figure 2, I indicate this chapter's location in the data collection and analytical process map.

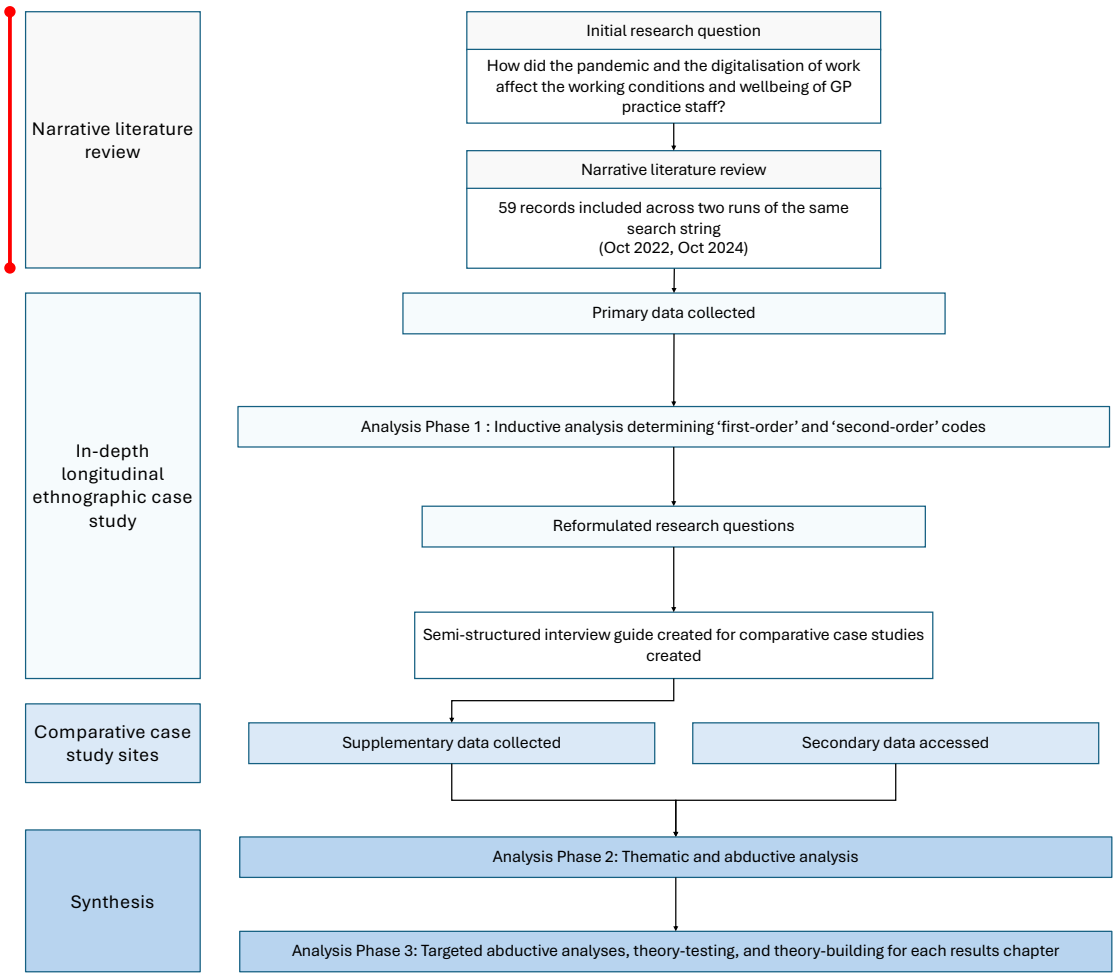


Figure 2: Data collection and analytical process map: narrative literature review

A narrative literature synthesis is a specific approach to literature reviews, which seeks to tell a story about the state of evidence on a given subject by bringing together existing research findings into a coherent narrative. [28, 29] The process includes 1) mapping the available evidence to inform the development of the review questions, 2) specifying the review question, 3) identifying studies for inclusion, 4) data extraction, and 5) narratively synthesising the 'story' across the included studies. [29]

2.2 Method

My central review question was 'How did the pandemic and digitalisation affect the working conditions and wellbeing of GP practice staff in the UK?'. The issue of staff wellbeing is nebulous, mainly due to the term's imprecision and generic application. The conceptual boundaries for what constitutes 'wellbeing' in the healthcare workforce were markedly varied. For example, the NHS Health and Wellbeing Framework uses the term to cover everything from the physical working environment, occupational health, personal bodily and mental health, how teams and individuals work and relate to one another, feelings of fulfilment, and how all of this is measured through data and management. [30] The flexibility with which this term is applied makes finding a clear definition difficult, and therefore, locating it in the evidence base is challenging. I broadly took it to refer to the physical, mental, and emotional wellbeing of the workforce. 'Working conditions' refers to the physical and psychological working environments in which GP practice work was performed (including working format e.g. digital or analogue, and the volume and frequency of the workload).

The search string I developed to capture the potential health and wellbeing impacts of the pandemic and digitalisation on the workforce was expansive. Even with a complex search, there were no doubt areas of the literature that were missed due to both the blurriness of the terminology, but also the ubiquity of changes to working conditions and wellbeing problems in the workforce associated with that period of time, meaning that there will likely have been publications that discussed these issues without making them their main focus (therefore not identifiable to the search).

The population of interest was everyone working in general practice across roles, and the issue of interest was any pandemic- or digitalisation-related changes to working

conditions or staff wellbeing. I combed the PubMed database for published evidence relating to general practice staff experiences of digitalisation during the pandemic, as well as possible mental, emotional, and physical effects. Early-stage scoping discussions with key informants, keywords from critical articles, and discussions with supervisors informed the development of the search string terms. However, whilst measures were taken to be as broad-ranging as possible, some synonymous descriptors may have been overlooked due to the nebulous meanings this term gathers. The full search string is provided below:

("general practitioners" OR GP OR "general practice" OR "primary care"[Title/Abstract]) AND (workers OR "healthcare workers" OR workforce OR employee OR nurse* OR doctor* OR receptionist* OR cleaner* OR manager* [Title/Abstract]) AND (wellbeing OR burnout OR "physical health" OR "mental health" OR emotion* OR "moral injury" OR pressure OR fear [Title/Abstract]) AND ("coronavirus" OR "COVID-19" OR covid OR pandemic OR "remote care" OR telehealth OR "remote consult*" OR "working conditions" OR workload [Title/Abstract]) AND (UK OR "United Kingdom" OR England OR Wales OR Scotland OR "Northern Ireland" OR NHS OR "National Health Service"[Title/Abstract) NOT (Australia OR Singapore or Canada or US or "United States" OR Italy OR China OR India OR Greece OR Belgium OR Netherlands OR "Low-Income Countries" OR LIC OR "Middle-Income Countries" OR MIC[Title/Abstract])*

This search was initially run in October 2022 to include all publications from 01-01-2020 to 26-10-2022, yielding 90 results. I have since run the search again to include articles published between 27-10-2022 to 30-10-2024, yielding an additional 92 results. From screening the results of these two searches, I found 29 articles that warranted inclusion in the review. I then snowballed further reports, newspaper articles, opinion pieces, blogs, and relevant reports from policy, government, and think-tanks into the review based on keyword searches on search engines, supervisor discussions, and relevant research networks, as well as applying the “ancestry and snowball” approach to especially relevant papers. [31] This uncovered an additional 53 records for screening, of which I deemed 24 to be relevant to the topic. This brought my total included texts for inclusion in this review to 53. This process of identifying, screening, and selecting for final inclusion is illustrated by my PRISMA flow diagram in Figure 3.

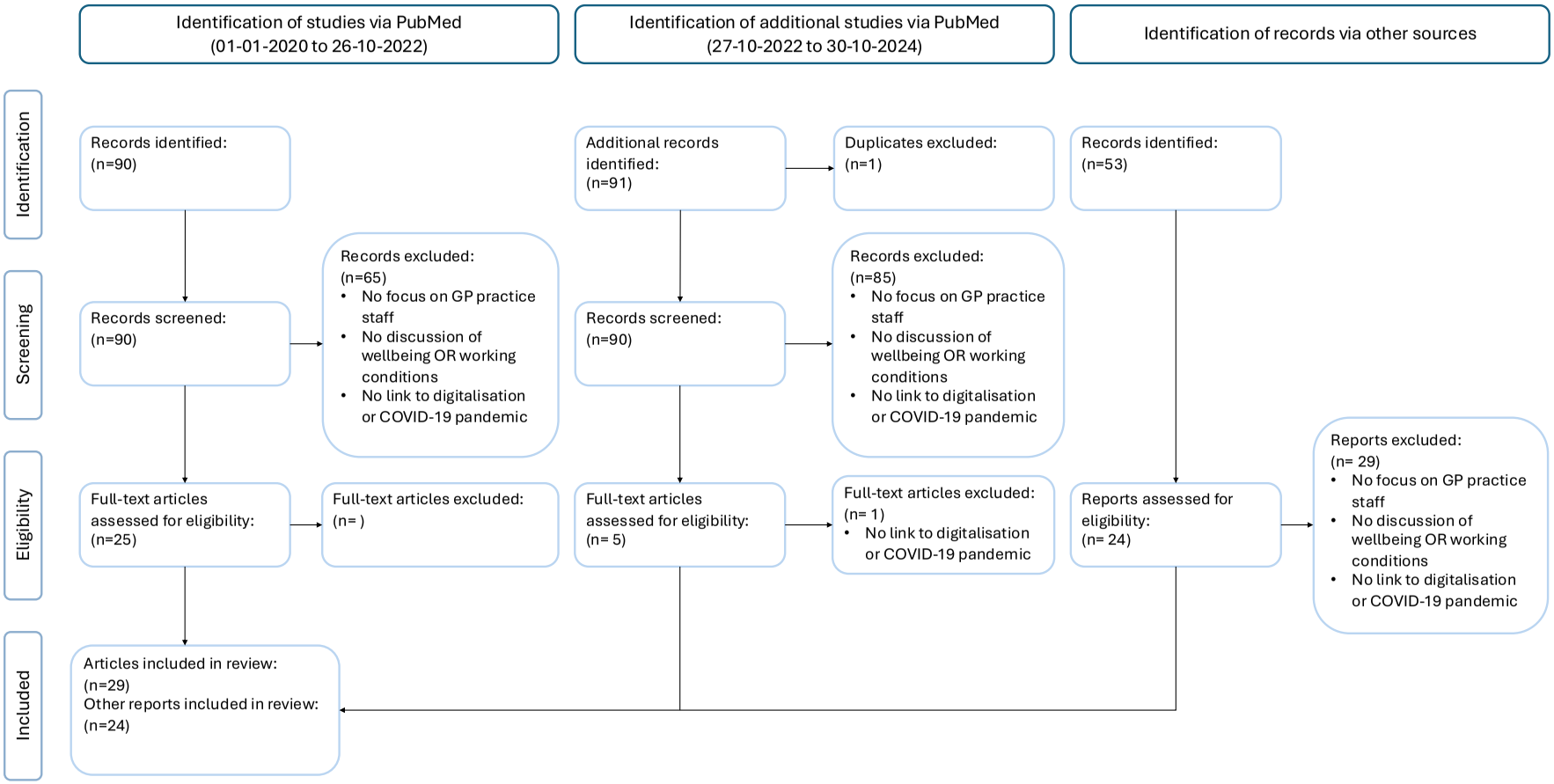


Figure 3: PRISMA flow diagram for narrative literature review

2.3 Results

The following results section was written after the original search was performed, in October 2022. As such, 2.3.1 to 2.3.6 reflect the state of the evidence base at the time. I have also included the results of my updated re-run in 2.3.7, which inform the conclusion of this chapter.

2.3.1 **Overview of findings**

The picture we have from the current evidence on the wellbeing and working conditions of staff in general practice is incomplete – and sometimes misleading. Here I will discuss what is currently known about workload and wellbeing in general practice staff, the gaps in how and what data are being collected, and who is being included in that collection. When approached critically and reflexively, such partial datasets still offer insights due to the complexity and interconnectedness of the system within which this study sits. [32, 33] The UK healthcare systems and discrete units within them, such as individual GP practices, are connected by their mutual user base and interoperative workflows. Pressure in one area has lateral effects on other areas of the system. For example, pressure in secondary care services means additional pressures on primary care, and vice-versa, [34] and a reduction in GPs (or GP funding) may drive the need for more (and different kinds of) allied health professionals. [17]

In the past ten years, workload has increased consistently in general practice, whilst baseline numbers of GPs have gone down by 1,850. [35] Between August 2021 and August 2022 alone, the NHS lost 314 full-time (FTE) GPs. [35] In their June 2022 report, The Health Foundation published workforce data on general practice, which indicates that there have been 4,200 fewer FTE GPs in 2021-22 than required to meet demand. It forecasts that, under the then-current policy, this will rise to a shortfall of 8,800 FTE GPs by 2030/31. [17] This is combined with a 6,400 shortfall in FTE nursing posts. [17] The experience drain in nursing resulting from recruitment, retention, and retirement issues is made more significant in the face of the pandemic's forced changes to workload and work patterns. [36] Under a pessimistic scenario, wherein the then-current policy is not realised for several reasons, such as the ongoing effects of COVID-19 on workload and backlog (as currently seems likely), half of all GP and nursing posts will be vacant by

2030/31 – that is a shortfall in FTE GPs of 18,900 and 12,000 nurses. [17] This may be the more likely scenario given the continuing uptick in workload in general practice as more patients return and practices continue to lead the vaccine and booster rollouts, discussed in depth later.

2.3.2 Staff wellbeing during the pandemic: presence and absence in the evidence base

At the time of the initial search, much of the evidence on healthcare workers' (HCWs') experiences of working during the pandemic focused on secondary care. This reflects more generalised centring of hospital workers in media and government rhetoric around the pandemic "heroes", as well as more recent demonisation of general practice workers. [37] Findings of hospital workers' experiences and after-effects of the pandemic indicate that infection with the coronavirus led to poorer physical and mental health for clinical, non-clinical, estate and support staff. [11] They highlight the pressures placed on hospital HCWs' physical, mental, and emotional health resulting from the outbreak they faced and its system-wide management. These threats were evident in day-to-day working, with an ever-present fear of contagion (and subsequent transmission to others) exacerbated by a lack of adequate PPE, changing and inadequate guidance and training, and inconsistent information. [38 , 39] Staff also faced higher workloads, disruptions to daily routines and team dynamics, negative impacts on personal and professional identity, moral injury, and threats to psychological safety. [38 , 40] HCWs also faced stigma in the community and disruptions to family relationships. [38 , 39]

In the published research on the impact of the pandemic (and the resultant mandatory digitalisation of care delivery and organisation) on general practice, there is a distinct centring of clinical roles. One international systematic review of GP wellbeing during the pandemic included two relevant to this UK-focused review. [10] One found that GPs were experiencing more stress and poorer mental health, [41] and the other focused on GP's experiences of Long COVID. [42] Studies focused on primary care respiratory nurses, diabetes nurses/nurse practitioners, and trainees, reported similar strains from navigating changes to work driven by infection control measures, and the strain mental health strain of working through a public health crisis. [43-46] In some of these studies, the

burden on reception and administration is hinted at. However, this is only through the clinician's lens, who sees elements of those workloads bleed into their day-to-day work. Community literature such as newspapers and blogs reveal more about the abuse of non-clinical staff [47-56] though this remains excluded from the evidence base.

These studies revealed primary care workers had similar, though not identical, concerns to hospital workers. Work-related issues of PPE provision, quality of care, the burden of changing working patterns and increasing workloads, and information overload. Pandemic-centred fears and anxieties of contagion and spreading the virus were also reported. Emotional and psychological factors such as poor mental health, feeling emotionally drained and overworked, low job satisfaction, and managing family pressures were all raised across several studies for these roles. These also manifested in physical symptoms. [43-46 , 57-59] Whilst this study and review are focused on the UK context, it is worth pointing out that international studies on the impact of the pandemic on wellbeing have found similar issues in general practice (and have similar limitations around their role inclusion). [12 , 60 , 61]

2.3.3 The effect of digitalisation and other pandemic-driven changes on workload

GPs have found that during the pandemic, the increased use of telemedicine and digital tools drove high levels of sedentary time in their working days, contributing to isolation and reduced exercise, which may negatively impact mental health. [62] GP trainees identified that their wellbeing was also impacted by challenging physical environments, poor interpersonal relationships with patients and colleagues, unsupportive environments and high workloads, all of which affected their perception of themselves as “good” or “bad” doctors. [46] Some studies identified the changing challenges the pandemic posed over time. [57] These chronological studies of GPs' workload and wellbeing during the early part of the pandemic state that, from March 2020, consulting workloads dropped initially. [57 , 59] However, their administrative burden grew due to the constantly changing guidelines and policies. [59] Additionally, a pause in referral to secondary care (due to their refocus on the pandemic) led to increased patient complaints regarding the reduction in care and added to the overall burden in general practice as waiting patients required clinical management. [57 , 59] This period is

characterised by fear and uncertainty from the threat of the virus itself and the changes to normal day-to-day working and consulting patterns. [57] After April 2020, there was reported greater comfort with remote consulting. From late summer of 2020, they report the beginning of the uptick in workload that general practice has experienced ever since. This was due to the continued and increasing demand for "usual care" alongside delivering the vaccination programme. Delivering the vaccine was viewed initially as a morale booster for GPs, wherein the extra hours worked built a sense of teamwork and pride, though it increased the number of patient queries practices received. [59]

There was also increasing complexity in the patient caseload due to higher incidences of severe mental health issues and late presentation of serious pathologies, adding to the burden and strain on GPs, and increased complexity of caring for these patients with remote-first or mixed consulting methods that worked for some but not others. [57 , 59]

2.3.4 The effect of digitalisation and other pandemic-driven changes to work on staff wellbeing

The workload increase came without an opportunity for true recuperation due to the consistency of the workload pressures, creating a higher risk of burnout. [57] It also spawned concerns around care safety, with GPs often consulting 2x the number of patients the RCGP recommends as safe. [59] In the autumn and winter of 2020, doctors had low motivation, dissatisfaction, frustration and anger stemming from the generalised strain of the pandemic at home and the "all-consuming" pressure of their work, [59] and reports of growing work-induced stress and burnout. [41] Indeed, WONCA Europe noted in late 2020 that the pandemic threatened the safety and wellbeing of primary care staff, and that clear support was needed to cope with the stress, anxiety and fear. [63] They also noted that there was a shortage of data on the matter. [63] Physicians were centred in discussions of wellbeing issues like burnout, mental health struggles, and psychological threats. [63 , 64]

Studies reported a reluctance to seek support, despite growing psychological stress and mental health diagnoses in clinical staff. [59] Cited reasons for this included guilt at creating an extra burden in "the system", referring to both the micro-level of their practices and the meso-level of the shared clinical networks within and between

primary and secondary care. [59] Discussed possible mechanisms for support included care from colleagues and seniors, positive working cultures, and personal and organisational adaptability, [46, 59] reducing clinical hours and planning for a future career that included other work rather than full-time GP hours. [59] There were also suggestions for other areas of the healthcare system that could be further developed to take on more roles currently performed in GP practice, to relieve pressures on primary care. [26, 65] Possible examples included community pharmacy and social prescribing. [26, 65]

2.3.5 Looking ahead: cracks in policy foundations

The 2022 policy paper from the Secretary of State for Health and Social Care entitled "Our plan for patients" set out a mandate for easing accessibility to general practice by adding 31,000 phone lines, adding one million additional appointments with clinical staff, and intentions to reduce the follow-on administrative burden on such staff after consultations, as well as incentivising GPs to remain in practice by "correcting pension rules". [66] Such promises set a high standard for public expectations, and risk worsening the relationship between the public and primary care in a media and political climate that has been particularly biased against general practice. [67, 68] The public perception of general practice that these negative reports create – termed "GP bashing" – has a documented impact on the wellbeing of GPs, causing stress, frustration, and underappreciation. [59] This was viewed as particularly stark in comparison to the initial public perception of all NHS workers at the beginning of the pandemic as "heroes", [59] a narrative which has been criticised for its implication that working in healthcare assumes heroism without reciprocity and fails to acknowledge the psychological effects of prolonged "heroism". [69]

The issue of access that the recent policy plan outlines may be a red herring in understanding the current issues underlying general practice. A proliferation of access routes, be they telephone lines or e-consultations, does not improve the fundamental supply and demand quagmire in primary care, nor does it support patients with the greatest need to access the care they need. [70] Rather, it can increase the administrative work that delays clinical work, creates more steps and wait time for frustrated patients,

and places additional burdens on reception staff who must take on these additional workloads and learn to triage patients appropriately. [59 , 70]

The persistent overburdening of primary care services in the face of a contracting workforce risks worsening the situation. Already, data from the BMA cites burnout, stress, ill health and poor work-life balance as causes for GPs moving from full-time to part-time working patterns. [35] The BMA states that for every 1,000 patients in England, there are 0.44 qualified GPs. [35] In August 2022, 2.6 million standard appointments were made in UK GP practices. [35] To meet this demand, both part- and full-time GPs are working more unpaid hours to meet the demand for appointments and the required administrative load, [35] with 12-14hr working days and additional unpaid administration sessions being common. [59] In reality, this means that FTE GPs are working beyond full-time, and those on part-time contracts are often working FTE hours. This points to problems both in the reporting of workload in general practice and a fundamental structuring issue in GP schedules, whereby dividing a GP's time into clinical "sessions" is no longer appropriate for the range of work they must complete in those slots.

The Health Foundation's recommendations make clear that top-down targets around general practice staff supply and capacity will not be successful. They maintain that a lack of nuanced and localised action risks patient safety, quality of care and equity of access. [17] However, such action needs to be based on a reliable understanding of the current working conditions in general practice. The Health Foundation made the point that there are significant gaps in the available data about the NHS workforce, particularly around the staff that are not considered to be involved in "direct patient care", such as administrative and reception roles. [17] Included roles are GPs and nurses, but more recently has expanded into advanced nurse practitioners, physician's associates, and paramedics, among others. [71] Many of the newer clinical roles are not accounted for in the current evidence picture, likely due to their recent adoption. The non-clinical general practice workforce (support staff like reception and administrative workers) is critically under-researched and often overlooked in policy.

The aforementioned policy paper from the Secretary of State for Health and Social Care cites the publication of "transparent" data on the performance of patients' local NHS services, including "exactly how many appointments each practice in England is

delivering and how long people wait between booking an appointment and receiving one", would support more informed and empowered decision-making by patients. [66] However, when the data presented to patients and policymakers is partial, an inaccurate picture is painted. This means policies for change – and any interventions to support that – can make incorrect normative assumptions which undermine change initiatives and their intended outcomes. [72, 73] Therefore, when working with the available data concerning policy development, attention to what is missing is essential. There are three areas to look at when talking about the workload of general practice: the method for data collection, the data that are being measured to determine workload, and whose workload is being measured.

Data on workloads in general practice are harvested from the various digital appointment systems used in UK practices. At the time of the original review, there were six available systems (EMIS, TPP/SystmOne, Eva Health, Informatica, Cegedim and Babylon (GP at Hand)), which could be overlaid by or integrated with other software designed to improve usability (e.g. Docman, accuRx, Anima). NHS Digital publishes General Practice Appointment Data (GPAD) monthly. [74] Crucially, they acknowledge that system and use-case variation within individual practices create limitations in the potential for collecting accurate appointment data and can provide "an incomplete picture of overall activity and workload in general practice". [75] There is ongoing work to improve the reliability of the GPAD data, but it will not be a quick process. For example, in data publications since April 2022, information about the actual duration of appointment times has become available. This indicates that in the available national data, 39.7% of appointments ran over the allocated 10-minute appointment times, with 5.5% lasting up to 60 minutes. [76] Of this data, 24.1% of appointments had an unknown duration, [76] which brings home the point that all data improvement action is iterative without a quick fix. Therefore, datasets such as these should be viewed with a critical eye.

As outlined above, there are problems with the data collection techniques and metrics used to measure workload, capacity, and the potential for increasing provision. There is also a problem with the scope of that data collection. NHS Digital make clear in their reporting that their measures are limited to GP practice's digital systems and are non-

representative of the totality of work within general practices, nor its complexity. [76] Measuring only appointments logged in the system masks and devalues many workflows: tasks, emergency task lists, medication reviews, undocumented follow-ups or consultations, writing and sending prescriptions, organising referrals, reviewing letters from secondary care and following up on missing information or requests for further investigations, or other "operational failures". [77] This work makes up a significant portion of GP time, and it has been noted that this workload burden is growing disproportionately in areas of higher socioeconomic deprivation, where GPs take on additional illness and social work for their patients whilst also managing their own emotional response to the high workload. [78] The extent to which this burden spills into the workloads of other members of the clinical and non-clinical teams (nurses, advanced nurse practitioners, phlebotomists, reception, managerial and administrative personnel) is under-researched. However, new research into elements of this "hidden work" is underway, though not yet been published. [79] In all areas, this workload spills into overtime hours. For some staff members, this is accounted for and appropriately remunerated, but for others it is not.

2.3.6 Conclusions from the first search

At the time of the review, the effects of these working conditions on practice staff were not being measured outside of the discrete academic studies discussed above. These studies paint a bleak picture of staff wellbeing during the pandemic (in the groups they have studied) and leave notable gaps around certain staff groups. This suggests that wellbeing information about the general practice workforce should be more routinely collected if we are to fully understand how crisis or change events impact them. There is a precedent set for this kind of measurement in secondary care by the NHS Staff Survey, which "aims to improve staff experience across the NHS" and has been running since 2003. At the time of the original search, this had never included the primary care workforce, though there were forward plans addressing this. [80] The first General Practice Staff Survey (GPSS) was run in late 2023, though the results have not been published by NHS England. [81] However, from the available workforce and workload data collected by the BMA, NHS Digital, and The Health Foundation, it's clear that there is a problem for clinical personnel. No data are collected on administrative or reception

roles, which can be considered a significant gap. As the mandated introduction of digital technologies into UK general practice was a live experiment at the time of searching, the evidence base on its impact on staff wellbeing and working conditions was extremely limited.

2.3.7 Updates and reflections from 2024

On re-running the search string in late October 2024, two years on from the previous search, surprisingly just four of the 90 deduplicated new records were relevant to the original research question. These four publications focused on: moral distress and wellbeing in general practice nursing staff during the pandemic,[82, 83] and the wellbeing of GPs during the pandemic. [84, 85]

One survey found that advanced practice nurses in GP practices were experiencing higher workloads due to the need to deliver COVID-19 vaccination programmes, feelings of isolation, exhaustion, and moral distress, and concerns about staffing, working overtime, and patient safety. [83] The qualitative GenCo Study found the GP practice nurses felt that, during the pandemic, they were under-recognised, undervalued, excluded, and disregarded in higher-level decision-making which were perceived as being 'top-down'. [82] Nurses were not included in clinical meetings or offered the same support as GP colleagues and felt that their training in remote consulting technologies was not sufficient to be safe. [82] These strains were added to by additional workloads reallocated from secondary care, GPs, community care, retiring or resigning nurses, and increasing patient need led to feelings of burnout and workplace stress. [82] The authors note that this study, and the catalysing effect of the pandemic, 'laid bare significant underlying cultural and structural issues' which were present before the COVID-19 pandemic and only exacerbated by it and that this poses a broader risk to retention of these staff. [82]

The two GP studies (one a qualitative interview study, and the other a social media study) reified those found in the first literature search; that GPs across career stages were experiencing low morale, distress, burnout, feelings of isolation and anxiety due to high workloads, GP 'bashing', the introduction of remote working and using digital technologies, lack of supportive NHS resources, lack of funding, insufficient staffing, and government misinformation about GP practices being 'closed'. [84, 85]

What is consistent is that the pressures of continuing to deliver care during the pandemic and adapting local working practices to the integration of new digital tools have had a lasting impact on the wellbeing of GP practice staff. It is also evident that these impacts are not solely caused by the pandemic and digitalisation, but these protracted events revealed and exacerbated previously existing issues in general practice. What is concerning is that, despite the reams of advice for policy and practice to improve the situation published in the academic literature, these problems are still endemic. It is also clear that the evidence-to-policy pipeline requires more translational work than simply publishing and hoping for impact. It is my intenion that this project will bridge that gap, by being embedded in a project with a linked policy partner, and through a multi-pronged approach to dissemination.

2.4 Conclusion

This review indicates that my study's holistic focus on all staff groups working in GP practices came at a critical moment. My choice to take the practice as a unit of analysis set it apart from previously published studies, which had focused on specific roles, and often overlooked the experiences and perspectives of support staff. Other studies had also tended to be limited to a short period of data collection and lacked a longitudinal component. In taking a longitudinal approach, my own study addresses that literature gap and offers a unique perspective on the longer-term effects of the pandemic and digitalisation, as well as offering learning as to what local-level strategies for navigating these issues have emerged. The literature review revealed an issue in how work is recorded in general practice (and that which is unrecorded) and, therefore, a systemic issue in how workload data on general practice is reported and represented at the level of policy and government. Without nuanced consideration of what the available data does and *does not* show us, we cannot make safe and fair policies and targets for increased capacity in general practice. Through my embedded approach to understanding how GP practice work has changed, my study will shed light on the kind of work that is not (and perhaps cannot be) captured in such reporting but must nevertheless be considered in policy concerning general practice.

3 Methodology, methods, and analytical approach

In this chapter, I introduce my ontological and epistemological position and describe my study design, methodology, and methods (including site selection and participant recruitment). I then reflect on the process of accessing my case study sites, and the role of my positionality in this, and outline my approach to Patient and Participant Involvement and Engagement (PPIE). Finally, I describe my three-phase approach to analysis.

3.1 Ontology and epistemology

Ontology and epistemology are two interacting concepts concerned with 1) forms of being or existing in the world, and 2) forms of knowing or understanding the world. [86] To determine one's ontological position, the researcher must consider how they conceive of reality and the phenomena they are observing: whether they exist external to human interpretation (realism), whether they exist through the subjective understanding and construction of people (idealism), or somewhere between these two extremes. [87] There are many perspectives between these two positions, and indeed one researcher may find that they operate at different points on that continuum depending on the study they are conducting and the methods the question requires. Ontologically, I am most broadly described as a constructionist, given that I recognise the influences of filtering a person's experience of reality through their unique cognition. [88] Equally, I recognise the role that I play as a researcher in the construction of the knowledge research produces – both implicitly during qualitative data collection, and more explicitly during analysis and theorisation. [89]

Epistemology is concerned with 'theories of knowledge'; how we learn about the world. With few exceptions, which are beyond the scope of this thesis, qualitative research is centrally interpretivist; we use qualitative methods to observe and speak to people about their lives and experiences, gathering observational and descriptive data, which we transform into text, and interpretively analyse supported by theory. [90] I too take this interpretivist position in my research, and am aware that I am engaging in 'second-order meaning making'; I construe the meaning of people who *act upon* meaning. [91] This

approach helps me to reconcile the inherent paradox in observational research, which ostensibly seeks to observe a stable reality 'out there' but also must be acutely aware of the social constructionism underpinning any subjective interpretations of the phenomenon observed. [92]

3.2 Study design

My project sat within a broader project called 'Remote-by-Default 2: The new normal?' (RBD2), which I also worked on as a researcher part-time throughout my DPhil. The study sought to inform high-quality, safe, and equitable care in UK general practice following the mandate for remote primary care to be offered 'by default'. [93] The broader study's design is described in its protocol and initial findings publication. [93, 94] My multi-sited ethnographic study of GP practice work had two in-depth ethnographic sites and eight comparative sites from which I collected interview data and reanalysed previously collected data to inform my developing explanations and theorisation. Within my ethnographic study, I engaged with a range of qualitative methods, including ethnographic observations, [92] depth interviews, [95] and focus groups. [96] For my comparative sites, I conducted semi-structured interviews with researchers-in-residence (embedded researchers leading data collection at particular sites, [97] a model I explain in 3.3.1), and reanalysis of previously collected interview data. I expand on each of these below, supported by Figure 4, which illustrates my overall study design.

The planning of my DPhil project was closely informed by extensive participant involvement activities, whereby a steering committee of staff and patients advised on the value and appropriateness of the overall study design and research question, and open meetings at each primary study site were held with staff to discern the acceptability of the study and specific methods. Changes were made in response to these meetings, for example, by offering the option of doing interviews remotely or off-site to ensure participants felt safe. The process and impact of my PPIE work are described in section 3.8.

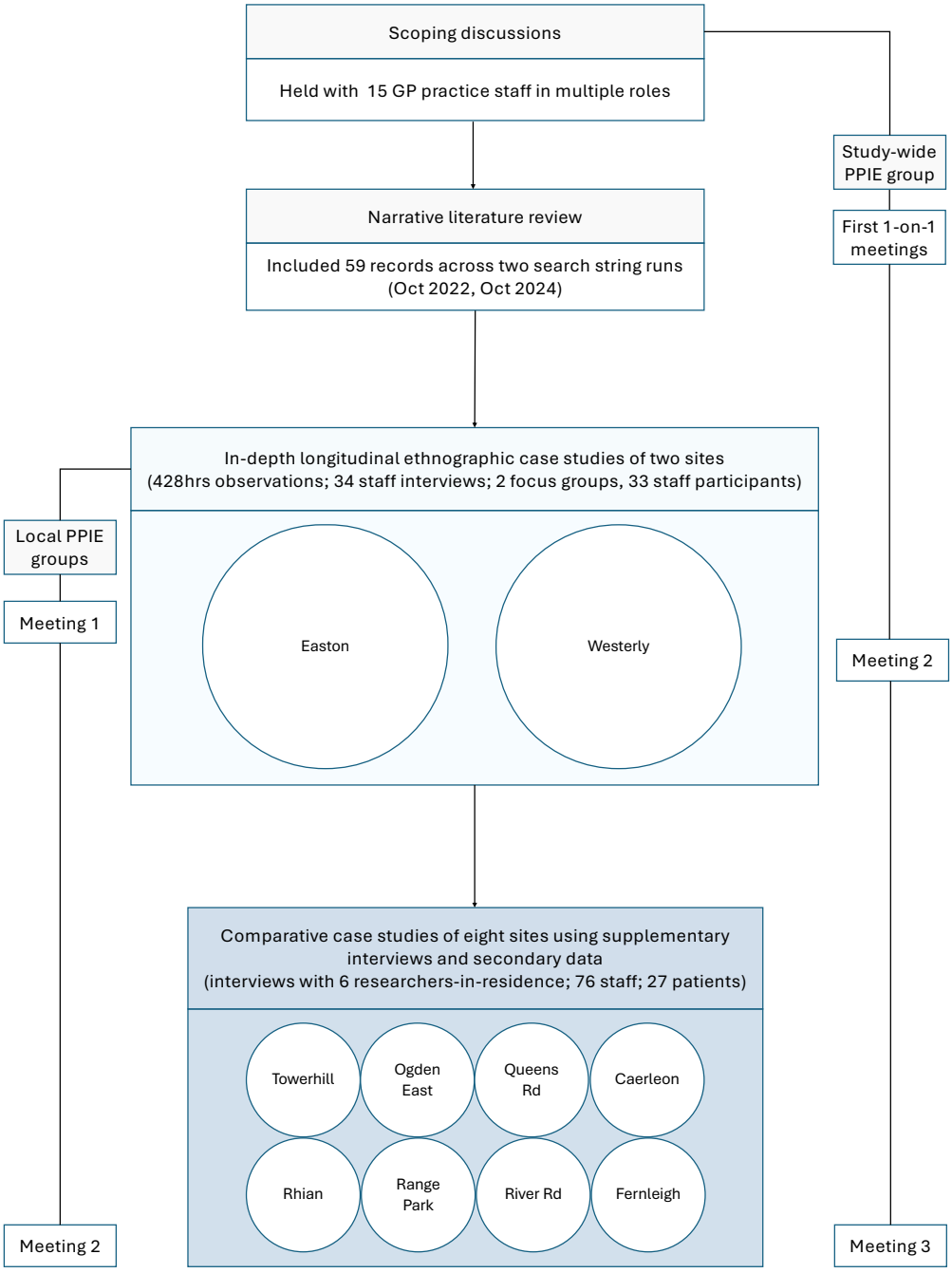


Figure 4: Illustration of multi-sited ethnographic case study design

3.3 Methodology and methods

In this section, I introduce the qualitative methodologies and methods that I used in this ethnographic study of UK general practices during the period of June 2022 to March 2024. This includes: case study, ethnography, interviews (depth and semi-structured), and focus groups.

3.3.1 Case study methodology

Case studies aim to enable the exploration of phenomena within real-life settings as they occur. This methodology's defining feature, as Sandelowski put it, is the 'intensive study (however accomplished) of one or more cases for some explicit purpose'. [98] As such, this approach pairs particularly fruitfully with ethnography – and multi-sited ethnography especially, as described later.

The use of case studies in healthcare-related research has a long history. In 1961, medical sociologists Becker, Geer, Hughes, and Strauss, pioneered its use in their field in a qualitative study of a medical school, where they viewed the organisation as constituted by many complex, interwoven social systems. [99] They used 'unstructured techniques', most dominantly continuous participant observation and interviews (formal and informal), [99] central methods of ethnography and of my own study. Like them, the final subject of my study emerged more from the field and what was of interest to my study population than from my prior conceptions, [99] as I will expand on later.

Since this seminal work, qualitative case study methodology has been applied to many subject areas in healthcare research. Within these applications, what constitutes a 'case' may vary; it may be organisationally bounded, as in Hughes' study of Integrated Care Systems, [100] and Ledger's (initial) study of Primary Care Trusts (subsequently Clinical Commissioning Groups). [101] They may be bounded by the physical estate of the site, as in Greenhalgh et al.'s studies of digital primary care and remote consulting in Scotland, Wales, and England. [93, 94] Or they may be bounded by the issue at hand, like Smith's study of how 'policy frames' could inform how evidence is(n't) leveraged for different public health issues. [102]

My doctoral study's design was informed by Eisenhardt's approach to case study research, which emphasises theory-building and explanation through flexible enquiry with multiple cases, empirical data, and theoretical logic. [103, 104] Broadly, this approach uses cases to create theoretical constructs from empirical evidence. [103, 104] Building theory from case studies is a research strategy that involves using one or more cases to create theoretical constructs or concepts, propositions, and theory from case-based, empirical evidence. [103, 104]

Eisenhardt's method is an eight-step process, illustrated by Figure 5, which is an excerpt from Eisenhardt's original 1989 article. [105] The process covers defining the research question, selecting cases through theoretical sampling, creating study materials, entering the field and collecting data, data analysis within- and cross-cases, hypotheses development through tabulating data to develop constructs and build evidence for relationships, enfolding existing theory and literature, and finalisation of the developed or extended theory. [105] In her 2021 essay Eisenhardt commented that, in her original model, she had been engaging in positivist language as a strategy for 'legitim[ising] multi-case theory building' in an epistemological context that tended to view this kind of work as 'a biased jumble of opinions and preconceptions'. [103] Eisenhardt now emphasises that the method is ontologically and epistemologically flexible, as I have found in my application in this study, but maintains that her structured approach to building theory from case study can help to keep the researcher 'honest'. [103] I have used this process as a heuristic device, rather than a ridged framework to inform the entirety of my study's design, from defining the research question in conversation with the data (as described in section 3.9), selecting my cases and 'casing' my study (explored below), and through my analysis: beginning within-case, moving to cross-case, and then enfolding literature and theory-testing (also described in 3.9). [105 , 106] This method has been usefully applied in other studies of multiple healthcare organisations in a variety of nations, including hospitals in the United States [107], cancer, maternity, and diabetes care in the UK [108], and primary care in LMICs [109], though this is its first application in the context of UK general practice.

Step	Activity	Reason
Getting Started	• Definition of research question • Possibly a priori constructs	• Focuses efforts • Provides better grounding of construct measures
Selecting Cases	• Neither theory nor hypotheses • Specified population • Theoretical, not random, sampling	• Retains theoretical flexibility • Constrains extraneous variation and sharpens external validity • Focuses efforts on theoretically useful cases, i.e. those that replicate or extend theory by filling conceptual categories
Crafting Instruments and Protocols	• Multiple data collection methods • Qualitative and quantitative data combined • Multiple investigators	• Strengthens grounding of theory by triangulation of evidence • Synergistic view of evidence • Fosters divergent perspectives and strengthens grounding
Entering the Field	• Overlap data collection and analysis, including field notes • Flexible and opportunistic data collection methods	• Speeds analyses and reveals helpful adjustments to data collection • Allows investigators to take advantage of emergent themes and unique case features
Analyzing Data	• Within-case analysis • Cross-case pattern search using divergent techniques	• Gains familiarity with data and preliminary theory generation • Forces investigators to look beyond initial impressions and see evidence thru multiple lenses
Shaping Hypotheses	• Iterative tabulation of evidence for each construct • Replication, not sampling, logic across cases • Search evidence for "why" behind relationships	• Sharpens construct definition validity and measurability • Confirms, extends, and sharpens theory • Builds internal validity
Enfolding Literature	• Comparison with conflicting literature • Comparison with similar literature	• Builds internal validity, raises theoretical level, and sharpens construct definitions • Sharpens generalizability, improves construct definition, and raises theoretical level
Reaching Closure	• Theoretical saturation when possible	• Ends process when marginal improvement becomes small

Figure 5: Eisenhardt's process of building theory from case study research, replicated from her original essay [105]

I am most closely informed by her 'common process design', whereby cases are theoretically sampled to focus on the same phenomenon in purposefully different settings, with the aim of improving the transferability of the emergent theory across settings. [103] Reflecting this, within my ethnographic case study, my two primary GP practice sites (which I refer to as my 'in-depth ethnographic' sites) were purposively sampled due to their differences in size, location, and deprivation. To inform the generalisability of my findings and early theorisation at these sites I conducted interviews with – and re-analysed data from – researchers-in-residence at eight other GP practice sites across the UK (which I refer to as my 'comparative' sites), as illustrated in Figure 4. These comparative sites were drawn from the wider RBD2 project, which applied the 'researcher-in-residence' model. This model of case study research embeds researchers into specific case study sites, at which they will lead data collection, to promote greater familiarisation with the contextual features of those sites. [97] In its

application in the healthcare improvement space, this method seeks to bring research closer to the reality of the 'practice' (meaning healthcare context, e.g. surgical theatre, GP practice, accident and emergency) into which improvement interventions must be implemented. [97] These researchers-in-residence lead the data collection at their specific sites, but also build relationships and learn about tacit knowledge systems within those sites to improve contextual understanding of those data. It is a method of data collection that helps researchers and those being researched to co-produce knowledge as equals, through a trusting relationship built over time. [110] This approach also allows the entire research team to benefit from the expertise of each research-in-residence, who may be an intentionally interdisciplinary group, as was the case in the RBD2 team, which included an anthropologist, a psychologist, health services researchers, social scientists, policy analysts, and clinicians. [93 , 94]

Given this combined in-depth and comparative model, the boundaries of each case were initially drawn at the level of each organisation. Particularly for each in-depth ethnographic case, whereby I was conducting longitudinal ethnographic observations and interviews on the physical estate of each organisation. For the eight comparative case studies, I attempted to retain this organisational case boundary by interviewing researchers-in-residence and reading through interview data from their respective sites sequentially. However, as Sandelowski reflects, 'what constitutes a case is often a confusing matter'. [98] This is due to the emergent nature of case study work, and the tendency for case study methodologists to – as I have – 'embrace changes in research interests, goals, and questions', meaning that we must 'case' the study as we go along; determine what it is a *case of*. [111] The more organisational cases I snowballed into my data collection, the more my 'casing' developed and complexified (and, for a time, confused). This casing was intricately linked to my analysis, which I describe in full in section 3.9. In brief, the entire study became a case of three things: 1) how digital innovation during crisis changed the kind of work performed in GP practices, 2) how these changes to daily work affected staff and patients, and 3) how practice teams navigated these changes. Through this process, it became clear that my two ethnographic case studies could be considered a 'polar design', with one organisation

being ‘more relational’, and the other ‘less relational’, two headings which I also latterly grouped comparative case studies under (explored in Chapter 8).

3.3.2 **Ethnography**

Ethnography**,** and observational methods more broadly, allow us to close the gap between what people say (or think) and what they do; in this case, ‘work-as-done’ versus ‘work-as-imagined’. [112] These methods deepen understanding of topics under study when used in combination with other qualitative methods like interviewing and focus groups. Observation involves watching how people behave, act, and interact in a given context (in this case, GP practices), and is particularly useful in healthcare research when applied to studies of organisations and relationships therein. [92]

Ethnography particularly emphasises attempting to gain an understanding of the ontology of the people under study: their worldview, their way of speaking, and the meanings they attach to particular symbols and actions. [92 , 113] The ethnographer hopes to do this through extended participant observation and interviews, which aim to embed the researcher in the daily lives of their study population. In the anthropological tradition, these would be totally immersive, whereby an anthropologist lives among their study population, learns their language, learns to perform the same activities as them, and attempts to understand their lived experience through integration as a member of their community. [114] In my case, I am using rapid ethnographic observations, as applied by Vindrola-Padros and her team. [115 , 116] This approach acknowledges criticisms of ethnography around the difficulty of actually achieving ‘immersion’, and the limitations of fieldwork in settings that do not allow for multiple years of time ‘in the field’. [117] Rapid ethnography was developed to enable the benefits of embedded observational methods to inform settings that demand fast-paced research, as is the case in settings undergoing crisis and/or change. [115 , 118]

In addition, my ethnography is ‘multi-sited’, in that it is occurring across two specific GP practices in different locations. This multiply-located ethnographic approach has a long history in anthropology; for example, Malinowski’s seminal ethnography of the Pacific was a voyage, with ethnography conducted along the way. [119] More recently, Appadurai and Kopytoff blurred the boundaries of the site by following the flows of objects

('things') through globalised economic systems. [120, 121] Marcus, who coined the term 'multi-sited ethnography', approached it as a mechanism for collapsing the dichotomy of the 'local' and the 'global' by studying systemic realities in local places by following objects, stories, or people, drawing on Latour's actor-network theory. [122]

The term has faced varied criticism for its overly-bounded view of the 'site', [123] and its oversimplification of the notion of a fieldwork location. [124] In my application, I have found it a productive heuristic for distinguishing between my participating GP practices, and, following Candea, take these limitations on the 'site' as a reminder of the partiality of my window into the 'worlds' of my participants and participating sites, [125] whilst maintaining an appreciation for what in my observations may be indicative of local or systemic realities.

Historically, anthropologists drew a distinction between theory and method (method implicitly meaning ethnography). Theory was something that happened outside of the data and the field. This processual view saw theorising as a formula: one gathers data in the field, and that data is then analysed and subsequently theorised. For some anthropologists, e.g. Radcliffe-Brown and Lévi-Strauss, the division between field and theory was material; with ethnographers and theorists being separate roles. [114] In anthropology, this distinction – which favoured theory as the cerebral task – reflects the history and politics of the discipline. The individual who extracts the knowledge (historically, from colonies viewed as 'other') is afforded less credit than the one who translates and theorises it into academic currency (books, chapters, papers) for the Western metropolitan scholastic audience. [114] This epistemological distinction is also present in social science research in healthcare, where we often distil the process of our qualitative research as having distinct phases of collection-analysis-theorisation. We do this to fit the structuring forms of the discipline in which we work, whose epistemological origins are strongly positivist and favour quantitative approaches. We 'clean up' our analyses to better fit the requirements of journals, and to demonstrate a 'scientific rigour' that is recognisable to an audience that can be prone to undervaluing the nuance of qualitative research. Whilst I generally adhere to this accepted tradition of writing, as already discussed, I use this thesis to expand more upon the interactions

between fieldwork, data, analysis, and theory, and my non-linear approach to theorisation.

My ethnographic observations took place during working hours Monday-Friday, including some Saturdays when flu or vaccination clinics were running. 'Working hours' could be expansive, depending on the volume of work, often beginning before 8 am and sometimes running as late as 9 pm. My observations included all staff groups (reception, administrative, managerial, leadership, clinical and clinical support), all working spaces within the practice (reception, group workspaces, consulting rooms, break rooms, storage areas, waiting room) and activities undertaken by staff at the site (day-to-day working, meetings, breaks). These included observations made as a participant and non-participant, depending on the setting, and engaging in informal conversations to understand what I was seeing. Those that did not agree to observations were not observed. In this sense, my case studies are bounded by the practice's estate and working hours. I did not spend time with my participants outside of these spaces and times. I spent a working week with each staff group starting in reception, then administration/management, then nursing and clinical support, and finally to salaried GPs and GP partners. This approach allowed me to integrate with different teams, get to know them (and vice versa) and recruit for interviews. Within each observation session, I alternated between 'shadowing' a particular staff member and observing particular spaces within the practice. I took extensive field notes during the observations, initially by hand and later digitally, to keep pace with my note-taking style. These notes were exclusively for research purposes and were anonymised during analysis.

3.3.3 **Qualitative interviews**

Qualitative interviews aim to understand the participant's views, experiences, and sense-making of a particular issue under study. [95] Interviews are a socially-constructed interaction, with many circumstantial variables – beyond just the agency of the interviewer or interviewee – that could alter the data or redirect the interview. Historically, researchers strove to avoid the influence (or 'contaminant') of the researcher in interview studies. [126] However, this perspective has now shifted, and

there is acceptance of the inevitability of the researcher's influence and situational uniqueness of any qualitative data produced in a given moment in time/space. [126] There are three main approaches to interviews – they can be structured (following specific pre-determined closed questions), semi-structured (broadly following an interview guide of pre-determined open-ended questions), or depth (few, very open-ended questions). [95] Interviews can be one-to-one, with two participants, or with a small group, and may be conducted in-person, over the telephone, or through online video platforms like Teams. I used two interviewing styles in this study, depth and semi-structured, with most being conducted in person, and a minority via online video calls.

In my in-depth ethnographic sites, my approach to the practice of interviewing was conversational; I aimed to first establish a rapport with participants and understand a bit of their background (personal and in terms of their career/ current role). I then asked questions broadly related to the issues I had identified as relevant through my literature review, focus groups, and observations. I would then, following Gubrium and Holstein's approach, engage in 'active' interviewing: paying attention to the participant's answers, asking relevant follow-up questions or prompting for more insight to encourage them to share their knowledge. [127] My participants and I would discursively explore how working conditions had changed throughout the pandemic and how that affected their physical, mental and emotional wellbeing both at work and at home. This approach allowed participants to tell their stories from their perspectives, focusing on what mattered to them, though I probed further when relevant. Interviews typically took between 40-70 minutes, were conducted in private spaces within the practices or outside (or occasionally online), and were audio recorded.

I used the semi-structured approach when interviewing researchers-in-residence to build my comparative case studies. For these interviews, I used an interview guide that I had developed through early analysis in the field during ethnography, and refinement during early analysis of that dataset. The interview guide is attached as Appendix 2. These interviews lasted 60-120 minutes, were conducted in private rooms on university premises or online and were audio-recorded.

3.3.4 **Focus groups**

Focus groups bring together groups of up to around 12 participants in the population under study – in this case, GP practice staff – who meet for between 60-90 minutes to explore a particular issue collectively through intra-group discussion. [96] In this format, the researcher takes a facilitatory role rather than an interviewing role, in order to tap into the group's collective knowledge, usually on an issue that is less well understood. [128] The use of focus groups has grown in popularity in healthcare research over the past 30 years, [128] and is an accepted qualitative method for identifying important issues for a given research study and to help develop study materials, [129] as I have applied it in this study. I also determined that it was best that the samples for the focus groups were representative of all staff groups within the practice, which often intersected with multiple ethnicities, class experiences, economic positions, and genders, as a means to avoiding homogenous perspectives. [130]

I used focus groups at the beginning and end of data collection at both sites, for a total of four meetings. Initially these were envisioned as PPIE meetings, but after the first it was clear that some of the discussions should be viewed as data due to participant's desire to talk about specific topics that should be included in the study. Verbal informed consent was gathered for all (at the end of the first meeting and before the start of the subsequent three) using a group verbal consent form. These meetings had multiple purposes: providing further research insights, informing the design of the study, determining the acceptability and appropriateness of the study, and determining the best mechanisms for dissemination and impact of study findings. The first meeting at each site was structured using a PowerPoint presentation, which covered the research background, questions, aims, and objectives, as well as the intended study design. Each element had discussion prompts which participants were invited to comment on. This led to participants talking about their experiences of working through the pandemic and shifting to using digital technologies and digitalised working processes, which were used to inform the development of a loose observational and interview guide. The final meetings at each site followed the same structure but with a focus on sharing early findings, with participants invited to comment upon these and discuss whether they found them representative and what they would like me to do with the findings.

3.4 Site selection

The two primary ethnographic sites were both English GP practices, selected for both convenience and maximum diversity in direct juxtaposition. One practice (pseudonymised as Easton) was located in a small city in South East England. Easton operated on a traditional partner-led model where all staff were permanently based at a single site; it was part of a small Primary Care Network (PCN) of four practices. PCNs are consortia of organisations in the same geographic region, to support the local population's health across community, mental health, social care, pharmacy, hospital and voluntary services. The other in-depth ethnographic practice (anonymised as Westerly) was in a socio-economically deprived and ethnically diverse part of inner London. Westerly consisted of two branch surgeries which staff would rotate between, often also picking up shifts in other practices across London. Westerly was part of a larger PCN of 10 practices.

Broadly, Easton represents a 'traditional' general practice—characterised by a small number of GP partners and support staff, most of whom live locally and have worked in the practice for many years; a 'family doctor' ethos with high value placed on personal relationships; and a relatively undifferentiated management structure (e.g. staff cover multiple roles as needed). [131] In contrast, Westerly represents a more contemporary 'polyclinic' (or 'super-practice') model characterised by larger size (oriented to achieving economies of scale); a more bureaucratic and formal ethos; more highly differentiated staff roles (e.g. multiple different kinds of clinical and support staff roles); a more diffuse workforce in which fewer staff had social ties; and higher turnover. [8]

The additional eight comparative sites were selected for diversity in four key characteristics which I hypothesised to affect the work environment and wellbeing of staff: practice location (geographical position in the UK and inner-city, urban or rural locality); practice size, staffing and ethos (broadly, 'traditional', 'polyclinic' or something in between); population served (from affluent to deprived and from predominantly White British to multi-ethnic); and maturity in relation to remote and digital healthcare. The characteristics of all practices are described in more detail in Chapter 4.

3.5 Participant recruitment and consent

3.5.1 **Recruitment**

Recruitment of individual participants for observations was driven by the convenience of which individuals happened to be working in the practice during my ethnographic observations and whether they consented to participate.

Participants for depth interviews were recruited through convenience and snowball sampling. I had recruitment posters placed throughout the sites, which had my contact details and information on the study, enabling people to reach out directly (which some did). Most interviewees were recruited through direct interactions during my observations and then snowballing further participants as recommended by them.

Researcher-in-residence participants were recruited via the RBD2 researchers' mailing list. I sent out a recruitment email for participation in this project, outlining its focus on the practice workforce. From the responses, I obtained a maximum variety sample of eight additional practices via six participants, with whom I conducted semi-structured interviews and who provided consent for reanalysis of their site's dataset.

3.5.2 **Consent**

Informed consent at my primary sites was facilitated by posters, participant information sheets (PIS) and opt-out stickers that I placed in communal staff spaces and offices before and throughout observations. In group meetings, I gathered verbal consent and only proceeded with observations where all attendees agreed. In large team-working spaces, I gathered written consent from the team lead and verbal consent from present team members. In smaller working spaces, I collected written consent from all present workers. I also gained written consent for all depth interviews. Given the nature and purpose of primary care facilities, it was unavoidable that patients would be present during my observations of waiting areas and clinical spaces. Indeed, it was crucial to capture interactions between staff and patients, as they are a central element of day-to-day work. I gathered verbal consent from all patients in clinical spaces via the clinician being observed; posters and PIS were made visible in waiting areas to forewarn patients of observations. In all spaces with PIS, I provided opt-out stickers (red dots) that people

could display to indicate their non-consent to observations. These were used by a few people, primarily patients who were then avoided in public areas and whose consultations were not observed. Any clinical encounters concerning patients under 18 or those that lacked capacity were not included in observations. Where there was uncertainty regarding the patient's capacity, the observed doctor determined whether the patient did or did not lack capacity.

Informed consent was gathered for my researcher-in-residence interviews by sharing a PIS via email before the interview, checking this had been read and for any questions before the interview began, and gathering verbal consent during interviews, which was documented by me on a digital consent form. Consent for the reanalysis of the researchers-in-residence's data was gathered during their data collection, as indicated on the RBD2 study consent form in Appendix 3, which contains the relevant RBD2 consent form, as well as my study's consent forms, posters, and PIS.

3.6 Accessing sites: reflecting on my positionality and the privileges it affords

It is relevant to mention my background and how that has affected my DPhil project in terms of its object of study, methods, and pace of progression.

3.6.1 **White, British, university-educated**

As a person with white skin, born and raised in Britain, and given access to tertiary education, my view of the world has many blind spots. I do not experience racial or cultural prejudice, my nationality is never questioned, and I have not experienced harassment or barriers due to my appearance. My blind spots are the result of growing up with privileges so ingrained that I often do not see them, which equally means that there are many inequities and barriers that others experience that I do not see. This means that the research I devise, conduct, and write about will also have blind spots. Through additional training focused on bias awareness and avoidance, working with vulnerable groups, and previous/ongoing research projects with specific equity foci, I have attempted to reduce these blind spots. However, there are likely many that remain, or will regrow, and thus my work to reduce my own biases and blind spots will be ongoing for my entire research career.

In devising my study, I have attempted to learn about and overcome specific issues relevant to my population of study through my extensive PPIE work, outlined below, and ongoing engagement with people working in primary care across all roles. My study includes in its focus staff groups that are often invisibilsed in research on GP practices and healthcare organisations more broadly: those in support roles like administration and reception. I began my data collection embedded within these groups intentionally to foreground their experiences and to have their view as my first perspectives on the organisation. In doing so, I hoped to see how the changes and crises occurring during data collection affected those with the least power over how to manage them. This provided unanticipated benefits; the support staff form a large proportion of the overall workforce and operate in working areas that also serve as break spaces or are frequented by all other staff members who need to liaise with support staff for their daily work. This meant that I was able to first integrate with the group who wielded significant social power (through collegial relationships with the wider team), and organisational knowledge (they understood the workings of the practice and people's individual schedules). Discussions with support staff also revealed insights about how organisational structures were navigated, e.g. reception staff requesting (sometimes demanding) to work part-time to remain below the benefits threshold.

3.6.2 **Anthropological training**

Whilst I received my postgraduate training in the traditional ethnographic methods of social anthropology, which favour extended periods in the far-flung 'field', I have always been an 'applied' anthropologist. This means I have been focused on applying anthropological theory and methods to practical settings, which are often problem oriented. My anthropology is done 'at home', meaning in my nation of origin and current permanent residence, where I have at least a partial pre-existing tacit grounding in norms and social scripts. [132] This requires a degree of what Bauman, in the sociological context, refers to as 'defamiliarising'; relinquishing assumptions and seeing the complexity in everyday life. [133] For my entire research career, this has been in the context of healthcare settings. More pure anthropologists might look at my career and deem it unworthy of the title 'anthropologist'. You *might* describe me as a social,

medical, or applied anthropologist. You might also describe me as a social scientist, a qualitative researcher, or a health services researcher.

3.6.3 Healthcare researcher

This brings me to my next positionality statement: I am a person who researches healthcare – healthcare technologies, processes, organisations, and people. I have been researching in this field since 2019 in a professional capacity and, more recently, as a doctoral student. Prior to joining the DPhil programme, I worked in healthcare improvement research at the University of Cambridge. Throughout my DPhil, I have also worked as a researcher on various projects across a few teams and organisations within and outside of the university. Throughout, I have been working on the Remote-by-Default 2 project, which is most relevant to this thesis. My DPhil project sat under the umbrella of this study from the outset, contributing to all its themes. In my professional capacity, I also co-led two themes: Access and Inequality, and Workforce.

This position, along with my professional history, afforded me knowledge about how to conduct a research study and the means to move at pace. For example, I was able to expedite the ethics process through my dual affiliation (gaining approval by the summer of my first year). My affiliation with the department and RBD2 allowed me to identify and gain access to sites quickly. I was aware of what academic currency I had to 'trade' with gatekeepers and other researchers (e.g. helping on other projects and invitations to co-author papers from my study). My experience in research afforded me the capacity to plan and begin data collection with confidence. Additionally, I was able to produce publications throughout my DPhil, which privileges my findings by being strengthened by the insights of peer review. Integrating my DPhil project also benefitted the RBD2 study by providing an additional researcher who would perform formal study-related work one day per week (though often more), including data collection, analysis, dissemination work, and manuscript writing, and provided access to an additional general practice site that had not previously been participating in RBD2.

3.6.4 **DPhil Student**

Being a DPhil student in a primary care department afforded me access to networks and people that strengthened my understanding of how general practice in the UK is structured and its governance, and kept me abreast of relevant hot topics or policy issues in the space. These same networks allowed me to discuss my project with people who had a direct interest in it – often members of the primary care workforce themselves or those with a research interest in it. From such discussions, ideas for refining my project, study design, further literature to review, and key people to connect with surfaced. Indeed, through presentations of my project plan at departmental meetings, I gained interest from GP partners with possible sites for inclusion. One of these became one of my in-depth ethnographic case study sites.

At Easton, the most powerful validation for me and my project came from the primary gatekeeper, who is a partner at the practice and an academic GP in my department. The association, buy-in, and backing of this individual is the key that opened the door to the practice. The development of this association was a result of mutual social and academic contexts, which placed me in a privileged position to talk about my project at a meeting on 09-02-2022. The project resonated with this GP's experiences, and the experiences of their practice's staff. Over a series of interactions, their support grew and they offered to participate as a site. They advocated for my study with their fellow partners and staff, such that the practice's involvement was confirmed in March of 2022.

When in the field, the identity of 'student' was also useful. Healthcare organisations are used to having placement medical students, and both of my in-depth longitudinal sites were training practices. This meant that, particularly during clinical observations or meetings, there was a defined process and identity into which I fit. In support settings (administration and reception), there was no clear pre-existing form to link to, but through informal discussions and occurrences in the field, I learned that I was viewed as a 'trainee' or 'work experience student'. The assumed naivety of the 'student' identity is particularly helpful in this kind of observational research. As I have no history of working clinically or researching primary care, it was useful for me to be treated as a

learner – with processes and technologies being explained to me in the moment rather than having that knowledge assumed.

3.6.5 Oxford University

It is worth acknowledging the symbolic power of Oxford University, which I am afforded affiliation with by my position within the Nuffield Department of Primary Care Health Sciences at the university. The historically constituted and socially reinforced prestige of that symbol improved my odds of recruiting sites and likely individual participants. In Westerly, the RBD2 research project and Oxford University symbols were undoubtedly the most powerful access tools and have been key enablers at critical moments in getting into the site. The initial agreement for my study's affiliation with the practice was on 15-11-2021, following discussions between myself, RBD2 researchers, and practice personnel to determine the relevance of my topic to the practice. This practice is the specialist site for the workforce workstream in RBD2, so there was strong interest from the then-site lead and a project-affiliated GP partner. There were subsequent negotiations around workload support for the RBD2 data collection (conducting interviews and sharing observations), providing non-clinical work support when doing ethnography, and payment for interviews. Financial negotiations with this site were much more central and explicit, beginning in February 2022.

3.6.6 The process of accessing specific sites

Access to qualitative field sites, particularly those engaging with ethnographic observations, requires careful negotiations which are intersected by political, cultural, and economic values. [134] As Duke noted, 'access' is not a single moment or permission, it is a process which is ongoing throughout fieldwork; [135] this was particularly true in my study, where formal access had several distinct phases, and ongoing approval was continuously sought throughout both formal and informal gatekeepers, by me and my clinical advocates. I reflect here on the process by which I gained formalised research access for this study.

Initially, access was bureaucratic, involving processes of legitimising my study as well as my own student and staff identities, involving forms, ethics applications, document-

writing, employee checks, and the pulling together of the 'researcher identity'. This required the support of my supervisors, my sponsor, gatekeepers at my sites, etc. This bureaucratic identity formation also had to be ratified socially and relationally, most importantly by the gatekeepers to my in-depth ethnographic case study sites and by the RBD2 researchers-in-residence who were participant-gatekeepers for my eight comparative sites. This process involved taking on the identity of an "insider" through the presentation of my research identity and the details of my project, and negotiations around research methods, payment, site pressures, contribution to the RBD2 workload, and discussions of where different themes for the study and the project overlapped.

Gaining the acceptance and trust of gatekeepers within my primary sites was critical as they would negotiate with other practice decision-makers (such as GP partners) on my behalf. The degree of advocacy that these gatekeepers demonstrate to decision-makers rested on: the site's enthusiasm for the project, its relevance to their own experiences and priorities, and remuneration for the practice. These negotiations, at times, affected the study's design, for example, the request for my provision of administrative support in one site allowed me to engage in *participant* observation in certain spaces (e.g. administration and reception).

Beyond this formal access approval, these were also informal gatekeepers within the practices with whom access had to be continually allowed. To a degree, this included all staff working in my primary sites, who allowed me into their working spaces and consented to my observations and interviews. There were also gatekeepers who stood out among the workforces. Those with formal organisational power (e.g. practice managers) or with informal social power, such as individuals who had been in post for an extended time, were popular or respected and understood the social fabric of the organisation. I reflect on the process, control, and power relations that surfaced through my access negotiations with various formal and informal gatekeepers in Chapter 4, and discuss the impacts it had on my perspective, data, and analysis. Much like Reeves in her ethnographic study of offenders in Probation Approved Premises, I found certain gatekeepers to exercise much more control than others, which could challenge my study design and my ethical position. [136] One such example was a practice manager who was asked by someone more senior to approve reception staff's

participation in one of my focus groups, but on the day prevented them from attending, risking under-representing those groups' views and experiences. I overcame this in the field by engaging in 'covert' rapid interviews during their lunch breaks.

3.7 Ethics and governance

3.7.1 **Seeking and gaining ethical approval**

As outlined previously, my study's design was significantly informed by scoping work with system stakeholders and my PPIE panel of staff and a patient. I recognised the potential sensitivity for some participants in talking about personal experiences of working during the COVID-19 pandemic and ongoing workforce crisis and reflecting on the effects on their wellbeing. There is potential for this topic to cause distress or upset. This potential risk was outlined in the information provided to participants. All participants were informed that they could withdraw from the study at any point and without having to give any explanation should they become uncomfortable. During research I would draw on my training and experience, watching for signs of distress and supporting this appropriately and sensitively, including pausing or stopping the interview and facilitating appropriate support and follow-up when necessary.

My ethics application made to the Research Ethics Committee (REC) reflected that involvement. I applied to the REC through an amendment to the RBD2 study, within which my project sat. Some minor changes and further justifications were requested, and the entire process took around six months, from application writing and the production of study materials to final approval. I submitted the amendment on the 24th of May 2022 and obtained ethical approval on the 9th of June 2022 from East Midlands — Leicester South Research Ethics Committee and UK Health Research Authority, reference number 21/EM/0170. Whilst obtaining formal ethical approval can be a hard road, particularly in qualitative research, I am aware that my experience was significantly eased by my affiliation to RBD2 and my experiences in previous roles of writing and amending ethics applications to various regional RECs, the Health Research Authority (HRA), Health Care Research Wales (HCRW), and the Confidentiality Advisory Group (CAG).

3.7.2 Ethical considerations and ethical moments

As in all research, reflexivity reveals a slew of ethical considerations, during what Simpson called 'ethical moments' in the study, which include 1) passing through ethical review, 2) engaging in ethnographic observation, and 3) writing ethnographically. [137] There are governing ethical principles which are applied when conducting healthcare research: the prioritisation of participant autonomy, to do good (not harm), and to strive for fairness and equity. [138] These are encoded into our research regulations through practice guidelines and the requirements for informed consent, confidentiality, and anonymity of participants. However, doing qualitative research ethically is not always a clear path; it requires ongoing reflections on one's positionality, power, and assumptions. These reflections are inevitably coloured by what Stones would call our 'internal structures'; our embodied knowledge or habitus – which may be our values, beliefs, morals – and our conjuncturally-specific knowledge; what we know about that specific situation. [139]

Sometimes, our guiding principles may come into conflict with one another or, indeed, may conflict with the chosen research method, during Simpson's 'second ethical moment' (time in the field). [137] Ethnography is intentionally immersive and extended in time. Thus, participants become used to the ethnographer's presence and – particularly during participant observations – may forget that they are present in a research capacity, or that they are being observed. [92] This produces an ethical paradox; the researcher simultaneously wishes to observe their participants under as close to 'normal' conditions as possible – and the invisibility of the ethnographer is helpful in this – *and* they want the participants to remain aware and consenting of the ongoing observations. This problem was helped in my context by my rotation between discrete working teams and shadowing specific people, meaning that I was 're-appearing' as a new feature of the working environment semi-regularly. I also sought to flag my research identity in the field by wearing my university lanyard and badge every day and continuously writing fieldnotes as visual reminders of my research presence. However certain aspects of my study design were inevitably flawed in this regard. For example, whilst I made every effort to inform patients of my presence as an ethnographer conducting observations in my site's waiting rooms, a GP practice waiting area is

transient by its very nature. Thus, it is unlikely that everyone will have read my posters and PIS. Another example of this would be the risk of patients feeling pressured to agree to give verbal consent during clinical consultation observations. When I suspected this, I would excuse myself, though there may have been occasions where I missed indicative cues of discomfort. Another risk was that patients could be misled about my role in the situation; being referred to as a 'student' could imply, for example, that I was a medical student in training.

The field also presents ethical considerations for the safety, autonomy, and comfort of the researcher. The lone researcher's power resides only in the imagined authority of their affiliation institutional signs and recognised social connections; in my case, Oxford University, the names of my supervisors, and my local clinical contacts (GP partners). However, once 'in the field', the researcher is alone, often in contexts that don't particularly value the institutional symbols that facilitated initial access. The difficult emotions elicited by such solitary fieldwork have been reflected upon by Pollard in her interview study of anthropology PhD students conducting ethnography. She identified 24 feelings shared by these researchers in the field: 'alone, ashamed, bereaved, betrayed, depressed, desperate, disappointed, disturbed, embarrassed, fearful, frustrated, guilty, harassed, homeless, paranoid, regretful, silenced, stressed, trapped, uncomfortable, unprepared, unsupported, and unwell'. [140] Whilst I did not feel all of these emotions, I certainly experienced many of them throughout different points of my data collection experience. For example, whilst observing a clinician during a consultation during data collection, I was requested to be a 'chaperone' for a patient's examination (usually a role taken up by a clinical member of staff), creating an ethical dilemma around the appropriateness of the request, my (dis)comfort with it, the unknown of the patient's level of comfort, and the workload-support promises made during access negotiations.

I have also encountered quandaries during Simpson's third 'ethical moment': writing. [137] Centrally, my concerns have been around ensuring I was addressing the issues my participants had told me were most important to them, and my responsibility to translate my data on those issues into the 'evidence base' to drive change. I maintained relationships with certain participants after fieldwork ended through project and

organisational affiliations and would check my direction with them on occasion. I also engaged in two dedicated focus groups – one at each longitudinal site – to present my findings and gain participants' feedback. When writing about specific moments and drawing out quotations, I also faced dilemmas around describing the situations as I saw them and disrupting the trusting relationship between participant and researcher. This could be through observing moments where failures occurred that *could have* (but did not) cause harm, as in one instance of a critically high number of patients being allocated to one duty doctor, causing significant moral distress to the clinician and fears around unsafe practice. They could also arise during interviews, where participants could use language that I found to be prejudiced or others who shared very personal stories which they may not want to be reproduced publicly despite anonymity. To overcome this, where I thought interviewees were unsure about sharing experiences, I would reassure them that they did not have to tell me anything they did not want to, that everything would be anonymised, and that if they wished I would make a note to contact them to check any quotations from their transcripts/observations. One participant took me up on this and has had the opportunity to clarify the context and redact elements of the data to assure their comfort in its use.

3.7.3 Data protection and participant confidentiality

Access to Data: Direct access was granted to authorised Sponsor (Oxford University) representatives to monitor and audit the study to ensure compliance with regulations.

Data Recording and Record-Keeping: The anonymised data are stored at the Nuffield Department of Primary Care Health Sciences, University of Oxford, and on password-protected storage on university computers/MSDIT servers. Personal details are stored securely, separately from the research data. Anonymised ID numbers and site pseudonyms are stored in a separate password-protected digital folder (not linked to the study data files). Personal data such as contact details that could identify a participant will be destroyed no later than 12 months after the end of the study.

Anonymised transcripts of interviews and fieldnotes may be kept for 15 years, if participants provided informed consent for their data to be used for re-analysis,

teaching, or to write additional papers and reports. Once these are completed, the data will be destroyed.

Participants could stop being a part of the study at any time without giving a reason. However, data already collected would be retained. Information on the use and retention of data and withdrawal from the study were included in the PIS, though thus far, nobody has withdrawn.

Participant Confidentiality: I will safeguard the privacy of participants' personal data. This dataset, especially the audio files, raises confidentiality issues. The processing of participants' personal data was minimised by using a unique participant ID number on all study documents and any electronic database, except for the consent form where participant initials were added. All documents and electronic files are stored securely and only accessible by authorised personnel. The study has complied with the UK General Data Protection Regulations (UK GDPR) and Data Protection Act 2018, which require data to be anonymised as soon as it is practical to do so.

3.8 Patient and Participant Involvement and Engagement

There are many frameworks for, and examples of, PPIE in various healthcare/medical research projects. No one size fits all, and the appropriateness of different methods or structures is highly context-specific. [141] The framework for the style of PPIE involved in my study was not selected a priori. Instead, I reviewed many possible options in the lead-up to establish the study's PPIE plan. The expected shape of panellist involvement (and other PPIE activities) was determined in conversations with panel members through one-on-one online meetings, whilst I also drew on study-focused frameworks. [142-145] This structure builds PPIE into the study design from the beginning to enable feedback and (re)direction across the entire research cycle. I also borrowed lenses from other frameworks that focus on priority-setting and power dynamics due to the often-hierarchical nature of healthcare organisations and the prolonged crisis context. [146, 147]

It was of central importance to me that the people who were living with the effects of digitalisation and the pandemic could influence the priorities of my research and its methods, to ensure I was seeking answers that mattered to them.

Three dedicated arms of PPIE were built into my study design to ensure this, and to provide opportunities to pivot the research if required, as illustrated by Figure 4. [148] The arms included:

- Scoping discussions with 15 practice staff to ensure the relevance and appropriateness of the study's aim and objectives, and to recruit for the panel.
- A study-wide panel of 5 experts-by-experience, meeting several times across the project to provide continual oversight. The panellists are described in Table 1.
- Local PPIE focus groups held at each ethnographic site to ensure the appropriateness of methods and to understand local priorities.

To recruit for the study-wide panel, I advertised via various formal, informal, personal and professional networks. These included social media platforms like Twitter, Facebook community groups, WhatsApp groups, a specialist interest mailing list, the People in Research website, and two Q Community specialist interest groups. I received 29 expressions of interest from clinical, administrative, managerial and assistive staff, a selection of patients, clinical-turned-research professionals, and NHS Health and Wellbeing officers. Of these 29 applicants, scoping chats were conducted with 15 people over the telephone to determine who would be the best fit for the final panel. The final 5 panellists have all had one-on-one PPIE meetings with me to determine the acceptability of the study and its chosen methods. These took place between February and April of 2022. Table 1 anonymously outlines the positionality of each member.

Role*	Region*	Ethnicity*	Other info*[1]
GP Partner	SW London	White British	Their practice covers a highly diverse area regarding deprivation and ethnicities/nationalities. Particularly interested in the professional and personal challenges staff have faced during the pandemic.
Practice Manager	Essex	Bangladeshi	Has worked in primary care management for over 16 years, was forced to leave his job due to shielding during the pandemic and removal of his remote working equipment and will leave his current position due to ongoing Long Covid. Particularly interested in ethnic minority patient access, patient-staff interaction, and inequity in new ways of working.
Patient	Oxfordshire	African	Provides a patient perspective and has a particular interest in systemic racism, access issues, and staff-patient interaction.
Practice Nurse / Infection Prevention Control Lead	North London	South American	Works for a GP super-practice that covers all areas of Enfield, London. Particularly interested in inter-role power dynamics, task shifting, workload and moral injury.
Administrator	Greater London	Indian	Experienced administrator in London, sits on several PPI panels as an advisor and advocate for Black, Asian and Minority Ethnic patients. Particularly interested in staff relationships and new working conditions.

Table 1: Characteristics of the Experts-by-Experience PPIE panel

Panellists also fed back on their preferences for the shape of their engagement as panel members. Most accepted the planned structure; however, some raised concerns about the eclipsing of some voices by louder members or those in a "higher up" position than them in their respective practices. Panellists agreed that the meeting chair would be attentive to the balance of voices. This learning was also applied to the local groups.

Two subsequent meetings were held with the panel to review the findings of workstreams 2 and 3 in November 2023 and September 2024. Retention of participants was difficult, and in both subsequent meetings, at least one member was missing (though their feedback was still captured via one-on-one meetings, and their time was fully compensated). This panel had significant value in the early stages of the project in ensuring the study's topic, aims, and objectives were timely, and methods were appropriate. Given my research experience had, up to that point, been in secondary care, building and engaging with this group of professionals also enabled me to learn the language of primary care and understand where general practice sat within the

[*] As defined or described by the panel member during first online contact and first meeting.

wider healthcare system and what system-level bodies would be relevant to my project. On reflection, the group lost momentum in the project's latter phase. The most valuable insights were gained in the one-on-one meetings at the beginning and with individuals who missed the larger group meetings. In those larger-group meetings, I found that panellists' engagement with the content I was presenting (summaries of workstreams, plans for further work, or results) tended to drop to general agreement. This may have been due to the online format, which I had chosen in conversation with the panellists for ease of participation amidst busy schedules. In future studies, my learning from this will be to hold group meetings in person where possible. However, one-on-ones worked well remotely.

Following an initial attempt at formal recruitment at Westerly, which was logistically challenging and inflammatory of previously discussed power dynamics within the practice, I determined that it was better to take a more informal approach to recruitment for the local PPIE group. For all four meetings, the approach was to advertise the time and location, which was usually during mid-morning coffee break times, in the shared break room or meeting room, and take be open-forum. This allowed anyone to walk in and out of the meeting, which followed a loose agenda that I had devised ahead of time but otherwise afforded all attendees the opportunity to speak, ask questions, or suggest alterations to the study/findings. These meetings bookended the data collection portion of the study, with each in-depth ethnographic case study site having an initial meeting before data collection started and another after it was finished where early findings could be presented.

To enable this additional element of PPIE, I applied for additional PPIE-ringfenced SPCR funding through my department. This was an open competition to which any researcher in the department could apply, and therefore, my application was judged alongside much more established researchers. Through this, I won an additional £270 to enable payment of participants at these groups, and to provide refreshments to attendees. This ambitious approach to PPIE was recognised at the departmental level through inclusion as a case study for good practice, which I presented at a departmental meeting. As part of the agreed feedback process for this aspect of my PPIE plan, and to encourage deeper engagement with the study, I developed two study bulletins and shared them

with the study-wide panel and the local practice-based groups to highlight what changes their views had made to the study. These are attached in Appendix 4.

Using local PPIE groups within case study sites was an approach that I had not seen applied in other studies, and I would strongly advocate for its use. The open-forum style of the focus groups allowed practice staff to directly shape the study's aims, objectives, and methods based on their own priorities, experiences, and preferences at the outset. This helped me understand the local priorities for this research and what limits I needed to put on my approach to respect each participant's personal boundaries. For example, some staff were happy for me to shadow them for hours directly (e.g. in their consulting room), while others preferred to only be observed in group settings (e.g. in shared offices or group meetings). Some did not want to be directly asked to be observed or interviewed due to feelings of obligation to agree, which was important to know before data collection began to ensure all staff members felt at ease in my presence. The open-forum style of these meetings helped to reduce administrative barriers to organising, as no prior commitment was required of any participants – rather, the meetings were advertised internally and took place in the shared break rooms of the two sites. This allowed people to come in and out of the meetings as their schedules allowed. This more informal discursive approach also helped to encourage participation from a wide range of staff groups despite being in a setting which had a risk of deferring to perceived hierarchy. Indeed, in the first PPIE meeting at Easton, the topic of staff experiences working through the pandemic elicited a strong emotional response from all present (including receptionists, nursing staff, salaried GPs and GP partners). That first meeting was referred to by participants as 'therapeutic' and provided a strong foundation for the data collection which was to follow.

Building in a final feedback meeting for each local PPIE group also afforded them the opportunity to 'correct the record' (or disagree with the record) at the end of the study, though there were no significant alterations suggested. It also afforded me a chance to suggest my ideas for further research and gauge their appropriateness and relevance to the workforce. Additionally, participants could see the sum and significance of the time and access they had given me to conduct this research. All participants were compensated for their time in the form of shopping vouchers.

The feedback I received on the meetings themselves was that practice staff were grateful to have their *experiences* of working through this period of acute crisis and change, and the *effects* thereof on their mental, emotional, and physical wellbeing, documented in the hope that it would drive change. When asked what further action they would like me to take with those findings specifically, they stated that they wanted patients, the media, and politicians to see the reality of working in primary care, and to understand the pressure they are under. In respect of this sentiment, I presented this stream of findings, among others, at several dissemination events that were aimed at the public and policymakers. This is expanded upon in Chapter 9, under the dissemination and impact sections.

3.9 Analytical approach

There were multiple levels to my analysis, sometimes referred to as an embedded design. [149] I present these sequentially, though there was often overlap between each level as I developed a deeper understanding of the data, and the direction of my analysis and research question(s) solidified. For the first level, which ran alongside my period of data collection with my two ethnographic case study sites, I took an inductive approach focusing on my research question rather than a guiding theory or framework, [104, 106] This meant focusing on the data to create first-order and second-order codes, as expanded on in 3.9.1. [27] My approach was also informed by Braun and Clarke's interpretive thematic analysis: paying attention to issues that were being spoken about or enacted repeatedly and making notes on ideas for possible codes in the field. [150, 151] These first- and second-order codes formed the bedrock of my approach to the second period of data collection, where I was building my comparative case study sites through both primary data collection and the reanalysis of previously collected data. These codes also directed my second level of analysis, thematic analysis of the secondary interview data from my comparative case study sites, using the second-order codes as a codebook. [150, 151] Overlapping with and following this phase was my third level of analysis, which consisted of four separate (but linked) abductive analyses which developed through my being in a protracted dialogue with my data and theories from

multiple disciplines. I expand on each of these levels of analysis below, supported by my data collection and analysis process map.

3.9.1 Inductive analysis: determining first-order and second-order codes

As mentioned, my first level of analysis was framed by my initial research question, outlined in section 1.2. Inductive coding began when I entered the field in mid-2022 and continued up until early 2024 as I continually returned to my data. This section is supported by Figure 6, wherein I have expanded my study process map to focus on the in-depth longitudinal ethnographic case studies and the inductive analysis.

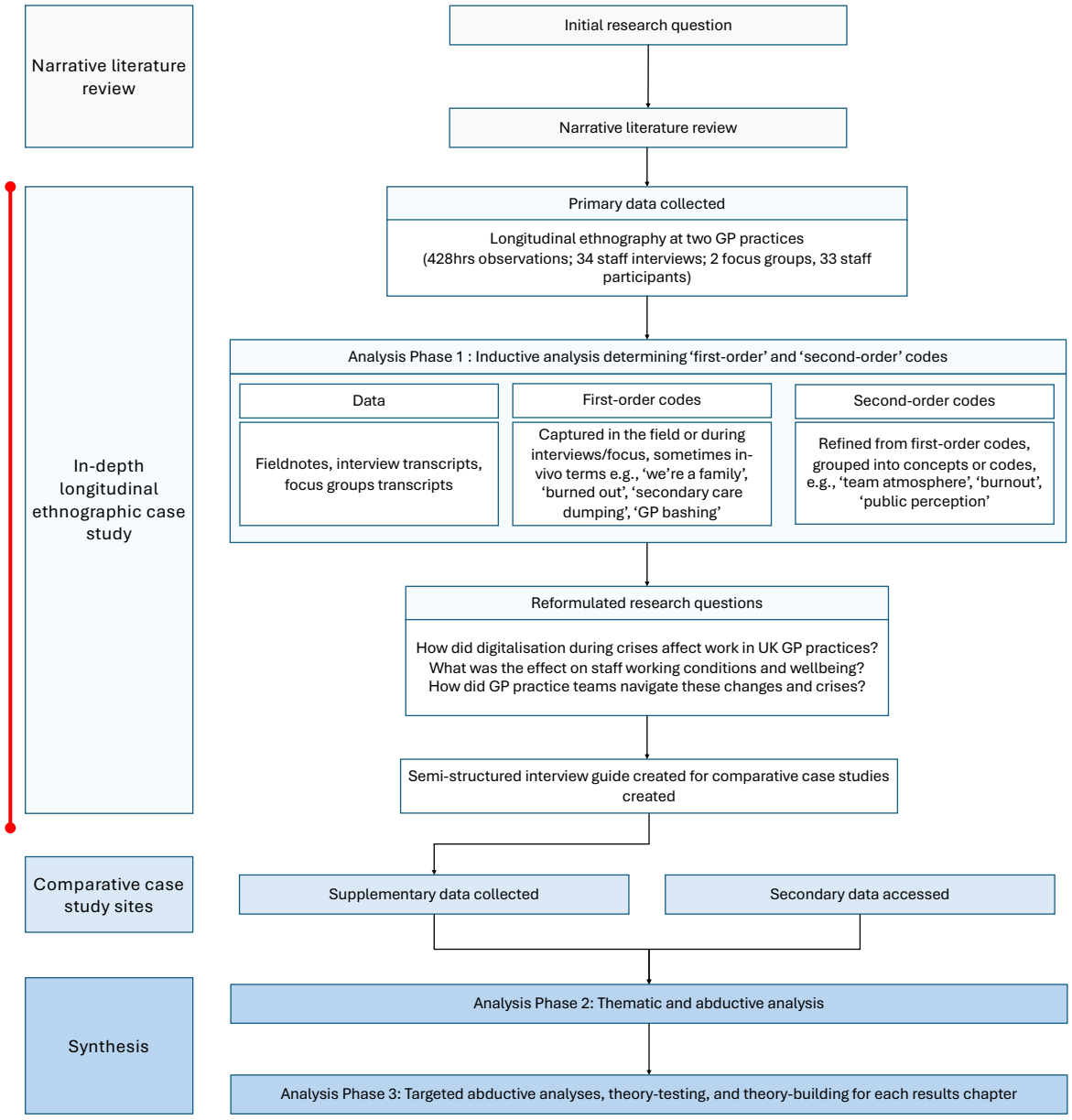


Figure 6: Data collection and analytical process map: inductive analysis

During fieldwork in my two in-depth ethnographic sites, I would write a potential second-order code next to a section of field notes, underlining what could be its linked first-order code. This was where my within-case analysis began, following Eisenhardt's approach as outlined in Figure 5. [105] This initially focused on what was relevant to the crisis of the pandemic and the shift to digitalised care and care processes, but as fieldwork developed, this expanded to include other crises and changes that were occurring during my time in the field, as previously outlined. The first-order codes were descriptors of behaviour as I observed it, or in-vivo terms; words or phrases used by participants themselves in interviews, focus groups, or during observations. [152] These are used to attempt to reflect the 'informant's first-order conceptions of what is going on [versus] the researcher's second-order conception of what is going on', a key distinction for the organisational ethnographer. [153] I discuss a few examples of linking first- and second-order codes and linking these to theoretical concepts later, supported by Table 2. First, I will show a worked example of how I identified first- and second-order codes in my data.

Figure 7 below is an excerpt from my field notes where I described an interaction between two staff members. When re-reading the notes at the end of the day, I identified and underlined the first-order codes 'looked annoyed', 'wringing hands' and 'sighed', and linked these codes in-text to the second-order code of 'team division'. This would later come under the second-order code of 'team atmosphere'. I made this link due to prior knowledge about the team members' working styles and interactional dynamics from previous observations and interviews. I also wrote potential second-order codes of 'communication breakdown' and 'preferences assumed'; the former was retained as I continued to find it relevant to staff interactions, but the latter became less useful as it was unique to this instance. These first- and second-order codes were designed to be 'close' to the ethnographic reality of my in-depth sites, representing how I observed it or how my participants described it to be. These were originally written in my physical field diary, which later shifted to digital notes as previously described. Alongside the in-text notes, I consistently added to and edited a long-list of second-order codes as they came up in the field.

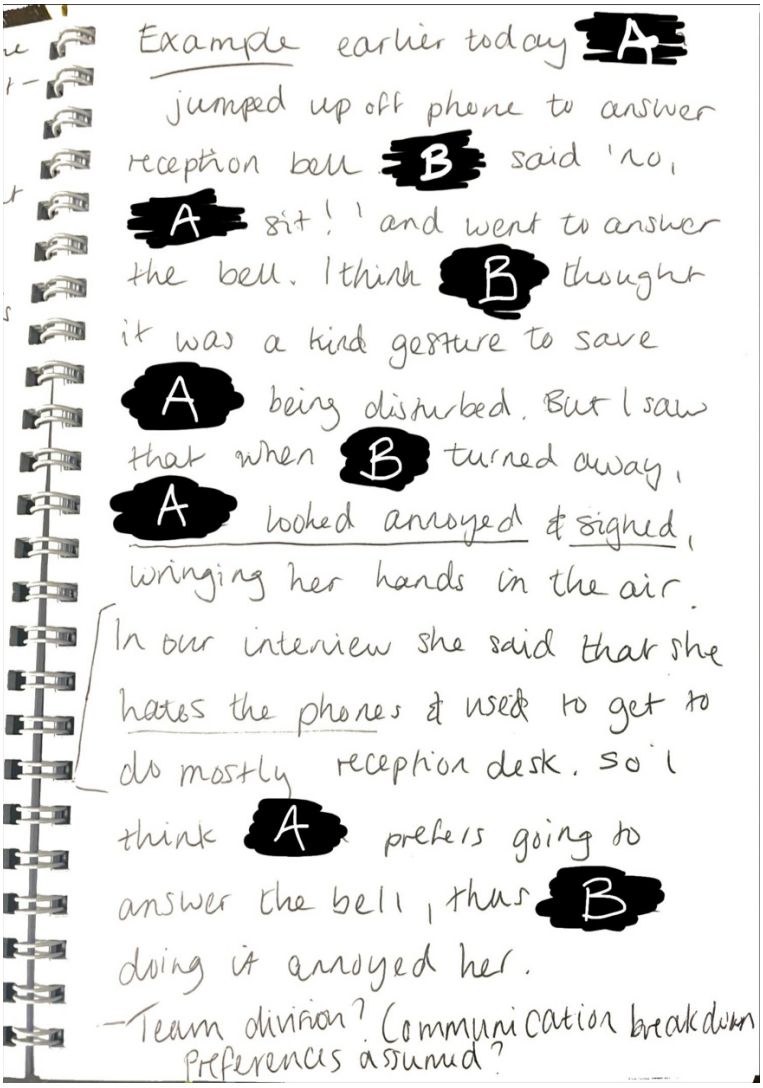


Figure 7: Excerpt from physical field notes (names redacted), showing how I linked first-order to second-order codes

Determining second-order codes generally (though not exclusively) took place outside of the physical field, or after an interview or focus group had taken place. Usually when reviewing field notes, during transcription or refamiliarisation (reading and re-reading transcripts), and whilst coding in NVivo. I developed these terms as explanatory devices for the first-level codes – sometimes using similar phrasing but pointing towards a more generalised phenomenon. [153] In Table 2, I provide worked examples of how my first- and second-order codes were developed and refined into interview prompts for my researcher-in-residence interviews (and latterly linked theories and concepts through abductive analysis, as described in 3.9.3.) For example, I determined that the first-order codes of 'off sick with stress', 'oh now you have anxiety', 'gives me pure anxiety',

'accessing mental health support therapy', and 'burned out' could all fall under a second-order code of 'burnout'. Some second-order codes overlapped with each other, such as 'burnout' and 'mental wellbeing'. These two levels of coding in my data helped me to maintain a distinction between what I had observed or been told about my case study sites and what I was beginning to interpret or theorise about them.

First-order codes (grounded in data)	Second-order codes	Researcher-in-residence interview prompt	Linked theoretical concepts
Off sick with stress Oh *now* you have anxiety Gives me pure anxiety Accessing mental health support therapy Felt so burned out It's the volume, there's too many things	Burnout Technology-driven stress	How would you describe the working conditions? How do these working conditions affect staff wellbeing	Technostress [154] Workplace suffering [155]
We all did it, we each do part of it People help Commitment to each other A strong team The same boat A family vibe A close-knit team We're holding strong	Team atmosphere Relational support	How do staff manage these workloads? What helps them? What hinders? Do staff support one another?	Relational coordination [156] Attentional infrastructures [157]
Open policy to suggest changes Culture of asking questions Open culture Open environment No blame Learning from failure	Speaking up Open, learning environment Suggest changes	Do staff speak up? In what manner do staff speak to one another?	Psychological safety [158]

Table 2: Examples of grouping first-order codes into second-order codes, developing semi-structured interview prompts, and linking theories and concepts

This approach to coding also provided a structure with which I could continue to navigate my dataset. This informed the ongoing development of my study as I expanded to build my eight comparative case study sites by informing the development of my semi-structured interview guide, and by guiding my choices of framing theoretical concepts for the subsequent chapter-specific abductive analyses. I used the guide in interviews with RBD2 researchers-in-residence to familiarise myself with the sites and dive deeply into the empirical and theoretical areas of interest highlighted through my ethnographic study. This guide is provided in full in Appendix 2 – note that the questions are only prompts, the exact question depended on context, but followed the topic of the prompt. I briefly describe the abductive analyses in this chapter, section 3.9.3, but more expansively in each results chapters' analysis section.

Through this inductive analysis of my ethnographic sites' data, I developed codes relevant to how digitalisation and the pandemic had changed the normal work of all kinds of practice staff and patients, and the effect on staff wellbeing (I provide examples of these in each relevant chapter). However, I also came to see a thread running through the whole dataset of the role of relationships in helping staff navigate the ill effects of these (and other) change and crisis events. This pushed me to reformulate my research question into three targeted questions, as described in section 1.2, covering how digitalisation during the pandemic had changed GP practice work, the effect of staff working conditions and wellbeing, and how practice teams navigated those changes.

Documenting my deepening inductive analysis in this way helped me to build a 'data structure', which Gioia outlines as critical in ensuring conclusions from inductive analysis are evidenced and that the process of that analysis can be articulated. [27] Over time, as my second-order codes solidified, I decided to focus on four key overarching issues relevant to my reformulated research questions. These included: 1) patient work and the impact of digitalisation during the pandemic, 2) support staff work and the impact of digitalisation during the pandemic, 3) whole-practice work and the impact of digitalisation during the pandemic, and 4) the role of relationships in navigating change and crisis. In Figure 8, I outline the second-order codes that I linked to each research question/key issue, which are explored in the four main results chapters. For each of

these issues, I determined to undertake abductive analysis to better understand and theorise my data.

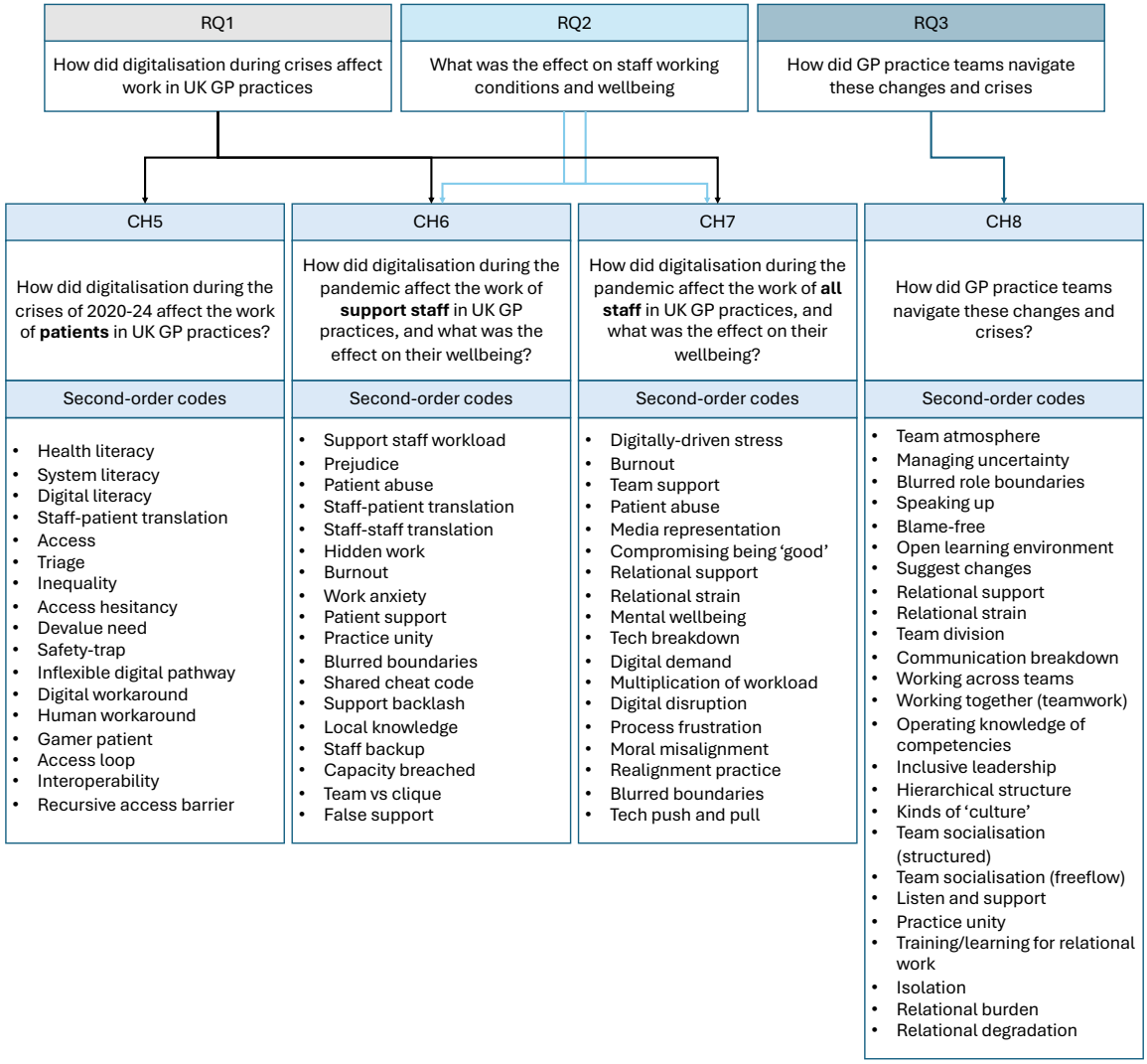


Figure 8: Research questions (RQ) linked to chapters (CH) and second-order codes

3.9.2 Thematic analysis with a codebook: synthesising in-depth ethnographic case data with comparative case data

My second level of analysis involved thematic analysis in NVivo using a codebook of second-order codes, as determined during the inductive analysis phase, illustrated by Figure 9. [151] I only partly applied the formal steps of this approach, which, in its entirety, covers the whole analytical journey from familiarisation, initial code generation, theme identification, review, and final definition. [151]

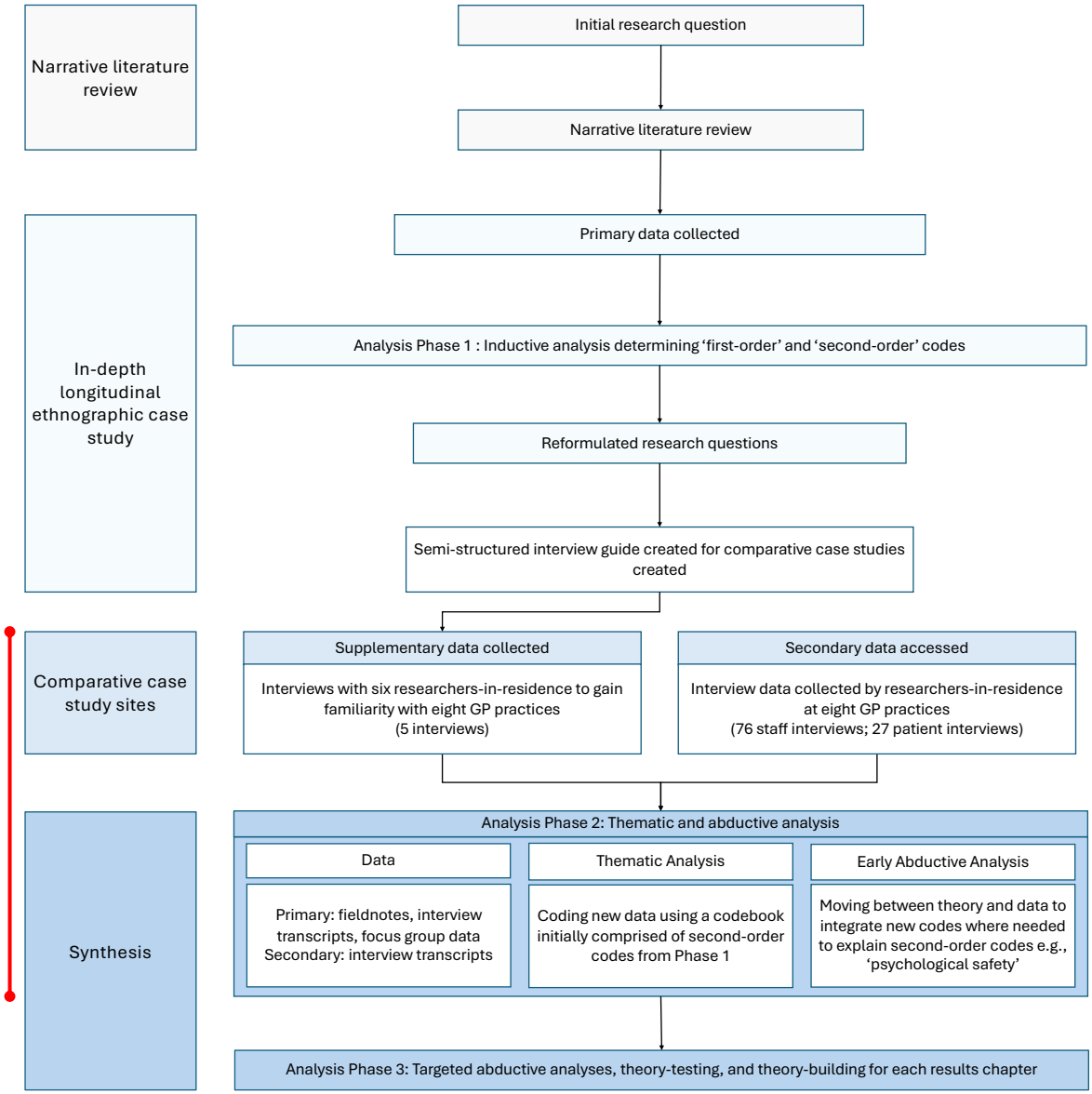


Figure 9: Data collection and analytical process map: thematic and early abductive analysis

Given I had already determined my codes (as previously described), I used this phase to determine, out of the many codes created, *what* exactly should be retained for the thematic analysis, and which were most relevant to my research questions. To do this, I reviewed my long-list of second-order codes, compared them to my research questions, and grouped them under each of the four key issues previously outlined, as illustrated in Figure 8. Any that did not fall into these categories were left out of the thematic analysis. Where there were second-order codes that overlapped significantly, I would choose to retain only one (for example, in Table 2, I felt that 'speaking up' and 'suggest changes' covered the same topic, so I only retained 'speaking up'. I used this

list as a codebook to ensure I was coding the comparative data efficiently, given its volume and the time constraints of the DPhil.

This was where I began my cross-case analysis, as outlined in Eisenhardt's approach to case study research (Figure 5). [105] I included interview data that I had collected by interviewing six researchers-in-residence, as well as secondary interview data from staff and patients that these researchers had collected as part of the RBD2 study (as described and illustrated in Chapter 4 and Tables 3 and 4). The initial interviews with researchers helped me to understand the comparative case studies in more depth, get a feel for the local context, and to understand how each researcher's own interviewing style and interests could have shaped the interviews themselves (in terms of depth and topics discussed). For example, the two researchers linked to the Welsh sites were only able to visit in person during one period of observation, with follow-up interviews and check-ins being conducted remotely. This means that insights from these sites are more grounded in the interview data than observations.

Using the codebook helped me to chart my developing analysis, as advised by Braun and Clarke, [159] and to determine which second-order codes were most relevant to each of my research questions. I did not code these data line-by-line to generate new codes, as I was already clear on my direction and wanted to maintain that focus. However, I did read and re-read all the transcripts, coding only what was relevant to the codebook. This phase of analysis overlapped with the following abductive analysis, due simply to the iterative and recursive nature of engaging with (and theorising about) qualitative data. During this phase, I added notes to some second-order codes to include references to theory; for example, I added a note to 'speaking up' to link to Edmondson's psychological safety, [158] and to 'hidden work', I noted that Allen had applied the same phrase in her 2014 work on hospital nursing staff. [160] This abduction was somewhat unintentional and was the result of my linking to theories I had previously encountered that seemed a good fit, or by coming across theory through conversations with colleagues, being part of a theory-focused reading group, and attending presentations given by others working with theory and empirical data.

3.9.3 Abductive analysis: moving between data and theories from across disciplines to test and build theory

The third phase of my analysis was a four-part abductive analysis, focused on each of my reformulated research questions. This section is illustrated by Figure 10, though I will expand on the chapter-specific analyses in their respective chapters. This was where I began actively enfolding literature into my analysis. [105] Abductive analysis, in Eisenhardt's application, involves engaging with a variety of theories in conversation with one's data. [103] This facilitates the interpretive and iterative work that qualitative researchers do to produce insights; this 'second-order meaning-making' whereby we interpret meaning from the actions or words of our participants, who themselves imbued their own meaning to those actions and words. [91 , 161]

I was searching particularly for theories that would help me to explain the second-order codes that I had grouped under each research question (see Figure 8), which I could use as part of the theoretical framework for each linked results chapter. Each time I found a theory or concept that I felt helped me in this task, I would take note of it and begin looking back over my second-order codes to think through the extent to which it offered potential explanatory power. This was a non-linear process; some theories that I picked up and tested were (whilst interesting or potentially applicable) either not sufficiently useful for the direction my analysis had taken or were addressing the same issue as another. Indeed, some made it as far as draft manuscripts before realising they were surplus; for example, the concepts of 'relational identities' [162] and 'dynamic culture' [163 , 164] had great potential for application with my dataset but were outside of the scope of the research questions.

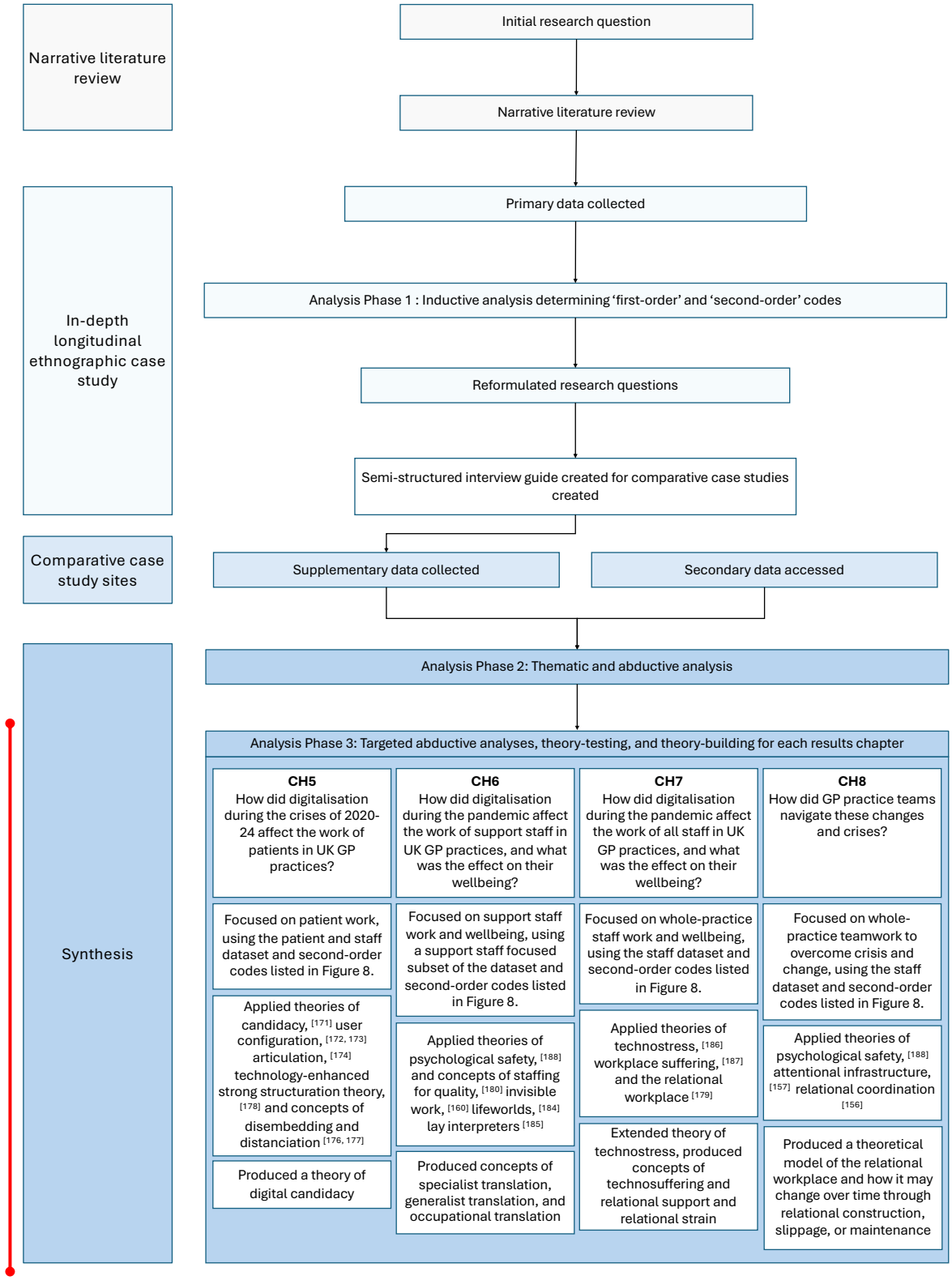


Figure 10: Data collection and analytical process map: chapter-specific abductive analyses

As I found relevant theories for the second-order codes, I would link them using notes to help me document the developing theoretical frameworks and, later, to help structure

the results section of each paper/chapter. Over time, I was able to find theories from across disciplines to help me explain each of my second-order codes in a way that sufficiently addressed their relevant research question. I included some worked examples of this in Table 2. As outlined in Figure 10, for each chapter this involved using multiple theories or concepts. These are described in full in each chapter's theoretical framework.

4 Introduction to the case study sites

In this chapter, I introduce the upcoming results chapters by outlining the characteristics of my pseudonymised case study sites (Table 2) and describing my overall dataset from the ethnographic case study (Table 3). I reflect on my histories of access at each site, my positionality, what these experiences revealed about my sites, and what they may have obscured. I end the chapter by introducing the focus and theoretical framings of my four results chapters.

4.1 Dataset summaries

In the two primary in-depth ethnographic sites, longitudinal data were collected from between June 2022 to March 2024. This includes field notes from 42 days (around 428hrs) of observations during the main ethnographic periods (total of eight weeks), plus several additional half-day visits for 1) familiarisation at the beginning of the study and 2) check-ins later in the study (around 12hrs). In Easton, my main period of rapid ethnography was continuous over 4.5 weeks from September to October 2022, during which time I would be in the practice generally between 8:00 to 19:30 Monday to Friday (and some Saturdays when additional clinics ran). I aimed to arrive at the usual employee arrival time and leave as late as possible when the practice was being closed (though I almost always left before the last clinician). In Westerly, the four weeks were staggered across November 2022 to January 2023, and I would observe between 8:00 and 17:30 Monday to Friday. Due to the limits on where I could be on the practice estate, I had to leave when reception closed.

Across my two primary sites, I conducted 34 interviews (32 in-person, one via video call and one over the telephone) with 32 staff (two were duplicates), with a similar spread across the two sites (16 interviews at Westerly and 18 at Easton) and interviews ranging from 30 to 75+ minutes. The sample included seven salaried GPs, seven receptionists (three leads), five administrators (two supervisors/leads), four GP partners, three nurses (one lead), two GP trainees, two practice managers, one receptionist/phlebotomist, and one drug and alcohol recovery worker. Actual job titles of the reception and administrative staff varied, including roles like ‘GP Support Administrator’, ‘Patient

Liaison Officer', 'Patient Services Co-ordinator', 'Clinical Assistant', etc, however all either referred to themselves colloquially as 'receptionist' or 'administrator' and performed tasks associated with those umbrella terms. I also held numerous informal conversations during observations, which are represented in my fieldnotes. I held four focus groups with 33 total participants working in clinical and support roles, ranging from 50 to 90+ minutes. All practice staff were invited to participate in interviews, and particular care was taken to ensure equality in sampling from clinical and support roles.

As previously described, I conducted semi-structured interviews with six researchers-in-residence to gain insight into their eight case study sites. Following these interviews, I was granted access to staff and patient interview data they had collected from the eight sites. I reviewed interviews with 72 members of staff (across 76 interviews, including follow-ups), and 27 patients from these additional sites. These were collected between 2021-2023. In most interviews, the researchers-in-residence had asked questions directly relevant to my research questions and topics, as they all used the same study interview guide which contained prompts relevant to the impact of digitalisation on the work performed in GP practices by staff and patients, included in Appendix 5. In many of these conversations, the topics covered by each of my results chapter came up following questions in this category. The presence of my topic in their data is likely a central driver for these six researchers-in-residence coming forward to take part.

Tables 3 provides information about the relevant characteristics of each site, including location, size, IMD decile, their 'digital maturity' (a 1-5 scale developed for the RBD2 project with 1 being less mature and 5 being most mature) [94], a description of the technologies being used, and a description of the local working conditions and 'culture' (a term drawn from the data, which I approach as a series of practices in Chapter 8)). Table 4 outlines the total data collected from each of them, across observations, interviews, and focus groups.

Site Number/ Pseudonym	Site Location	Practice list size	IMD Decile	Digital maturity scale point	Description of technologies used	Description of 'practice culture' and working conditions
In-depth ethnographic case study sites						
1: Easton	Semi-urban, England	13,500	7th	••••	Many patients use remote access routes. GPs often used telephone consultations, occasionally used photo-sharing software, and none made use of video consulting.	The workforce had strong retention, with practice staff being very familiar with one another and referring to the organisation as 'a family'. Staff were embedded in the local community with a strong awareness of individual patient circumstances and needs.
2: Westerly	Southeast London	27,000	2nd	•••	Offers access via telephone, website, and NHS App, but had mixed uptake and is re-introducing a walk-in-and-wait service. Very frequent user of the digital interpretation service Language Line. Telephone contact is very high, placing a significant burden on reception staff and driving high turnover rates.	Clear divide between support and clinical staff teams, and a hierarchical staffing structure that favours the practice manager and partners' voices. Relationships within the practice have suffered since 2020, with more clinical and senior staff able to work remotely, and support staff having little control over how, when, and where they work due to infection control measures and new ways of working. High turnover rates, particularly in reception roles. Clinical staff have better retention, but often discuss moving on. Low value placed on staff health and wellbeing.
Comparative case study sites						
3: Towerhill	Greater London	15,800	8th	•••••	Access is officially digital-only, with a high proportion of consultations occurring remotely. Clinical staff support the digitalised service, but support staff identify the risk of digital exclusion and manually add telephone or walk-in patients to the	Clear divide between the clinical and support staff, whereby clinicians were viewed as the 'centre' of the practice, and support staff as peripheral and transient. Clinicians have a supportive environment with good communication, though less social cohesion and increased isolation since going fully digital. Suggestions that this is leading to increasing clinical turnover. Support staff viewed as external, not central to the

					digital queue to avoid them being pushed back.	practice. Reception and admin teams have low support, lack a team dynamic, and have high turnover rates.
4: Ogden East	South West England	8,300	1st	•	Some online consultations offered, but aware of the risk of digital exclusion. Remote consulting generates a higher workload than in-person options, and remote triage is not used.	Focused on maintaining "traditional" general practice embedded in their population's needs: continuity, support, familiar faces. Staff take a team approach to problem-solving. Strong retention of all staff, GP trainees tend to stay on after training.
5: Queens Rd	South West England	13,000	7th	•••	Offers online, telephone, and walk-in access, and the practice has a very high uptake of Language Line. Staff experienced some patient abuse in response to digitalising access services.	Decisions were partner-led, with less focus given to the views of salaried staff (clinical and support). Siloed and isolated working. Staff get frustrated by technology not functioning, reflected in their interactions with one another. Little capacity to feed back to leadership, and no value placed on staff wellbeing. Higher turnover.
6: Carleon	North Wales	7,500	2nd	•	Offers only phone or walk-in contact, largely due to staff and patient preferences.	Staff are loyal to the practice, a 'family' who all know each other. Culture of speaking up, with value placed on all staff.
7: Rhian	South Wales	11,500	3rd	••	Telephone triage and some telephone appointments are available, but no online access or consultations yet.	Staff rarely change and have worked together for a long time, meaning strong teamworking culture. Retains GP trainees. Collaborative and communicative across the whole practice. Relational hierarchy: decisions made collaboratively by practice manager and partners, in open consultation with other staff.
8: Range Park	West Central Scotland	2,300	1st	•	Mostly traditional, in-person care. Some consultations are done over the phone, with practice interest lying more in community-driven development than technological.	The practice has a 'family' ethos; the workforce is very small and embedded in the community, with strong familiarity and trust between staff members (e.g. receptionist trusted to make triaging decisions), and between staff and patients. Relational hierarchy: clear distinctions between partners and other employees, but clear communication routes and strong focus on respect across these power divisions.

9: River Rd	West Central Scotland	5,500	1st	•••	Online triage recently introduced. Staff responses mixed, with a higher burden on GPs to triage e-consults to reduce strain on reception.	Close-knit team with strong camaraderie. Team works collectively to meet the demands of the practice daily, with a clear culture of trust in one another to perform their share of workload. Open communication between individuals and teams.
10: Fernleigh	South East England	15,000	9th	••••	Embraces digitalisation where possible, and actively adapts work processes, though many patients are elderly and do not engage with online access routes.	Culture of psychological safety and speaking up, approaching mistakes as an opportunity for learning. Value different kinds of knowledge from all staff groups. However, leaders struggle to make space for building relational links between staff (e.g. through breaks) due to supply and demand gap.

Table 3: Site characteristics

Site Number/ Pseudonym	*n* Focus Group Participants	*n* Observation Days	*n* Staff Interviews (*n* participants)	*n* RIR Interviews (*n* participants)	*n* Patient Interviews
In-depth ethnographic case study sites					
1: Easton	17	22	18 (18)		0
2: Westerly	16	20	16 (14)		3
Total	33	42	34 (32)		3
Comparative case study sites					
3: Towerhill			11 (11)	1 (1)	0
4: Ogden East			8 (8)		5
5: Queens Rd			9 (7)	1 (1)	1
6: Carleon			21 (15)		2
7: Rhian			27 (15)	1 (2)	0
8: Range Park			5 (4)		4
9: River Rd			12 (10)	1 (1)	0
10: Fernleigh			6 (6)	1 (1)	12
Total			72 (76)	5 (6)	24
Sum total	33	42	106 (108)	5 (6)	27

Table 4: Total dataset

4.2 Ethnographic framing: reflections on access and the context of data collection

Here, I provide descriptive timelines of my interactions with the longitudinal sites. I compare the varying success of my negotiations, depending upon the perceived value of my offerings (payments, workload support, project relevance), balanced against each practice's capacity and gatekeepers' judgements. I also include comparative autoethnographic reflections about what the process of negotiating access revealed about power relations within the practices and the perceived value of institutional symbols, and the ways in which those negotiations and resistances shaped data collection.

4.2.1 **Easton**

My first in-person interaction with the site was a brief visit on 19-05-2022 to be introduced to all staff members by the gatekeeper. This involved physically visiting every working space – reception area, administrative rooms, consultation rooms, and the

practice manager's office – and explaining my project and plan. In these introductions, my offer of exchange work was centred as a selling point and was very well received – as were the food gifts I had brought. Following this visit, the practice agreed to host a focus group with a selection of staff members, which took place on 29-07-2022. It was attended by six female staff: two advanced nurse practitioners, one receptionist, one reception/administrator, one salaried GP, and one GP partner. The focus group validated the focus of the project, provided useful direction for the study, and built trust between me and my participants. The focus group was a critical moment, demonstrating the value my study might offer to the practice in terms of the individual opportunities for therapeutic story-sharing, as well as the impact those stories could have when shared with public and policy audiences. The experience also assured me that their involvement (and my access) was acceptable, and not the sole result of the power my gatekeeper held.

Fieldwork began on 05-09-2022. I rotated between teams weekly to spend time with reception, administration, and clinical workers. In each rotation of observations, there was initial internal awkwardness for me around my finding the best place to observe from and how much to interact with the participants. Over the course of each section of observations, this became easier as I became more social with each team and got to know the wider practice. The practice manager was particularly supportive, regularly checking in on my progress and needs. With each team, I would bring snacks or group lunches in reflection of the unspoken reciprocal exchange that was constantly re-occurring whereby I was receiving participants' lived experiences and time. [165]

My final day of ethnography was on 07-10-2022, my final interview from this site was on 17-10-2022, and the final focus group (which began with a feedback presentation), was on 27-02-2024. After my five-week engagement, I returned to gift the practice a hamper and card. Staff reflected on how strange it would be not to have me around anymore, and indeed a couple of weeks after my exit, I heard that people had reflected on there being a feeling of 'something missing' from the practice following my departure. This may mean I failed to develop the 'vanishing power' that some affiliate with anthropologists, [166] but I found significant added value in becoming embedded as a whole person rather than a detached researcher. Arguably, my ethnographic work in

Westerly did afford me that vanishing power, as I will discuss below, though often with a distinct awareness of my un-welcomeness.

4.2.2 **Westerly**

The start of fieldwork was more fragmented at Westerly, following the established frictions discussed in Chapter 3, where I reflected on the process of accessing each longitudinal site. The RBD2 named researcher and site lead (GP partner) were replaced at around the same time, which disrupted my communication with the site's key gatekeeper (the practice manager) from late April 2022. Through a series of fractured interactions, I was able to set a date for observations and a focus group (28-06-2022). The activity was planned to include a salaried GP, a lead nurse, two reception staff, and an administrator.

On the scheduled visit day, power dynamics in the practice necessitated some creative adaptations to my planned methods. Undercurrent tensions pervaded the observations, with unplanned limits placed on where I was allowed to observe by the practice manager, despite the full approval of practice partners. I was initially only permitted by the practice manager to observe the waiting room or the break area in the reception, which was partly obscured from the reception desks. Whilst I could see and hear interesting interactions, these early limitations reflected a stark difference from Easton's approach to my presence, which was collaborative and open.

The practice manager also revoked their permission for reception and administrative staff to attend the focus group. This activity was only able to proceed as planned due to the intervention of three GPs who happened to enter the room as we were agreeing to cancel it. The GPs (two partners and the RBD2 site lead, a salaried GP) circumvented the practice manager's directions by relocating the activity to a clinical space over which she did not have purview. I adapted the focus group to fit into a slot reserved for clinical meetings and had seven clinical participants. To retain the inclusion of reception and administration staff, I undertook ad hoc rapid interviews with the three intended focus group participants individually (two in-person during lunch breaks, and one remotely after work).

Whilst the practice manager had agreed to my return for the planned 20 days of ethnographic observations, difficulties in gaining full access continued. Repeated contact attempts between 29-06-2022 and 06-09-2022 yielded no response. This is likely due to the extremely high workloads faced across general practice, combined with the practice manager's reported concern that my research would detract from reception's productivity.

A critical turning point came when the institutional and financial power of the wider project was flagged by the project lead on 18-10-2022, due to similar involvement problems faced by the RBD2 study. Within two hours access was granted – though still without direct contact with the practice manager. This enabled field observations to take place from November 2022 to January 2023. During these observations, I noted that I was generally ignored and not acknowledged – this could be due to the business of the practice, the high turnover rates, or general disinterest. My observations generally remained within the agreed areas: reception, break room, and waiting room. I was also occasionally invited to join clinical meetings by my clinical contact and conducted cross-role observations in the break room, which helped to build more representation of the clinical staff's daily working conditions. My final day of observations was on 20-01-2023, the last interview took place on 23-01-2023, and the final focus group (which began with a feedback presentation) was on 10-10-2023.

4.2.3 **Comparative sites**

As previously discussed in 3.3.3, my other sites were collected through cascading a recruitment email through a professional network of researchers-in-residence on the project that this DPhil sits within (RBD2), whom I also work alongside as a researcher on the project. My recruitment call included information about the topic of the study. Therefore, respondents self-selected due to their data's relevance to my research questions. By virtue of being in the project team, I was able to regularly check my interpretations and findings with these researchers-in-residence during team meetings or paper development meetings. This privileged me with multiple informal conversations with my site gatekeepers not included in the formal dataset.

The total dataset for these case study sites is provided in Table 4 above. This was a maximum variety sample of eight practices across England, Wales, and Scotland. Each of the sites has been given a pseudonym, and key details changed to protect the identities of staff and patients. They include Towerhill, Ogden East, Queens Rd, Carleon, Rhian, Range Park, River Rd, and Fernleigh. Practice characteristics are also provided in Table 3.

4.2.4 Reflections on selecting and accessing the in-depth ethnographic case study sites

My experiences of accessing and roaming within the two in-depth ethnographic sites were quite different in ways which are productive in understanding the internal socio-politics of each practice and what is valued in those networks. As outlined, one practice manager was obstructive, whereas the other was supportive. Agents afforded the same position-practice (by their position within the organisation and the authority thereof) exerted that power very differently due to their individual identities and intra-organisational social bonds. [167 , 168]

Comparing the two experiences is also productive when thinking about the dialogue between methods and data collection when the 'data' are elusive. In Westerly, the field *resisted* my data collection and in doing so reshaped the research project, demanding a more 'patchwork' approach to ethnography, which is 'designed around short-term field visits, using fragmentary yet rigorous data… [which] maintains the long-term commitments, contextual knowledge, and slow thinking that characterizes so-called traditional fieldwork'. [169] Whereas in Easton my study design was unchanged, and data were abundant.

It is worth reflecting on the influence of the field and research participants on the study. When conducting empirical research, particularly ethnographic work, the field and our participants have a powerful agency. They can enable, disable, disrupt and redirect empirical work. As outlined by my experiences accessing Westerly, 'gatekeepers' can hold significant power over the researchers. The established norms and physical space of the site itself have a kind of agentic power over the researcher; the GP practice is a place where I ordinarily follow the social script and physical route of a patient. As a

researcher I was observing and taking part in routines I did not recognise, in spaces normally beyond my remit as a patient. Research participants, too, have significant influence; in qualitative research, they are the source of data, either through their actions, interactions, or speech. They determine what they do in front of me as an ethnographer, and what they tell me in informal discussions or interviews. Qualitative research does not deal in stability or predictability. Relinquishing the blinders of what one hopes to find, at least in part, and instead looking at what is there helps to unravel the complexities of the phenomena we observe. Identifying this power helps to afford research participants the recognition they earn as producers of research. It is also instructive when planning studies: recognising the power of the field and participants to *change* the study after it has begun should, for example, the methods be unsuitable demands proper involvement of the population under study at early planning phases to assure the correct approach is devised at the outset, and adaptive strategies are in place if required. Importantly, when a site seems to resist study, this doesn't mean it's a 'bad' site; that resistance reveals things about the structures and social forms of the place.

4.3 Guide to the following results chapters

Here I will briefly outline the structure of the following results chapters, their topics, and how they came to develop through the process of data collection, recursive analysis, engagement with theory, and writing.

As I discussed in Chapter 3, my research question expanded over time as I came to learn more about my topic and my participant's experiences in the field through deeper engagement over time, and through broader engagement with interdisciplinary theory. My question expanded from a focus on the impact of the pandemic and digitalisation of general practice work on workforce wellbeing and working conditions to include learnings about navigating change and crises in GP practices more broadly and the role of relationships therein.

My results (and publication history during the DPhil) reflect this broadening view of the field and my subject. I structure my results beginning at the level of the patient, and how the work they must do to appear at and access their GP practice has changed with

digitalisation through my development of a new theory of 'digital candidacy'. I then move on to the work of reception staff, who are the primary contacts for patients, and who are required to perform unique translational work between the lifeworlds of patients and practices, as well as between teams within practices, reflecting on its effect on their wellbeing and the relational strategies used to overcome it. I then expand this perspective to assess the impact of digitalisation during the pandemic on the whole practice team, attending to technologically-driven forms of stress and suffering and developing my attention to relationships further. I then focus on how teams in my ethnographic study overcame the challenges associated with digitalisation, attending particularly to relational workplace conditions, and how they may be built, maintained, or eroded over time.

Each results chapter presents the findings of analyses of the same overall dataset (or a subset thereof). Each discrete interrogation sought to answer slightly different questions, which arose in response to what I was seeing in the field, in my empirical data, and issues that were emerging in real-time within the wider sociopolitical climate of primary care and the NHS. As previously discussed, my overall analytical approach became much more abductive over the course of the study; as my understanding of the complexity of my case study expanded and my familiarity with other disciplinary frameworks broadened, each of these results chapters took a different theoretical framing (or theoretical lenses) to explicate the specific phenomena I was observing. I expand on this analytical journey in each chapter. To serve as a guide for the following chapters, I briefly introduce each and their theoretical frames below.

4.3.1 Chapter 5: Patient work, digital candidacy, and the digital facsimile

These findings are published in Social Science and Medicine, from which Chapter 5 is adapted. [170] This chapter/paper seeks to understand how the changes and crises experienced in UK general practice came to impact the work patients perform to access GP practices, and what action was required to circumvent or navigate these impacts. To explore this issue, I extend an established theoretical model of candidacy, developed by Dixon-Woods et al., [171] with concepts and theories from socio-technical research. These included Woolgar [172] and Oudshoorn's [173] concepts of user configuration and

articulation (and technologies' restriction of this). [174] I also draw on selected concepts from Gidden's structuration theory [175] and Stones' extension of this into Strong Structuration Theory (SST), [139] and the concepts of disembedding [176] and distanciation.[177] I make brief reference to Greenhalgh & Stones' particular extension of SST into technological structuration – Technology-Enhanced Strong Structuration Theory (TESST). [178] In applying these theories to my data on digitalised GP practice work, I posit a new theory of digital candidacy and specifically highlight the role of relational articulation work in supporting patients to meet the requirements of the digital technologies assumed user.

4.3.2 Chapter 6: The hidden work of support staff and the importance of a relational workplace

These findings are published in BMJ Leader, from which Chapter 6 is adapted. [179] This chapter seeks to outline the hidden and unique translational work support staff do to smoothen day-to-day practice function, the additional burden it places on them, and how the symphony of crises in 2020–2023 compounded those burdens and changed their working conditions. I discuss how, during crises, the volume of this work grows, complexifies, and becomes more fragmented, and that relational and supportive teams were more able to adapt to these challenges, concluding that the 'relational workplace' provided the best conditions to enable staff to perform this work. [179]

This analysis is guided by an interdisciplinary theoretical framework discussed in detail in the chapter. Briefly, this included staffing for quality (developed in the healthcare improvement tradition),[180] psychological safety, teamwork and speaking up (from the organisation and management tradition),[181] and health and wellbeing at work (from the occupational health tradition), [182 , 183] the feminist sociological concept of invisible work,[160] and that of 'lay interpreters' who translate between 'lifeworlds' and 'systems'. [184 , 185]

4.3.3 Chapter 7: Technostress, technosuffering, and relational strain following the digitalisation of general practice work

These findings are published in the British Journal of General Practice (BJGP), [21] from which Chapter 7 is adapted. With this paper/chapter, I aim to build a more nuanced understanding of the impact of digitalisation on the work of all practice staff, and how it affected their wellbeing. In doing so, I produce a theoretical framework to better understand *why* many staff are currently so troubled and unfulfilled, and how this can impact the resilience and effectiveness of the team and the organisation. I combine Ragu-Nathan et al's concept of technostress[186] with Gill's concept of workplace suffering to theorise how technostress leads to suffering at work.[187] I also employ (and develop) my previous interpretation of the 'relational workplace'[179] to explore the strain that this suffering places on team relations, with adverse effects on mutual accountability and support.

4.3.4 Chapter 8: Relational practices: structures, dynamics, and environments that improve navigation of change and crisis

This chapter presents findings that have, at the time of writing, not been published in a peer-reviewed journal. In it, I explore the role and significance of different kinds of relational practices in helping staff overcome the challenges of integrating significant work process change during crisis events. I draw on theories of psychological safety, [188, 189] attentional infrastructure, [157] and relational coordination [156] from organisation studies for my analysis, to examine relational practices that I consider to be structural, dynamic, and environmental. In doing so, I produce a model of the relational workplace and a hypothesis for how these kinds of organisations can be constructed, maintained, or eroded over time. The content of this chapter is currently being adapted for submission to two peer-reviewed journals.

5 Results 1: Patient work, digital candidacy, and the digital facsimile

The following chapter describes findings that have been previously published in Social Science & Medicine. [170] As noted in that paper, on which I was the lead and corresponding author, three other authors contributed. My contribution was conceptualising this sub-study, collecting the data, conducting the analysis, and writing the manuscript. Dr Sara Rybczynska-Bunt collected some of the comparative case study data and was involved in meetings about drafting the manuscript. Dr Rebecca Rosen supported the development of policy implications as reported in that manuscript. Professor Trisha Greenhalgh supported the editing of the manuscript.

5.1 Introduction

In this chapter, I ask how digitalisation during the crises of 2020-24 affected the work of required of patients to access GP practices in the UK and explore the equity risks of this. Digital pathways and technologies, introduced or expanded as an emergency response to the early COVID-19 pandemic, have become routinised in UK general practice. Heterogeneous technological configurations support patient access and triage (via online forms, apps and telephone calls) and remote consulting (via telephone, video or text messaging). [190] Some authors have raised concerns that these changes may widen inequities (e.g. through digital exclusion or safeguarding issues), reduce efficiency (e.g. from double-handling, new burdens on staff or missed opportunities for early detection) or pose other threats to quality (e.g. loss of relational continuity, erosion of patients' trust in the system). [23 , 24 , 191]

Whilst it is well-established that digitalised routes for access and triage disproportionately exclude disadvantaged patients, [192] the mechanisms by which such exclusion occurs are not fully known. Important questions include: what assumptions about patients are built into remote and digital modalities and the wider socio-technical network for accessing care?; how do particular modalities and linked processes represent patients to practice staff, potentially influencing judgements about who is offered—or denied—care?; what are the consequences of this for patients' perception

of their right to access care and their willingness to do so?; and what happens to those patients who are unable to respond as expected to how the socio-technical system has 'configured' them?

In this chapter, I seek to address these questions by extending an established theoretical model of candidacy with concepts and theories from socio-technical research. I introduce the former below and the latter in section 5.2.

The concept of candidacy was developed by Dixon-Woods et al. [171] in a critical interpretive synthesis on access to healthcare by vulnerable groups:

> "Candidacy describes the ways in which people's eligibility for medical attention and intervention is jointly negotiated between individuals and health services. Our synthesising argument runs as follows: candidacy is a dynamic and contingent process, constantly being defined and redefined through interactions between individuals and professionals, including how "cases" are constructed. Accomplishing access to healthcare requires considerable work on the part of users, and the amount, difficulty, and complexity of that work may operate as barriers to receipt of care. The social patterning of perceptions of health and health services, and a lack of alignment between the priorities and competencies of disadvantaged people and the organisation of health services, conspire to create vulnerabilities." [171]

The original theory of candidacy depicts seven elements: identification (of oneself as sick), navigation (finding the front door to the service), permeability of services, appearance at services, adjudications, offers and resistance, and operating conditions and the local production of candidacy. Most empirical studies drawing on candidacy have addressed in-person attempts to seek care. [193 , 194] Three recent studies considered candidacy in remote secondary healthcare access. [195-197] To my knowledge, candidacy theory has not previously been operationalised in remote primary care services, nor formally integrated with sociotechnical theories.

Below, I describe how I developed a novel theoretical synthesis and applied it to my empirical dataset to reveal how digital technologies, processes and pathways in access and triage to primary care can create multiple and unique disruptions to patient candidacy work.

5.2 Data analysis and theoretical framework

I combined Dixon-Woods et al's original theory of candidacy (see Introduction) with several related streams of work from socio-technical studies. I began with theories of how technologies *configure the user*, as introduced by Woolgar [172] and refined by Oudshoorn. [173] All technologies, to a greater or lesser extent, contain inscribed assumptions about the people who will use them (or the people for whom they will be used) and how. I sought to surface what assumptions had been built into digital access and triage systems about patients' capabilities and the decisions and actions they would take at each step in the pathway.

I also incorporated theories of *articulation*—that is, the steps people take to overcome the limitations of technologies as these become apparent in the here-and-now [174]. Because technologies are pre-configured (and generally reflect the prevailing social structures of their developers' contexts), they are necessarily *in*flexible to the specificities of the immediate situation.

I drew on two concepts from Giddens' structuration theory, [175] developed further by Stones: *disembedding,* [176] in which social activities are increasingly "removed from the immediacies of context" [175] on the basis of technologically-mediated and abstracted forms of information; and *distanciation,* [177] defined as "[t]he stretching of social systems across time-space" [175] and meaning that social interactions are increasingly asynchronous in time and distant in space.

Finally, I embraced theories of technology structuration, which (broadly speaking) seek to surface and explore the recursive relationship between technologies and society. [198] Technology-Enhanced Strong Structuration Theory (TESST) [178] was developed specifically to study the introduction of digital technologies in healthcare settings. TESST develops Stones' [199] earlier adaptation of structuration theory using selected concepts from actor-network theory (such as the notion that it is helpful to consider humans and technologies as connected in relational networks). Unlike actor-network theory, however, TESST assumes a layered ontology, conceptualising external social structures (at both macro—broad societal—and meso—organisational—level) which are produced, reproduced and shaped as both humans and technologies 'act' in

particular social situations or *conjunctures*. Each human actor has a *position-practice* which can be thought of as a combination of social role and position in the socio-technical network; [199] technological actors have something akin to this. Both human and technological actors also have *internal* social structures. In the case of the human actor, internal structures roughly correspond to habitus (e.g. general dispositions, embodied knowledge, training). [200] The human actor's wider understandings and dispositions, and their conjuncturally-specific knowledge (including their assessment of what Stones calls the 'strategic terrain'), [199] which may be flawed or incomplete, are brought to bear on the actor's here-and-now assessment of the unfolding social situation.

Technological actors, in turn, can be thought of as having internal structures—that is, particular material properties and inscribed sociocultural assumptions and biases; again, these are brought into play when the technology 'acts' or when it fails to 'act' in a particular social situation. [178] These structures are, to a greater or lesser extent, encoded into technologies as forms, pull-down menus, digital body maps or assumed user journeys, thereby enabling work practices but also constraining them. [178] As technologies are used (or, indeed, as people make the decision *not* to use them, or use them in ways other than intended by their designers), over time those actions or inactions either reinforce social structures or shape and change them.

My overall analytical approach is described in section 3.9. This is the only analysis in which I included patient interview data, as the rest of the results chapters are focused on staff topics. Here, I provide additional detail for the specific analysis presented in this chapter. To obtain a focused dataset on issues related to how patient work to access GP practices had changed because of digitalisation during the pandemic, I searched through my second-order codes for related topics, such as. 'access', 'triage', and 'inequality'. As I built my theoretical framework by abductively engaging with theory and data, I began to link these second-order codes to my chosen theories and concepts (outlined above), such as 'navigation (candidacy)', 'articulation', 'user-configuration', and 'distanciation'. In doing so, I began to build a novel theory of digital candidacy, outlined in 5.4. Table 5 below provides worked examples of how I linked first- and second-order codes to theory.

First-order codes	Second-order codes	Linked theory or concept
I don't want to hassle They're busy Don't want to bother	Access hesitancy	Identification (candidacy) [171]
A spiral (online access form) Round in a circle (online access form) Online system doesn't allow	Inflexible digital pathway	Adjudication (candidacy) [171]
Get around it with an email 5:15 calls get in quicker I time when I'm calling False urgency Say it's mental health High-powered, digitally enabled, and high access	System literacy Digital literacy Cheat-codes Gaming the system	Articulation [174]

Table 5: Examples of grouping first-order codes into second-order codes, and linking theories and concepts

When applying the candidacy framework to my data, I first considered how the patient self-assessed their candidacy for healthcare and decided to seek care (or not). Then, I considered how the patient had been configured by the technologies that were in play in the access and triage process, and the misalignments between this configuration and the patient's actual condition and needs. Thereafter, I examined the extent to which the patient, or someone acting on their behalf, was capable of articulation to overcome these misalignments (for example, when none of the options offered in a digital menu exactly fit the patient's symptoms, could they or their advocate use judgement to pick the most appropriate match?).

When analysing asynchronous and physically distanced interactions, I also explored the distorting influence of distanciation and disembedding (as defined in 5.2) on the social interaction between patient and practice staff (an interaction which, at times, was hard to recognise as a conjuncture at all). This included how separation in space and time required the patient to create a *digital facsimile*—that is, a digital version of themselves which could convey the nature, seriousness or trajectory of the problem. Triage staff then had to assess and adjudicate based on this facsimile. I also used longitudinal data to follow the *structuration* of digital inequities as actions taken by

patients or staff at one moment in time went on to further develop (and perhaps distort) the patient's digital facsimile and shape or constrain future attempts at access.

Data included in this analysis (observational and interview) were collected at times when patients had successfully navigated primary care access and triage pathways to some extent. This leaves an important potential gap in my dataset around those patients who had been unsuccessful in their efforts to access care (and those who did not recognise that they needed care). To address this, I presented an earlier form of this chapter to my PPIE group, the RBD2 study's PPIE group, and attendees at an access-focused workshop to test the theorisation and seek comments. Participants were able to comment not just on the findings from the patients who had been interviewed but also on hypothetical patients who would not have made it into my sample, based on their own life experiences, which informed the development of the chapter.

5.3 Results

5.3.1 **Overview and context**

Before outlining the full results, it's relevant to provide some chapter-specific context. Contemporary UK general practice involves a complex network of interrelated and interdependent people, technologies, processes and multi-modal pathways. This network reflects what candidacy theory calls the 'local operating conditions' [171] and structuration theory calls the 'meso-level structures', [199] i.e. the organisational-level context of a particular general practice site. It also reflects a set of 'wider operating conditions' [171] or 'macro-level external structures', [199] including the prevailing political, economic and demographic context (e.g. a 12-year history of austerity and chronic underfunding in the UK public sector, an ageing population and a worsening healthcare workforce shortage).

In all 10 sites from my ethnographic study, access and triage were technology-mediated in some way, but the specifics varied widely across sites. In most sites, the process involved multiple technologies—hardware (computers, telephones, smartphones, headsets, check-in screens) and software (NHS app, electronic consultation systems for appointment requests and booking; electronic patient records; management systems for workflow, and information sharing; local or cloud-based telephony

systems; electronic document management and sharing platforms) from a variety of suppliers.

The triage process used a range of modalities (in-person, by telephone using calls, SMS, photo-sharing, and online using email, forms, and messaging). Some of these innovations, such as online consultation request forms (e-requests) and more sophisticated telephony systems, had been introduced or scaled up in response to the COVID-19 pandemic. [201] In each site, particular processes and technologies were, in general, closely associated with particular human agents (clinical and clinically related staff, support staff, and patients), each of whom had a recognisable position-practice linked to it (e.g. some but not all support staff processed e-request forms).

I identified three main digital access routes into general practice across the 10 practices: 1) telephoning the practice, listening to a pre-recorded message, responding to its prompts, and waiting in an automated queue; 2) using the NHS app on a smartphone, if the practice had opted into this function; or 3) completing an e-request form with biographical and clinical information, which was then assessed asynchronously by support and clinical staff. All routes were characterised by a high degree of complexity and distanciation.

"We deal with the phones, the online requests, and after the requests are triaged by the doctors, we book the appointments. We deal with e-mails, any queries from patients really. [...] We used to talk to patients on the phone and in-person to make appointments. Now they're discouraged from coming in, and we use online request forms. At the beginning of using them, reception triaged [requests], but now doctors do it so that's less stressful. Even if the patient complains, you can say this has been triaged by a doctor. We've learned the new system now. The patients are learning too. The young people prefer it, but there's quite a lot of older people who are not very happy. When people can't use it, we try to help them; we do the forms for them and make it easier." WM11, Patient Liaison Officer, Towerhill

As the quote above illustrates, support staff managed the various digital access routes, screened requests, allocated requests to various multidisciplinary team members, and supported patients who needed help navigating the digital pathways. Three practices in my sample retained a traditional walk-in-and-wait service, and a small minority of patients were directed to general practice via NHS 111 referral, either online or by telephone. Notably, one practice had implemented a 'total digital triage' approach but retained a human interface; patients could physically walk in and wait, but they would

be entered into the digital system at the front desk via a receptionist completing an online request form, placing all patients in a single digital queue. This service was used, for example, by older or visually impaired patients, those with limited English and those who had no internet connection or digital device.

"Around ten a day are like that [requiring human support to complete e-requests]. We push patients to do it themselves or sometimes I even come out to show them on the phone. If they can't do it, we don't put up an argument we're like, we'll do it for you.'" – Notes from discussion during fieldwork with QT, Patient Liaison Officer, Towerhill

Following the initial screening of requests by a non-clinician, the duty clinician considered appointment requests and checked incoming test results before recommending a telephone, video, or in-person consultation or an investigation or referral. Once a consultation modality had been decided upon, this was arranged through the patchwork of human and technological agents within the practice, using technologies that had not always been designed for the volume of work or level of interoperability needed. Missing, inaccurate or uncertain information supplied by patients could result in a rebuttal (e.g. advising the patient to self-manage) or inappropriate modality offer (e.g. a telephone call-back when an in-person assessment was needed). When these measures led to double-handling, they were resource-intensive for practices and reduced the number of appointments available to other patients.

The many different software products used across the practices did not always work smoothly together, especially when loaded onto low-capacity or ageing hardware. Staff made various articulations and passed requests through the digital network, supported by digital or verbal explanations. The patient was then contacted by telephone or SMS with requests for more information or an allocated appointment time and modality. However, this system relied on technologies working as intended, which was not always the case. In one example, when I was shadowing a duty doctor, they tried networked computer terminals in four different rooms but were met with black screens or rejected passwords. Support staff explained that this was a "network issue" with the local system provider.

In the sections below, I draw on my empirical data to consider how the traditional theory of candidacy is further compounded by remote and digital modalities and

pathways. I consider in particular how self-assessment of candidacy (the patient becoming aware that they need healthcare) may be distorted in the digital world (section 5.3.2), how digital systems can create and perpetuate a flawed digital facsimile of the patient, resulting in access being denied or obstructed for those most in need of it (section 5.3.3), how navigating the pathway into care now requires the additional skill of articulation to overcome technologies' limitations (section 5.3.4), how the negotiation of candidacy in the face of staff adjudications is made substantially more difficult when care is distanciated and disembedded (section 5.3.5), and how digital inequities can be reinforced and magnified over time through technology structuration (section 5.3.6). I also describe in each section approaches taken by practices to mitigate these problems.

5.3.2 **Candidacy in a digital world**

To identify that they are a candidate for healthcare in the technology-saturated operating conditions described above, patients had to correctly interpret their symptoms and their significance, including evaluating online information from multiple (sometimes conflicting) sources about eligibility criteria, access routes (e.g. e-request templates), opening times and availability of appointments. Digital sources of such information included the practice, NHS, and government web pages, including proforma-guided patient-facing decision-support tools such as NHS 111. Patients also needed to acquire 'soft' knowledge about the times when telephone lines and e-request channels were likely to be busy and the likely response timeframes.

Whilst some patients could build and retain this kind of knowledge, many could not. Our dataset contained many examples of patients who encountered difficulties making contact, miscommunications, and misinterpretations of practice information from websites or pre-recorded telephone line messages. Patients from disadvantaged groups were disproportionately affected—for example, due to limited English proficiency, lack of awareness of available healthcare resources, or health needs requiring support from carers or family members. Some patients who had previously been able to access services independently found they became unable to do so after the introduction of

remote- and digital-by-default options. Some of these patients now perceived their GP surgery to be “closed”.

Identifying candidacy in pre-digitalised contexts involved patients estimating where they were positioned in an interpreted hierarchy of need, taking account of their estimates of other patients’ needs and staff availability. When access routes were digitalised, there seemed to be an increased risk of poor judgements based on misinterpretation of (or inability to find) key information, which deterred some patients from seeking care. In such situations, patients acted as their own gatekeepers, downgrading their perceived need for care relative to imagined others’, or assumptions about system pressures and imagined rebuttals:

“I’m thinking I won’t hassle the receptionist at half past eight because I know it’s busy, so I’ll call at 10 o’clock after the rush. But at 10 I’m told Dr X is fully booked.” — CC, patient, Fernleigh

Remote and digital systems were sometimes experienced as inefficient (e.g. requiring the patient to call back or go online repeatedly to catch a window of availability). These systems also created significant additional access barriers for patients who did not have the digital infrastructure (e.g. internet access), devices and the technical capability to access, navigate and permeate online access and triage services. Poverty was sometimes a limiting factor:

“[L]ots of people’s phones weren’t good enough or didn’t work or I just couldn’t get through. They didn’t receive the text, or there was a problem. Not everyone in our area has an amazing phone or the money to buy that equipment, so that’s a barrier as well.”—KL, recently qualified GP, Queens Rd

Traditional candidacy theory highlights that patients with multiple complex needs may be unable to recognise the extent of their own illness, especially when they lack the lay support networks to help them with this task. [171] This aspect of candidacy became perilous when the safeguard of in-person assessment was removed, as the following quote illustrates:

“For people who use alcohol and drugs, they are so divorced from what's normal; they feel terrible all the time. They don’t recognise when they are poorly. We could arrange care for them when we were physically in the homeless shelter fairly regularly. I’m not seeing those people as much now it’s digital.”—BJ5, GP Ogden East

The implication that the patient, however unwell and disadvantaged, should take responsibility for making the judgement that care is needed and pursue the necessary pathways to achieve it is an example of *responsibilisation*. I return to this concept in the discussion.

5.3.3 User configuration and the flawed digital facsimile

Digitally-mediated access technologies configure users in novel ways. Automated digital telephone systems, for example, assume a patient who is not put off by recorded messages (which may be irrelevant or confusing) and who can respond to repeated interactive prompts appropriately and in real-time. Apps and e-request forms assume a digitally capable user, proficient in written English, equipped with adequate digital infrastructure and devices, able to navigate through web pages effectively, and with sufficient advocational stamina to withstand the rebuttals and redirections of (sometimes multiple) digital and human agents (for example, messages announcing that priority will be given to "emergencies").

All these technologies also assume a minimum level of mental capability and physical health and a relatively high level of system knowledge. For example, about what configuration of modalities their own general practice offers, what information to put in which section of an e-request form, and when access routes are switched on (and what to do when they are not).

When a patient (or someone on their behalf) chooses options from on-screen menus or enters data onto an e-request form, a digital facsimile is created. It is this facsimile that represents the patient to the practice and is the basis upon which practice staff will adjudicate their access and pathway. Sometimes this facsimile represents the true patient well enough for their circumstances, but I saw that the representation could be misaligned in several directions. My analysis indicated that patients who struggled to complete e-request forms (older, sicker, less digitally literate, and whose conditions may have affected their digital skills) tended to generate an incomplete or inaccurate digital facsimile, which could 'under-sell' their actual needs—for example by omitting key information about the symptoms or trajectory of an acute or long-term condition, concealing the truth of the patient's social circumstances; or over-estimating the

patient's ability to use remote and digital modalities (e.g. when the patient managed to complete an e-request template without fully understanding it).

The quote below describes such a scenario, where an elderly patient called in to get an appointment, but was initially pushed back for not fitting the digital criteria for an 'urgent' case based on how he communicated his symptoms.

"There was a gentleman that I know … on the phone to another receptionist saying 'I don't feel well, I don't know what's wrong'. She said it wasn't urgent. But he never phones, that was a red flag to me straight away. So I said, quietly 'he needs to go on the urgent list'. And she looked, she went 'really'? [There was some back-and-forth…] anyway, she put him on the urgent list. When he came in, I went straight to the nurse and I said, you better come see him. […] She done him an ECG. He's only having a heart attack. He never had no chest pains. […] None of what reception are trained to identify [as urgent]. Honestly, he was having a heart attack. I knew there was something wrong because he called." – S2S9 Receptionist/Phlebotomist , Easton

In this case, it was a staff member's understanding of how that individual patient viewed their candidacy for care that enabled them to get the urgent care that was required. Without this articulation move, the patient's digital facsimile would not have aligned sufficiently with the characteristics of the assumed 'urgent' case, and they would not have been seen on the day.

Conversely, patients who had high health and digital literacy were able to shape a particular version of their history and symptoms, creating a convincing digital facsimile that fit system algorithms and met encoded expectations (e.g. listing the correct symptom cluster to trigger a desired in-person consultation) and in some cases actively crafting their digital facsimile to fit rapid-access pathways. GPs reflected that some patients had learned to game the remote access system (in some systems, for example, patients who self-classified as 'urgent' in a pull-down menu were allocated urgent appointments).

Similarly, high-capacity patients found ways around capacity limits by using their system knowledge of alternative pathways, effectively 'gaming' the system. In one interview, a patient talked about how she had learned to 'time' her calls to avoid long call queues. In another example from my field notes, a practice team discussed the problem of patients with high system literacy who had learnt to submit 'task requests'

by email when there were no available consultation slots, thereby effectively securing a consultation out of turn, as these field notes from a practice meeting illustrate:

"If people can't get an appointment now, they get around it with an email which leaks into your admin tray on the task list. Then you do a consultation which isn't recorded in your workload officially, but it still takes time." S2S12, Salaried GP, Easton

"'We get loads of calls at 5:15-5:45 pm with people wanting urgent appointments, so we add them to triage list for quick call backs and they get in quicker." S2S4 Senior Patient Services Co-Ordinator' – Notes from a group meeting at Easton

"I find actually that's it quicker to get through. When I ring up I'm first or second or third in the queue [...] because I'm timing when I'm calling." – TE, Patient, Fernleigh

The above examples illustrate how digital facsimiles could speed up or slow down a patient's route into general practice services. However, some staff, especially those working in deprived areas, voiced concerns about patients who did *not* appear in the digital spaces that characterised the triage system because of the various markers of disadvantage discussed above. Such patients had no digital facsimile at all and were therefore invisibilised in the system, as the following comment illustrates.

"There's this risk of digital exclusion, an inverse care law for the most excluded people who can't get through to the practice. You're worried about the elderly lady without a computer, the person with mental health issues that can't afford a mobile phone. Other people are digitally enabled, and some are entitled, messaging with less important things all the time. They're very high-powered and have access, taking up space. When we turn e-consults on, we're flooded with requests. It just drowns us."—TI, GP partner, Westerly

As the above quote shows, there was high *visible* demand in most practices, and this led some staff to conclude, erroneously, that everyone who wanted to be seen was already in the queue.

"All I know is that the patients who want to get through are getting through. And that may just be perseverance, but it doesn't feel like it because I've got patients that might get through multiple times in a week if they need to. There's a balance, isn't there, between supply and demand. I really think our access is better than most practices" NN, GP Partner, Westerly

In the context of a service that is 'drowning' in requests, it was difficult for staff who were aware of 'invisibilised' patients to take action on their behalf.

5.3.4 **Articulation: overcoming the brittleness of digital adjudication**

Traditional candidacy theory talks about *adjudications* (judgements made by staff about whether and what kind of access to care will be granted). I identified two points at which adjudications were made in digitalised systems: during the access attempt (when *digital adjudications* contributed to the creation of a digital facsimile), and *after* the access attempt (when *human adjudications* were made by triage staff based on this digital facsimile).

Concerning the digital adjudication process, algorithms built into access technologies (online request forms, telephone call lines, and integrated symptom checkers) were necessarily based on standardised scenarios, hence their adjudications were characteristically brittle, impersonal and inflexible, as the following example illustrates:

> "My husband has to get a yearly health check with a specialist consultant for his job, and it came up that his heart was beating at the wrong time so he was told he needed to get that checked with the GP. So he went on the online form, which told him that he needed an emergency response. He knew he didn't. So, he called the surgery and the surgery said, "Well it's non-urgent, you need to use the form online," it just ended up being a bit of a spiral. you know, so they were sending him back in a circle. So, it actually doesn't work sometimes for those non-emergency situations" LM2, patient's wife, Fernleigh

In the above example, the couple understood that the digital system was misaligned with the patient's actual needs, but they were not able to override its adjudications and became caught in an algorithmic 'safety trap' (a term I use to describe how safety-netting digital protocols can catch and impede patient progress).

This example illustrates how articulation efforts to overcome the limitations of digital technologies require a great deal from the patient in addition to fluency in English (or Welsh)—*health literacy* (attention to their own symptomology and the ability to find, understand, and use the information to make decisions about their health and care), *system literacy* (knowing what services are available and how to access them), and health-related *digital literacy* (ability to access and use technology to find, evaluate and communicate information)—and that even when patients possess these capabilities, there is no guarantee that their articulation efforts will succeed.

In my dataset, articulation moves to rebut digital adjudication were more difficult when the patient's needs were unique and complex. In the following example, a carer

describes the complex articulation work needed when trying to access care for a dependent daughter, given that the system did not allow the parent to set up the NHS app on their smartphone for both them and their daughter:

"My daughter has learning disabilities and has to have somebody help support her. If you are doing remote access with e-Consult that's okay because you can put in the name of the person, but the issue's when you're entering the data for emails and phone calls. My daughter doesn't have email or a phone. I can access her health records, but I've got to go in through the browser: she isn't able to have the NHS App because the system doesn't allow you to set it up for more than one person, so it's a lot of extra work."—LN, carer, Fernleigh

In other examples recounted by staff and patients, it was evident that patients had *learned* through trial-and-error to manipulate their answers on an e-request form into the correct answer to 'fit' them into a particular algorithmic pathway. This was colloquially referred to as 'gaming' the system.

The crafting of candidacy as patients edited and re-edited their digital facsimile created problems for subsequent adjudications by triage staff. For the most part, staff had to assume that the information provided was accurate and valid to ensure appropriate and safe care for the patient and efficient resource management for the practice. A well-crafted digital facsimile from a high-capacity gamer patient could inaccurately represent their need, leading to the misallocation of resources by triaging staff. Conversely, when it was clear that the patient had not been able to craft their digital facsimile to an effective level, staff had to glean what they could from what was or was not present in the information supplied to facilitate the access which they understood the patient to need.

These informal and bespoke efforts often depended on relational knowledge—that is, what particular staff members knew about the individual patient and their circumstances—and were more evident in smaller practices where staff retention was high, and the practice had a personal list or 'usual doctor' system. Handling these gaps and flaws in the digital facsimile occurred in various ways, both formal (e.g. an in-house flagging system) and informal (e.g. healthcare staff's awareness of individual patient circumstances), as the following quote illustrates:

"[T]here are loads of patient groups that struggle with the digital systems. Patients who've got no permanent address, patients with complex needs, or maybe a child on a

protection plan. Social issues. Children under one. I've got a patient who's deaf, mental health problems who can't use these tools. We arrange special support: interpreters, sign language interpreters, fixing appointments certain times, a colour-coded walk-in service list (see-soon patients), clinicians jump ahead to call those patients up early."—NN, GP, Westerly

Misalignments between the real patient and the digital facsimile were not always spotted, and the 'invisibilised' patient who lacked a digital facsimile was not always identified. As I will explore in the next section, this created the preconditions for the structuring and compounding of inequity of access over time [202].

5.3.5 Distanciated negotiations: impoverished conversations

Traditional candidacy theory talks about *negotiations*—that is, synchronous conversations in which patients assert their candidacy and self-advocate. In digitally-(or remotely-) mediated access systems, these negotiations did not usually involve human actors having a synchronous conversation in which each party responded in turn. Rather, a patient would submit an e-request form (or have a telephone call in which a support staff member filled in one of these on their behalf). They would receive a response after a delay of minutes, hours or days. Often, there was no direct route for the patient to then respond in turn. Thus, any further negotiation had to be done through the same arduous access routes.

Unsurprisingly, negotiations about what kind of care was needed and what modality of encounter should be offered were typically disjointed and hard for the patient to expedite or challenge when they considered the offer inappropriate or unfeasible. Indeed, this difficulty of negotiation could terminate the patient's perceptions of their own candidacy and dissuade them from attempting re-contact. I identified numerous cases in which a negative adjudication experience with a digital modality led to the patient losing trust in the system and resolving not to bother next time:

"I went onto e-Consult about my varicose legs and went through a long process. There was hundreds of questions. At the end it said, 'This is too serious, you must contact the doctor,' and it wipes everything. I was trying to contact the doctor! So I think I'll phone in - but 'Oh it's 12 o'clock, if I phone now they'll say, 'No you'll have to phone tomorrow morning because it's too late'. So I thought, 'Oh, I don't want to burden the doctor'." – NG, patient, Ferneligh

In the above example, the patient's palpable frustration at a set of carefully crafted responses being 'wiped' seems to have triggered a reassessment of their own candidacy against their knowledge of clinicians' capacity. In this case, the patient has assigned themselves the category of 'burden' and learnt a negative lesson about the (ill) function of e-request forms.

Distanciation and disembedding (introduced and defined in section 5.2) are particularly relevant concepts here. Remote and digital forms of access tended to replace the warmth of a here-and-now, in-person interaction with words on a screen, emails, tick-boxes, algorithmic pathways, and task lists and instructions constructed by one individual for another to carry out. Social interactions, instead of being contextually grounded and richly meaningful, become 'emptied out', dehumanised and deprofessionalised. Whilst these phenomena affected all patients, they disproportionally impacted the more vulnerable.

5.3.6 The structuration of digital inequities

My fieldwork began in 2022 when remote-by-default access was mandated in the UK. By the end (March 2024), this was no longer the case, and most practices were operating a hybrid model (in-person and remote). However, patients' understandings and perceptions had often been shaped by the earlier restrictions. Based on the digital facsimile, for example, patients could be flagged up as requiring or not requiring digital access support. They could be identified as having a single, straightforward problem when they, in fact, had multiple complex and interdependent ones. Their digital facsimile could imply a series of unrelated symptoms when a full professional assessment would have produced a unifying narrative pointing to a single diagnosis.

Below, a researcher-in-residence reflects on discussions held with patients during fieldwork with a walking group, about the different points they delayed or gave up on trying to contact their practices.

"Initially, patients in both Scottish practices couldn't get through, there wasn't a queueing system. [They said] when you call in, it rings out if it isn't answered, it doesn't even engage. So you turn up to the practice. You're told no, you've to phone, and then you think if they're not answering, you know, why bother. And then there's a kind of a legacy there. So even though things improved later with the phones, people remember and are already put off by that, so they delay it [... until] it gets to a point where they suddenly

panic, and they just want to see a doctor. An older patient in walking club had this, and she had finally got in touch for a call-back which would be between 9-12, so she had sat by her landline all morning and not been rung, then gone out to the shops and missed the call, that was it. [...] Another elderly patient in the club got a follow-up message to say, please send me a picture of your rash and he thought he sent it but he didn't get a reply to that and just gave up. He said they obviously don't care, just gave up." – Interview with Researcher-in-Residence for Range Park and River Rd

These patients' views highlight how poor access experiences come to influence subsequent help-seeking attempts. Whilst these rebuttals are captured here through observations outside the care system, from the practice's perspective it is impossible to know which barrier terminated the patients' access attempts. Without routes to make vulnerable and disadvantaged patients visible, digital access will become progressively more shaped towards the more enabled. [202]

5.4 Discussion

5.4.1 **Summary of key findings**

The findings presented in this chapter have revealed a landscape of digital access and triage which is polarised and strongly patterned by markers of disadvantage including income (and associated access to material and digital infrastructure), education, literacy (linguistic, system, health, digital), social inclusion, disability and life conditions. Patients who possessed high levels of health, digital, and system literacy and whose needs matched the standardised scenarios around which access technologies and protocols had been designed could generally correctly identify their need for care and find their way to and through access pathways; those without these capabilities or whose needs were unique or complex sometimes could not.

In this chapter, I also offer a novel theoretical contribution. I began with an established theory of candidacy whose key elements included identification of oneself as sick, finding and appearing at the 'front door' to health services, managing the adjudications made by healthcare staff through negotiation and self-advocacy, and taking account of the wider operating conditions of the service. [171] I combine this theory with concepts from socio-technical theories – configuration, [172, 173] articulation, [174] technology structuration, [178] disembedding, [176] and distanciation – [177] as well as new concepts

including the digital facsimile (and facsimilisation), the invisibilised patient (who lacks a digital facsimile), and algorithmic safety traps. In doing so, I offer a novel theory of digital candidacy, which is summarised in Box 1.

Box 1: A theory of digital candidacy

1. Access routes into contemporary general practice involve a highly complex socio-technical network with multiple human and technological actors. There is a great deal of information and instructions, much of it in digital format, which is difficult to fathom and navigate.

2. Human actors in this network occupy position-practices which incorporate their internalised social structures and social role—for example, they have a particular cultural and educational background, greater or lesser knowledge and skill levels, particular beliefs and assumptions about patients' needs and entitlements, and relational links with other people and technologies in the network.

3. Technologies, too, have position-practices in the network; they contain inscribed assumptions about patients' (and other users') characteristics, rights, needs and capabilities. They configure the user, sometimes in ways that exacerbate disadvantage.

4. Technologies' tendency to be inflexible and brittle means that access through digital entry points is critically dependent on *articulation*—i.e. both patients and staff must take situated actions to adapt to, and compensate for, technology's material properties and limitations.

5. Articulation by the patient in this context requires fluency in the dominant language of the service and advanced levels of health literacy, system literacy and digital literacy.

6. A preliminary step in the digital access pathway is the patient or someone on their behalf creating a *digital facsimile* (section 2.2) which is sufficiently complete and persuasive to convey their current health status and its trajectory to the human or technological agent who will make an adjudication decision. Some patients become skilled in crafting and recrafting their digital facsimile; others can create only an incomplete, flawed or unpersuasive facsimile. The most disadvantaged patients are unable to create a digital facsimile at all and become invisibilised in the system.

7. Adjudication of need by clinical and support staff now typically happens asynchronously and at a distance, hence negotiation of access may no longer involve a direct, real-time conversation with a human being. Staff who adjudicate based on flawed digital facsimiles may incorrectly assess a problem as simple or non-urgent and then deprioritise or misdirect it, leading to inappropriate care or wasteful double-handling.

8. When staff *know* that a patient's digital facsimile may be flawed or absent and that the patient is disadvantaged or vulnerable, they use various relational approaches, articulation measures, and embedded relational knowledge to ensure a personalised and appropriate access package. However, they cannot identify or fully mitigate all such cases.

9. The decisions and actions of human and technological agents at the time of an attempt to access care can significantly influence, disrupt, and reconstitute candidacy both immediately and recursively over time, and also recursively shape the system itself. This occurs through both technological actors (e.g. the adjudication decision may serve to encode and reinforce a flawed digital facsimile on the patient's electronic record) and human ones (e.g. the patient's understanding of, and trust in, the system may be shaped in potentially negative ways).

My empirical findings in this chapter align with other research on widening inequities in remote and digital healthcare. [192 , 203-205] The new theoretical model I offer links well with a previous study in face-to-face healthcare which showed that candidacy operates recursively as each healthcare encounter comes to shape patients' interpretation of their candidacy in subsequent encounters. [206]

5.4.2 Mitigating the challenges of digital candidacy: lessons for policy and practice

As with all inequities which have their roots in the way society is structured, there are no easy fixes for the digital candidacy challenges described in Box 1. Whilst better technological designs may help overcome inbuilt assumptions and biases of current systems, these will be, at best, a partial solution for several reasons. Firstly, the design of healthcare technologies is often commercial-in-confidence and thus opaque. [207] Secondly, inflexibility and brittleness are inherent features of many digital technologies, which are not designed to hold synchronous conversations.

Thirdly, the technologies used in digital access and triage are a product of the macro-level terrain in which they emerged, encoded with the assumptions of their developers and wider society. [178] Their use and uptake are then shaped by policy, contracting, and funding limitations. One prevailing tendency in the current UK system, for example, is to 'responsibilise' the patient, sometimes using the language of 'activation' or

'empowerment'. [208] As these assumptions are built into digital technologies, software can come to ossify the inequities in policy discourse.

A possible solution for the future could be digital assistants based on large language models which present a human interface and can have synchronous conversations with patients, potentially reducing the impact of distanciation and disembedding. Such technologies are programmed to incorporate context and respond adaptively to the patient's socio-cultural background, emotional states and real-time responses. [209] This area of digital technology development is progressing rapidly, but at the time of writing, the evidence base for the efficacy and safety of such models in access and triage does not exist. In the meantime, *human* mediators such as digital navigators are likely to have a crucial role to play in supporting disadvantaged patients to find and navigate digital access systems. [210]

The findings presented in this chapter underscore the importance of ensuring that local systems for delivering digital access and triage are designed around the patterns of need in the local population and that they are as flexible and adaptive as possible, allowing for multiple kinds of locally-determined configurations of digital and in-person routes to meet different access needs and mitigate different kinds of disadvantage. [204] It also emphasises the importance of a robust and dependable infrastructure as digital services are scaled up, [201] sets out key competencies and training priorities for staff, [211] demonstrates that relational continuity is especially important for patients with complex and multiple health and social needs, [212] and identifies crucial measures to safeguard patient safety and support front-line staff. [213, 214]

5.5 Conclusion

This chapter has shown how remote and digital access and triage routes have come to reconfigure the very terms on which candidacy is identified, articulated, represented, and negotiated, sometimes resulting in a widening of inequities of access. Whilst remote and digital technologies may add value when situated within a system which is adequately staffed and resourced, offers a wide range of access routes to care and provides appropriate access support for those in need of it, I caution against an

exclusively digital-first system in which only the correctly configured patient is a candidate for care.

As the digitalisation of health and other public services moves apace, creating risks to equity as well as opportunities for efficiency, I hope that this theory of digital candidacy can be further tested and extended.

6 Results 2: The hidden work of support staff and the importance of a relational workplace

The following chapter describes findings that have been previously published in BMJ Leader. [179] *As noted in that paper, on which I was the lead and corresponding author, three other authors contributed. My contribution was conceptualising this sub-study, collecting the data, conducting the analysis, and writing the manuscript. Dr Tanvi Rai, Dr Sara Paparini, and Professor Trisha Greenhalgh provided comments on manuscript drafts.*

6.1 Introduction

Having explored the ways in which digitalisation of primary care has impacted patients, I now move to focus on support staff, which is the staff group with whom patients first interact. This part of the GP practice workforce includes reception, secretarial, and administrative personnel who are responsible for booking and managing patient requests, appointments, and other interactions. This chapter partially answers my first research question. I chose to have a chapter with an explicit focus on support staff because my scoping work and narrative literature review identified them as a critically understudied section of the GP practice workforce. In this chapter, I look particularly at the work support staff perform in practices to smoothen practice function, including interactions with (and around) patients, other staff, and technologies. In doing so, I align with scholars who seek to go beyond quantitative metrics which favour countable (and often clinical) work, such as the number of appointments conducted, wait times to secondary care, number of patients per number of doctors, etc. Instead, I focus on the work which is unrecorded and often unseen – which occurs in hard-to-quantify interpersonal interaction or the blurriness of workarounds to routine processes and which is performed by the support staff groups that are often overlooked in formal workload metrics or research studies.

Recorded workloads in general practice have continued to rise beyond pre-pandemic levels, following an initial dip during the pandemic's first few months.[10, 35, 59, 76] Patients are returning to practices requiring longer primary care management due to late presentations, more complexity and increased wait times for secondary care.[59] This 'new normal' of higher workloads arises amidst a growing shortfall between the supply and demand of all staff (including clinical, administrative, secretarial, and reception roles).[17, 35, 215] The current situation exacerbates the constraints on funding, workforce, and capacity from before the pandemic.[17, 216] This context can make it challenging to maintain workplace conditions that support good staff wellbeing, including appropriate staffing and sufficient psychological safety to support teamwork and speaking up.[181]

National datasets collect valuable metrics (e.g. number of consultations) but cannot capture more subtle information on what staff do to make an imperfect system run. This hidden work, and the mental, emotional and physical impacts thereof, occurs outside of formal recording systems.[76, 79] Where impacts have been studied, the focus has mostly been on clinicians (GPs, GP trainees, and specialist nurses). [9, 12, 34, 43, 44, 46, 59] While some studies have looked at the unique role of *reception* staff in facilitating care delivery,[217, 218] noting their work can be obscured,[219] none have looked explicitly at how workload during times of crisis impacts their wellbeing. Given the complexity and interconnectedness of the healthcare system,[32, 33] the hidden nature of support work,[218, 219] and government calls to increase general practice workloads,[66] this is an important gap in the literature.

Support staff in general practices tend to reflect the ethnicities of their local areas. The GP support staff workforce broadly reflects the ethnicity data of the UK population,[220] with support staff respondents to a 2023 NHS survey self-describing as White (78.9%), Asian/Asian British (6.8%), and Black/African/Caribbean/Black British (1.8%).[215] It is a highly gendered workforce (95.2% female),[215] the rate of pay is low,[221] and many work part-time.[215] This multi-ethnic, multicultural, and multilingual workforce is key to the proper function of general practice. However, this section of the workforce faces multiple and intersecting challenges through their work due to their unique position at the intersections of patient lifeworlds, the practice system, and the wider healthcare system. In this chapter, I highlight the specialised translational work that their

positionality enables, as well as the unique burden it places upon them, to encourage practice leaders to provide them with tailored support, as guided by my final recommendations.

I place a novel focus on these team members' capacity for three types of translational work: generalist, specialist, and occupational. I also highlight how working through the crises of 2020-24 (as previously outlined) has affected these staff specifically. Through doing so, I have developed practical advice on how to *support* support staff wellbeing and develop a more relational working environment. These are founded on the principle of the 'relational workplace', a term that I interpret from the healthcare improvement literature.[181] It posits that people working in the healthcare system rely on *human action, interaction, and relationships* to enable the adoption, implementation, and long-term sustainability of improvements.[181] By applying the principle of relationality to the work of support staff in general practice, I extend it to propose that it underpins the function of the healthcare system as a whole and that a relational approach to leadership and teams is required for good practice function and good patient care.

6.2 Data analysis and theoretical framework

The analysis for this chapter was specifically focused on how digitalisation during the crises of 2020-24 affected the work of support staff, and the effect on their wellbeing. Consequently, the dataset used for this analysis is a subset of the larger dataset outlined in Table 4. Included in this analysis were interview data from staff in support roles as well as focus group and observational data from the two in-depth ethnographic practices to capture interactions between support and clinical staff. These data are summarised in Table 6 below.

Support staff job titles were varied – including administrative roles like Patient Services Manager, GP Support Administrator, and Clinical Assistant; reception roles like Patient Liaison Officer, Reception Team Lead, and Patient Services Coordinator; dual roles such as Phlebotomist-Receptionist, and general managerial roles like General Operations Manager, Practice Manager, and Business Manager. This last group were quite distinct from the other two groups of support staff, performing less patient-

centred work, and being strongly male-dominated (whereas the former were almost exclusively female).

Site Number/ Pseudonym	*n* Focus Group Participants	*n* Observation Days	*n* Support staff Interviews
In-depth ethnographic case study sites			
1: Easton	17	22	10
2: Westerly	16	20	6
Total	33	42	16
Comparative case study sites			
3: Towerhill			4
4: Ogden East			2
5: Queens Rd			3
6: Carleon			6
7: Rhian			3
8: Range Park			2
9: River Rd			3
10: Fernleigh			3
Total			26
Sum total	33	42	42

Table 6: Support-staff focused subset of data used for Chapter 6's analysis

My analysis was guided primarily by Maben et al.'s framework of 'workplace conditions that matter'.[181] This interdisciplinary framework, outlined below, draws on various academic traditions and has three components: staffing for quality (developed in the healthcare improvement tradition),[180] psychological safety, teamwork and speaking up (from the organisation and management tradition),[181] and health and wellbeing at work (from the occupational health tradition).[182 , 183]

Maben et al. have described that adequate numbers and appropriate skillsets of staff are prerequisites for high-quality and safe care. Evidence from nursing literature suggests that getting this right can improve conditions for staff by contributing to improvements in wellbeing, sickness rates, retention, and burnout (when a person

becomes exhausted as a result of workload).[59 , 181 , 222] An organisation might be considered 'psychologically safe' when team members feel secure in taking interpersonal risks: [223] it enables speaking up, whereby people are willing to 'voice their observations, questions, and concerns, especially to colleagues above them in a hierarchy.'[181] Teamwork is where people in an organisation work collaboratively to complete interdependent tasks.[181]

I augmented this framework with the feminist sociological concept of invisible work,[160] and that of 'lay interpreters' who translate between 'lifeworlds' and 'systems'. [184 , 185] Invisible work is that which is conducted by 'focal actors' at the fringes of defined 'job roles', often considered as an adjunct to core tasks. However, in healthcare systems, this obscured work can be essential 'translational mobilisation' in sustaining the networks of care organisation and care delivery.[160] This is similar to Swinglehurst et al.'s conceptualisation of 'hidden work', developed in the context of repeat prescribing in general practice to describe the obscured role of reception and administrative staff in enabling quality and safety. [224] I expand this application to consider what additional practice tasks might require different kinds of hidden/invisible work from reception and administrative staff.

The terms lifeworld, system, and lay translators were originally developed by Habermas,[184] and first applied to healthcare by Mishler.[225] The terms lifeworld and system depict two 'worlds': the lifeworld comprising the family, household and cultural community; and the 'system', comprising the economy and state (including the various institutions and bureaucracies with which people must interact). Miscommunication between patients and healthcare professionals (especially but not exclusively when those individuals are from different cultural or ethnic groups) occurs when the language of the system is poorly translated into the language of the lifeworld. Staff who share a 'lifeworld' experience can sometimes bridge this gap and provide support and advocacy for vulnerable groups through 'lay translation'.[185] This concept has thus far only been applied to patient and clinician interactions. I expand this application here by including interactions between patients and support staff, as well as between different kinds of GP practice staff.

I followed my previously discussed analytical approach (see 3.9). Here, my targeted abductive analysis was specifically focused on codes and concepts relevant to support staff. As previously mentioned, I limited this analysis to data on support staff, which helped me to identify first- and second-order codes that were derived from these interview data and field notes. To determine what would be included in the above theoretical framework, I continually tested potentially relevant theories and concepts with the data, linking those which I felt resonated with second-order codes. Through applying them to my data, I saw where some theories and concepts could be extended, for example adapting 'lay translation' into three types of translation in this context: generalist, specialist, and occupational. In Table 7 below, I provide some examples of how I linked first- and second-order codes with the chosen theories and concepts.

First-order codes	Second-order codes	Linked theory or concept
High patient expectation Call volume 10x pre-digitalisation Endless ringing A queue out the door	Workload capacity	Staffing for quality [180]
What am I doing here? I just cry Stress on reception Couldn't cope Anxiety I don't feel like I have a break	Burnout	Health and wellbeing at work [182 , 183]
Cheat code: call back at 5 Queue-jumping Say it's mental health Speaking patient's language	Helping patients Cheat code	Lay translation [184]
They'll help me Supportive Like a family	Practice unity	Teamwork [181]

Table 7: Examples of grouping first-order codes into second-order codes, and linking theories and concepts

6.3 Results

I have structured the results for this chapter following my theoretical framework, supported by relevant quotes from staff interviews, focus groups, and observations. All data presented here are anonymised with identifiable comments in quotes fictionalised to support de-identification.

6.3.1 **Staffing for quality**

6.3.1.1.1 Workload and staffing

All support staff mentioned their high workload. It was stated during observations and in all interviews that workload had increased after the first six months of the pandemic and continued to rise during the data collection period. Causes ranged from more patients returning post-lockdowns, the integration of new digital technologies, vaccination and booster drives, and increased workload from secondary care. This work came alongside perceptions of increasing patient hostility and frustration from system-wide wait times and remote delivery pathways and more exposure to discrimination based on nationality, linguistic markers, and ethnicity.

“Patients can get aggressive and rude about a wait. When you go in and the first call you get you get sworn at down the phone. And I just think, what am I doing here?” – S1S10 Patient Services Lead, Westerly

“Patient expectation is high, and they get frustrated. There are days I'll admit that I go home, and I just cry…I’m just really trying to help them.” – S2S4 Snr Patient Coordinator, Easton

“Before COVID we’d be making like 20 calls in the morning, but with COVID it went from 20 to 200. It was a big, big difference and it was a lot of stress on reception. It's still like that now, two and half years later…and a queue out the door. We lost loads of staff from it. People just left because they just couldn't cope with the stress anymore. We still can't seem to get back to normal… Patients are calling and they think we're lying to them. It’s a lot, the anxiety that we get knowing that we're going to have no appointments to offer.” S2S4 Receptionist, Westerly

Much of these new forms of work are ‘invisible’ within roles: undocumented by auditing processes and unseen by patients. It can also be unseen because it may be completed in times or places outside of the practice’s opening hours or estate: through arriving

early, staying late, or working unpaid hours at home. This meant that staff who took on this overflow work, often due to their concerns for patients and sense of responsibility for other staff, had less opportunity to unwind from the mental and emotional challenges of their role.

"It's only me who does e-consults at the moment, we never did them before and now we get 50 through a day. I'm the reception team lead so I need to deal with everything else that comes in, and also them. I was in at seven o'clock this morning, I don't start until eight. Just so I could clear the backlog from yesterday. I'm having to come in out of my own time because I just don't like it being there. It just gives me pure anxiety. I've got a laptop at home, so sometimes I log on at home, and just do some work, but then I don't feel like I have a break." – S1S5 Reception Team Lead, Westerly

This higher workload meant that learning new skills or training others formally or informally became harder. It afforded few opportunities for team-focused training or other activities that build morale and informal networks for support (such as shared lunchtimes or other breaks). Collective learning on how to perform tasks across roles had the capacity to help support the wider team through acute staffing problems, as demonstrated by team leads or multi-role staff that were able to step in and take on additional workload burdens when necessary.

6.3.1.2 Translating with patients: generalist and specialist translation

Support staff performed translational work to help patients navigate the healthcare system and understand their requirements to appropriately allocate practice resources. Some of this work was generalist – applicable to many kinds of patients, for example translating system jargon into words, phrases, and actions that patients could easily understand. Some members of the teams had pooled knowledge of how to do this due to their experience in the post or because of wider clinical or administrative experience in other roles. This knowledge was often passed between staff informally during the working day. Receptionists had a particularly intimate knowledge of how the practice system functioned from an access and resource allocation perspective and knew what information, keywords, or contact timing would open doors for patients. Staff shared general tips with patients, such as the best time of day to call for different requirements. In the excerpt below, a receptionist translates the working routines of the practice into an action that will help them to get an appointment faster, calling at 5pm when the on-

duty doctor may have finished their list for the day and, therefore, have space for an extra consultation.

"At around 11am a patient called reception trying to get an on-the-day appointment. Protocol is that the on-the-day appointments are all allocated at the start of the day, based on phone calls and e-consults from 8am. The receptionist who answered was taking long pauses in between telling the patient this and that there were no more appointments available. Something the patient said prompted her to share some insider knowledge: 'Right, well, I'm only telling you this, but if you call back at 5 o'clock, we might be able to get you a phone call with the doctor if they have time after their list.' The patient did ring back later that afternoon, and was able to get an evening call-back from the doctor. There are some ways of queue-jumping, if patients know how. A few days ago [another receptionist] told a patient that if the problem was causing them mental health distress, they could have an on-the-day appointment." – Excerpts from fieldnotes during observations at Easton

Some support staff could perform more specialist translational (linguistic and cross-cultural) work for patients, drawing on their personal experiences with particular cultures, languages, social classes, government structures, and disabilities. The example below is taken from ethnographic observations at Easton, where an Indian receptionist overheard an interaction at the front desk and stepped in to provide specialist translational support by speaking in the patient's preferred language and dialect.

"I heard Tania speaking in Urdu (as she later clarified). She had gone to the front desk to take over checking-in a patient after hearing them speaking Urdu – she is the only person in reception who speaks it. She told me it helps to speak to patients in their preferred language so that she can understand what they need. She later told me she speaks five languages – Urdu, Patwari, Punjabi, English, and some Hindi. This mix is because of the regions she and her partner's families are from, and where she has grown up. She said these languages help with Indian, Pakistani, and Nepalese patients at the practice – she notices when people on the phone are struggling, or if they come in with an English-speaking family member, and will offer to speak in these languages based on what she's hearing. She told me the Indian community here is quite small, so you get to know everyone." – Excerpt from fieldnotes during observations at Easton

These specialised translators often represented marginalised groups who were underrepresented in the demographics of the wider team. Yet the patient population with whom they shared cultural, linguistic, or social understanding (and therefore could provide such specialised support) was comparatively much larger. Therefore, they could face a disproportionately higher sense of responsibility for such patients. They also

faced the problem of educating other members of staff about the differences between some patients' lifeworlds and theirs.

These frictions were evidenced during interviews and observations by comments, actions, and pointed looks. They could occur between members of support staff, between support staff and the wider practice workforce, or with patients. One practice made active efforts across roles to be more inclusive and facilitate speaking up about such frictions, which helped to facilitate a more open learning environment (though biases could still surface), whereas in the other, prejudiced language and behaviour largely went unchecked. One such instance is outlined below when a British-Indian member of secretarial staff stepped in to de-escalate an aggravated and racialised encounter between a receptionist at the front desk and a frustrated patient.

"There was a [East African/Black] man came in, in his 30s, wanting an emergency appointment. He was screaming and shouting [...] And the man said is it because I'm black? You're racist [...] So I went out there and I said, okay, guys, leave, I'm going to have a chat with this guy. Calmed him down. Obviously, the colour of my skin probably calmed him down more than anything. And I try to give him what he wanted, put my clinical system hat on. [...] I did not mention the fact that he called the [White British] receptionist racists, but the receptionist made sure to tell the doctor that he did. So that worked in the [receptionists'] favour. So he did not get an appointment. They were like, you should not be helping him, he called us racist. And I said, that's not an insult. You know, that's not a reason to block him from getting care. [...] So I'm getting emotional. He's getting emotional. So it's just really difficult. Really, really difficult. That's just one example when trying to bend the rule for one person, but the ends up kind of like, you know [shrugs]." – S1S7 Clinical Assistant Interview, Westerly

6.3.1.3 Translating with staff: occupational translation

Staff working across support and clinical roles could provide unique translational support to facilitate a shared understanding of the capacities and responsibilities of different teams. This improved task integration and clarity around role boundaries. These occupational translators worked across the margins of different teams and were able to smoothen frictions in interdependent work by drawing on their knowledge of the particularities of how different teams, infrastructures, or processes worked.

My dataset included occupational translators that spanned the boundaries of administration, reception, and clinical roles, which could directly support better

working relationships and better patient care. A successful application of the unique skills of occupational translators is outlined below, where a phlebotomist-receptionist utilised their embedded knowledge of the system, the specific patient, and the boundaries of reception and clinical roles to enable a patient to access urgent support when they otherwise would have been blocked.

"I get to know the patients a bit more doing bloods, I know more about them, and enough about the clinical side to know it isn't our decision in reception. There was a gentleman that I know. And he was saying on the phone to another receptionist 'I don't feel well, I don't know what's wrong'. She said it wasn't urgent. But he never phones, that was a red flag to me straight away. So I said, quietly 'he needs to go on the urgent list'. She would only put him down for urgent bloods, with me. When he came in I went straight to the nurse and I said, you better come see him. I said his nose is black his legs are swollen. And he's not holding his chest or tummy. He looks dreadful. She done him an ECG. He's only having heart attack. He never had no chest pains. He never had no sweaty, clammy, he never had no left arm. None of what reception are trained to identify. Honestly, he was having a heart attack. I knew there was something wrong because he called. That's why I like them to talk to me in bloods." S2S9 Phlebotomist/ Receptionist, Easton

6.3.2 **Psychological safety, teamwork and speaking up**

6.3.2.1 Practice unity and its implications

Leadership was crucial to engendering psychological safety and establishing an atmosphere of teamwork in staff across roles. Support roles could have fast turnovers, so ensuring an enduring team atmosphere relies on the actions of staff with system authority (partners, practice managers, team leads) or social leaders (long-standing and well-established team members), as well as the acceptance and engagement of other team-members.

In one practice, a non-hierarchical approach supported cross-team interaction for both social and clinical purposes. This supported staff to feel that they were a 'family', and were more likely to check on, ask for advice, and help each other. This behaviour was modelled from the top and embodied by partners, practice managers, and team leads. In a setting where hierarchies were more present and enforced, divisions developed between and within teams. This is explicated by that site's practice manager in the following quote, who describes the value of reception staff in the team, and the embedded social support strategies in place to facilitate speaking up. Similarly, a

recently trained member of reception staff in the subsequent quote reflects on the learning ethos within the practice, whereby they felt supported to speak up and ask for help when needed.

"They're really good in reception. If they can hear someone having a difficult time, quite often they'll step in and say, let me help, because sometimes if a patient hears it from a receptionist and doesn't like what they hear, they think that, well, they must be lying. But then hears it from another receptionist, they'll take it. [...] sometimes I can go 'hang on a doctor's just walked in the room' and they confirm what I said, and the patient will go 'oh, right, then.'" – S2S10 Patient Services Manager, Easton

"I started three months ago. So when it comes to how the trainings been, it's been full on. But the surgery itself has been really supportive, not just the receptionists, the doctors, the nurses too, and the managers. And they come and they tell you something new as well [...]the surgery here feels more like a family. [...] If you do something wrong, or you make a mistake. You don't get told off right, they explain to you, and then they teach you how to do it the right way." – S2S1 Patient Services Coordinator, Easton

The presentation of a unified whole-practice team was particularly important for reception staff, as the perceived hierarchy of the practice (wherein support staff rank lower) informed how patients approached and interacted with them. These perceptions derived from wider social influences like community, media, and government narratives, but could be reinforced or disrupted based on the whole team's response. Where patient-facing messaging between staff was inconsistent, this could lead to frustrations being directed towards support staff (as the face of the practice). This issue is well described by the next quote, where a senior member of reception staff describes the difficulties created when clinical staff make promises to patients which go against organisational policy, and do not communicate these promises with reception.

"Sometimes people are angry or upset, especially if they want something that we can't give them. Particularly if a doctor says to patients, call me anytime, and I'll call you back, which is lovely for the patient. But it means that if the patient then calls back, and *they* expect to get called back that day within an hour. And when we say 'no, like they're completely fully booked.' In the doctor trying to be there and available for the patients, it actually makes it more difficult for reception to manage." – S2S10 Patient Services Manager, Easton

6.3.2.1.1 Disruptions to teams

Disruptions occurred where teams' work overlapped, interactions with/between patients, or where the practice interacted with other areas of the healthcare system. Conflict could occur because of non-unified communications to parties outside of the practice workforce, for example in responses to patients or secondary care. Divisions could also form when individuals within the team were not treated equally. My data reflected this in an array of observed privileges like access to resources for working from home, allowance of sickness days, and access to an ergonomic workspace or more reliable technologies.

"There are only two people working in reception today. One says 'It's a nightmare today, it's so busy and there's no staff [...] It's the same people over and over again going off sick and working from home, and it's the people in charge who get paid twice as much as us. It ain't fair." – Excerpt from fieldnotes during observations at Westerly Interview

It should be noted that developing a more unified 'family' environment may not entirely prevent people from feeling excluded if they are in a sociocultural minority, identify less strongly with the team (due to cultural, linguistic, or socioeconomic differences), or do not socialise in the same way (for example due to neurodiversity). This was particularly true when social leaders actively excluded those people. Often, excluded people found their support networks from their personal lives and, therefore, had no safe formal escalation paths within work, as described by the following participant.

"When I was when I was child, I was diagnosed with Austism, [...] I've got dyspraxia as well. So, but it's like, when you go to work. You have to block all that. And you have - you do a show, you're on show [...] There's certain people I don't relate to in there [...] I just feel like there's a bit of a clique with certain people. And I'm not in that clique [...] Thing is I think certain people have influence on certain things. When I first started working I almost left [...] I speak to my mum, and then I feel better. So it's fine." – S2S2 Patient Services Co-ordinator Interview, Easton

6.3.3 **Staff health and wellbeing at work**

6.3.3.1 Burnout, perceived invisibility, and hidden work

The health and wellbeing of reception staff have been seriously challenged by the multiple crises faced over the past few years. Some have felt that more acutely than

others, but my analysis indicated consistently that the pressures those crises have created are not set to abate soon. Digitalisation has relocated certain tasks into digital spaces, often making them invisible (for example, first-line triaging of online consultation requests, digital messaging communications with internal members of practice staff or with colleagues in secondary care, and online training modules). In the quote below a member of reception staff describes how multiple digital workstreams now come atop traditional methods rather than replacing them, due to individual patients or secondary care staff not engaging with them as wholesale replacements.

"We get lots of calls every day, patients using AccuRx, *and* older patients who don't want to use online. We get EDTs [Electronic Document Transfers] so that has to be filed and given to doctors to action. We used to be one person just doing [EDTs] because it's a lot, but now we sometimes have days where we can't do it because we don't have enough staff. We get complaints when it's not on [the GP's] system. On top of the emails, we still get 60/70 documents every day in post [...] There's people leaving for jobs that pay more and might be a bit less stressful and less time." – WM11, Patient Liaison Officer, Towerhill

This relocation demands a degree of learning and adaptive work from individual members of support staff for them to integrate their usual working routines into newly fragmented and technologised spaces. This expanding, and increasingly hidden workload, combined with chronic understaffing, put staff under significant and enduring pressure. Over time, this could lead to staff resistance in working multiple sessions, as outlined in the quote below. In severe cases, it could lead to burnout.

"Yeah it is stressful. The lack of staff sometimes is quite hard actually, we are busier and people don't want to work any extra sessions" – TS, Reception Team Lead, Fernleigh

For many of my support staff participants, nearly all of whom were female, this burden came atop managing the pressures of domestic, caring, and familial responsibilities, as well as juggling precarious financial positions, with participants often working multiple part-time roles and navigating state credit systems. This, in combination with navigating patient frustrations, perceived abuse, and comments that appeared to reflect negative media rhetoric, pushed many members of support staff towards burnout. The compounding pressure of these responsibilities is outlined by the participant below, who describes the burden of expectation in combination with the social erasure of their work and presence.

"Yeah, there are days I'll admit that I go home and, and I just cry [...] I'm just like really trying to help them. So now patients are like, 'well I want everything *now*' when you know, unfortunately, they can't have everything now. Expectation is high. There's a lot of frustration as well. And I feel their frustration. But I think they feel that because a lot of them didn't come during COVID with the media saying that 'oh, well, GP isn't there'. We were here. We were working, we were here." – S2S4 Senior Patient Services Coordinator Interview, Easton

Staff were also obscured through being socially isolated from their peers, lack of acknowledgement from other members of staff, and being physically removed from other staff on the practice estate. Promises of support without clear mechanisms to enable access caused more harm and moral injury through accusations of fraudulent behaviour, destabilizing staff's willingness to continue to work beyond their capacity. The damaging effects of this inconsistency are expanded upon by the participant below, who was penalised for accessing mental health support for burnout from overworking to help meet practice demand.

"The PCN started providing us mental health support therapy, which I used. And I got a note to file from HR to say this is fraudulent behaviour, using therapy during work hours. There's posters and emails everywhere, encouraging you to access therapy, but somehow they didn't think we would do it in work hours, because where else would I do it? I'm at work 24/7. I never take my half-hour break, I just don't have time. I come in up to two hours early, I leave two hours late. Therapy's 45 minutes. I got COVID at work twice by that point, I nearly died. The least you can do is allow me to do some therapy. So they gave me a note to file allowing it. And I just thought, should I be grateful?" – S1S7 Physician's Administrative Assistant, Westerly

6.3.3.2 Impact of prejudice

Staff who were able to act as specialist translators to patients could face prejudice from patients and (more rarely) other staff due to linguistic, cultural, and ethnic bias. Staff that experienced such prejudice reported challenges to their mental health, job satisfaction, and feelings of belonging in the team. The following quote outlines one Eastern European member of staff's experience of discrimination from a patient who undermined her ability to speak English and perform her job well based on her accent.

"The lady had dementia so she wanted me to speak with her husband, her husband was very rude person. Very. So it was very unpleasant talk, it was pretty bad [...] he wanted to speak with one of my colleagues. He said that he wants to speak with someone 'professional' [... on the phone with the team lead] he said that she's supposed to pick

better members of her staff, because he didn't understand my English 'She was talking to us like a total idiot'. [...] So it's taken me a while to just get the confidence again in myself to be able to call the people and ask them to book their appointments [...] I was thinking he's probably right, I cannot speak English good enough." – S2S8 GP Support Administrator, Easton

This same member of staff had, during ethnographic observations, utilised her bilingualism and knowledge of European healthcare systems to support patients who had recently moved to the UK to better understand NHS primary care, highlighting her unique value to the practice.

6.4 Discussion

6.4.1 **Summary of key findings**

The findings of this chapter highlight the unique translational skills of these staff, developed through operating at the intersection of a bureaucratic system and complex personal lives. This work is important in facilitating patient access and good practice function. I determined that this translational work fell into three categories: generalist, specialist, and occupational. Generalist translational work took place between support staff and all kinds of patients, to improve understanding of the GP practice system. Staff provided specialised translational support to patients from shared communities or communities with common linguistic or cultural traits. Occupation translation took place across occupational groups, often by staff working in dual roles who could utilise their knowledge of each to smooth communication and improve working practices.

Despite their unique skills, my data indicates that these staff are also more likely to face abuse from patients and other staff due to intersections of class, ethnicity, language, and perceptions of practice hierarchy. I also found that support staff are more likely to be female, less well-paid, part-time, living in deprived areas, and managing domestic pressures from their personal lives.

The challenges to staff wellbeing resultant of performing this hidden workload of generalist, specialist, and occupational translation were felt more acutely in the less relational practice. As such, I posit that developing a more relational workplace can facilitate better working conditions for support staff, and better staff wellbeing.

Developing a relational workplace strengthens the human infrastructure of the primary care system. A secure and psychologically safe workforce facilitates openness to adaptive and innovative delivery of care,[181] which can help to meet the unique needs of the variety of patients served by general practices across the UK.

6.4.2 Recommendations for policy and practice

The work and needs of support staff are often hidden, made invisible, or de-prioritised, and can be obscured by the hierarchical nature of GP practices and the public perception thereof. To guide practice leaders, I have developed recommendations to support the recursive work of developing and maintaining a relational workplace in which support staff, and their value, may be better 'seen'. These recommendations are not yet tested, so I encourage practice leaders to engage with their staff directly to determine their local applicability. This is presented in Table 8, structured using my previously discussed theoretical framework.

Concept	Recommendations for Leaders
Staffing for quality	- Ensure your number of FT or PT support staff is adequate for your practice's requirements. - Ensure staff have time to be trained in all tasks in case of staff shortages. - Shift from a demand-led service to a capacity-led service. - Team leads should regularly check on the fairness of workload distribution - Encourage informal skill development and intra-team support by expanding social opportunities e.g. with group lunchtimes, break times, and training. - Be aware of the unequal burden faced by team members from underserved communities: ensure they are well supported and have a safe route for escalating disproportionate workloads.
Psychological safety, teamwork and speaking up	- Model the behaviour you want to see in your practice: the conditions for psychological safety, teamwork and speaking up begin at the top and must be consistently reinforced at multiple levels (including formal and social leaders). - Establish pathways for escalating staff issues safely and privately, so that all staff have a support route should they need it. - Recognise that some people may not participate in the practice's social network because of their own needs, caring responsibilities, backgrounds, or preferences. Care should be taken not to reinforce exclusion of such staff. - Present a united team front to support better inter- and intra- team interactions.

	- Be clear and consistent around managing patient expectations across teams: lack of clarity around what the standard care offer is can make equitable management of patients requests difficult. - Develop or share multilingual patient education resources about your particular practice's function to remove some of the translational burden from support staff.
Staff health and wellbeing at work	- Ensure knowledge about mental health support services are shared and access is consistently supported. - Develop peer-support systems. - Ensure provision of resources is appropriate to the role and be clear about why some roles might have access to different resources. - Respond swiftly and appropriately when staff face abuse or discrimination from patients
Lifeworld / system, and lay translators	- Know your staff and know your patients: identify your generalist-lay and specialist-lay translators and their particular community (or lifeworld). Support and recognise their translational work. - In mapping your lay translators, identify where you are missing bridges to communities that your practice serves. Think about how you can provide targeted support for them. - Identify the occupational translators: those who work at the intersection of occupational groups, and therefore have unique situated knowledge. Support and recognise their translational work. - Ensure the practice does not take advantage of the unique skills that lay, specialist and occupational translators offer. Regularly check in to ensure that they feel their workload is fair and appropriately acknowledged/remunerated.

Table 8: Recommendations for practice leaders to better support 'support staff'

6.5 Conclusion

This chapter extends the existing literature on support staff, which has thus far focused on the work of receptionist staff,[217-219] to include administrators and secretarial workers. It does this with a further focus on their working conditions *and* the impact on their wellbeing amidst the multiple crises of 2020-2023. Therefore, this chapter makes a unique contribution in documenting the experiences of these staff and suggesting how practice leaders can better support them. It also expands Maben et al.'s structure of 'working conditions that matter'[181] to general practice, with a focus on support staff. My analysis has extended the concept of 'lay translators'[185] by applying it to support staff for the first time to reveal three types of translational work done by support staff: lay, specialised and occupational.

7 Results 3: Technostress, technosuffering, and relational strain following the digitalisation of general practice work

The following chapter partly reproduces my first-author paper currently under review at the British Journal of General Practice. [21] As noted in that paper, on which I was the lead and corresponding author, ten other authors contributed. My contribution was conceptualising this sub-study, collecting the data, conducting the analysis, and writing the manuscript. Nina Hemmings contributed to data collection, was involved in meetings about manuscript drafting, and provided comments on drafts of the manuscript. Professor Trisha Greenhalgh was involved in meetings about manuscript drafting and provided comments on drafts of the manuscript. Dr Lucy Moore, Dr Emma Ladds, Dr Rebecca Payne, Dr Rebecca Rosen, Dr Joseph Wherton, and Dr Sietse Wieringa collected data at comparative case study sites included in this analysis. Professor Richard Byng provided comments on a final draft of the manuscript.

7.1 Introduction

This chapter looks at the impact of digitalisation on all GP practice staff, taking an equal view of support and clinical staff groups. Since 2020, changes in the organisation and delivery of UK general practice have been extensive and far-reaching. Some, such as total triage[226] and remote by default consultations by telephone, video or electronic communication, [227] went from intermittent use to routine practice as part of an emergency infection control strategy, and subsequently retained (at least in part) as elements of a long-term policy vision for a more accessible and efficient service. [228-232]

These changes need to be interpreted in the context of chronic underfunding in the UK public sector in general, [233] and general practice in particular, [234] rising burden of demand, [235] and task-shifting from other sectors under strain, e.g. secondary care and social care, [236] [233] which creates challenges for implementing complex changes to working routines. The policy assumption has been that technology-enabled work such as remote booking and consulting can improve labour productivity, affording clinicians the 'gift of time',[228] and improve convenience for patients, though studies of remote and digital access to UK general practice have not demonstrated clear efficiency gains.[237]

The expansion of remote and digital modalities in UK general practice has generated safety concerns,[238-242] unmet training needs,[242 , 243] threats to continuity of care,[244 , 245] challenges to coordination of care,[242 , 245] widening inequities of access,[170 , 246 , 247] and a range of workforce issues including reduced job satisfaction, increased job stress, loss of confidence, low morale, increased turnover of staff and increased sickness absence.[179 , 242 , 243] [248]

This chapter presents my findings on the impact of digitalisation during the COVID-19 pandemic on GP practice teams' working conditions and wellbeing. I describe the benefits of these technologies, but also how introducing them drove stress and suffering among practice staff, compromised job satisfaction, and could cause 'relational strain'. Equally, I identify how team members could offer one another 'relational support'. I do so by combining Ragu-Nathan et al's concept of technostress[154] with Gill's concept of workplace suffering, [155] and employing my previously published (though then underdeveloped) interpretation of the 'relational workplace'[179] to explore the strain that this suffering places on team relations and expand further on the concept. This contributes to developing my notion of the 'relational workplace' as a structural form; an ongoing organisational process whereby relational action and structures are in a recursive relationship, which endures through the attention of personnel at all levels (and attenuates in the absence of such attention). [21 , 179] Or, more concisely, relationally-oriented organisational conditions, as discussed in Chapter 9.

7.2 Data analysis and theoretical framework

I followed my previously discussed analytical approach (see 3.9). For the results presented in this chapter, my targeted abductive analysis sought to understand how digitalisation during the crises of 2020-24 had affected the work of all practice staff, and the effects thereof on their wellbeing using my entire staff dataset (excluding only patient interview data). In pursuit of this, I looked for keywords or first-order codes like 'cloud telephony', 'e-consult', 'EMIS', and second-order codes related to digitalised working routines, such as 'digital demand', 'digital disruption', 'multiplication of workload', or 'tech breakdown', and those related to wellbeing (which included staff

mental, emotional, and physical health) such as ‘burnout’, ‘digitally-driven stress/anxiety’, ‘process frustration’, and ‘moral misalignment’.

To determine the appropriate theoretical framework for this chapter, I searched for theories and concepts related to these second-order codes by looking at the theories chosen by other scholars researching workforce wellbeing and occupational health, discussing my data with colleagues, and presenting at discussion seminars. Again, I deductively tested concepts against my data as I came across them, [91] engaging with work from information systems, psychology, internet studies, sociology, health services research, and organisational studies. I, in conversation with my supervisors, ultimately selected and combined three strands of theoretical work which fit my emerging analysis: technostress,[154, 249] organisational suffering,[155] and the relational workplace;[179] incorporating concepts from relational coordination[250, 251] and psychological safety. [158] I chose these to understand and explain the prevalence of technology-induced stress that I was seeing across second-order codes like digital disruptions, multiplication of workload, mental wellbeing, and burnout, as well as staff interactional codes around the strain or support this stress and pressure could illicit. The theories of technostress and workplace suffering helped me to distinguish between issues driven primarily by the technologies themselves (for example, how their (dis)function interrupted or multiplied work, creating additional stress for staff), [154] and how these technologies acted as mechanisms of control over staff action, affecting their perceptions of the work and themselves, and their wellbeing. [155] Relational coordination and psychological safety helped me to identify relational structures and processes that enabled peer-to-peer relational support, [156, 189] as well as identify when these were lacking (where relational strain could occur). I explore all of this further in the results.

In Table 7 below, I provide some examples of how I linked first- and second-order codes with my chosen theories and concepts. Then, I define the concepts included in my theoretical framework for this chapter.

First-order codes	Second-order codes	Linked theoretical concept
Screen messages interrupt Instant messages = 'care by committee' Network outage Tech breakdown	Digital disruption	Invasion (technostress) [154]
Duplicates the whole sheet Compounding work (tech and traditional workstreams) Chain of multiplication (hospital->GP->pharmacy) Digital dumping No slots = work snuck in under in screen messages Uncappable digital demand The Diary Book became a hidden third consultation list	Multiplication of workload	Complexity (technostress) [154]
What am I doing here? I just cry Stress on reception Couldn't cope I don't feel like I have a break Death by a million paper cuts Less job satisfaction (over the phone) Tech-induced anxiety/stress	Mental wellbeing Burnout	Workplace suffering [155]
Somebody will always listen Asked if I'm okay Like a family A big support net	Relational support	Relational workplace [179]

Table 9: Examples of grouping first-order codes into second-order codes, and linking theories and concepts

The first concept in my theoretical framework for this chapter is 'technostress'. In 2008, Ragu-Nathan et al. proposed five contributors to technostress in the workplace: *overload, invasion, complexity, insecurity* and *uncertainty*.[154] More recently, in 2021, Fischer et al. added *role stress* (for example job-related ambiguity), *boredom* (for example where work is increasingly automated), *control* (for example lack of autonomy in a work day) and [lack of] *involvement in system design*.[252] Drawing on these and other sources, Umair et al. refined a theory of technostress (geared towards their

empirical work on online labour markets), which proposes that whilst technology *can* allow for greater flexibility and autonomy for workers, it also typically increases their stress, especially when work is intense and time-constrained, when multitasking is required, and when workers feel penalised or coerced by factors beyond their control. If prolonged, technostress can lead to burnout, reduced productivity, loss of commitment, sickness absence and high staff turnover. [249]

My next framing concept is 'workplace suffering'. In 1998 Gill, citing Cassell's definition of suffering as "the distress a person experiences when they perceive a threat to any aspect of their continued existence, whether physical, psychological, or social",[253] showed that suffering in the workplace emerges from conflicts between staff members' identities and their subjective experience of organisational control—both bureaucratic (to do with rules and roles) and normative (to do with shared values and organisational norms).[155] When modes of control are *compatible* with their identities, staff experience fulfilment but when they are incoherent, staff suffer. The multiple modes of control in an organisation may be more or less *coherent* with one another (e.g. the rules and roles align closely with the organisation's espoused values). A contemporary example of workplace suffering is the *moral injury* sustained by healthcare staff during the COVID-19 pandemic when treatment options and visiting time were strictly rationed and they could not provide the usual standards of care and comfort.[254] There was both *incompatibility* (between the professional codes of conduct they internalised as part of their identities and the protocols they were required to follow) and *incoherence* (because these protocols also clashed with the espoused values of the healthcare organisations they were working in). To reduce their individual workplace suffering, workers may employ one of four strategies: *blending* (aligning aspects of their selfhood with modes of control), *bridging* (connecting selectively with those modes of control they find fulfilling), *distancing* (seeking to keep at bay certain contradictory modes of control through small acts of resistance), and *separating* (attempting to remove themselves from contradictory and incompatible modes of control through larger acts of resistance).

My final framing concept is the term 'relational workplace', which I applied in 2023 to emphasise the importance of human relations for the effective workings of UK general

practice teams, drawing on the work of Maben, Ball, and Edmondson, which proposes that human action, interaction and relationships enable the adoption, implementation and long-term sustainability of innovations and improvements. [181] Such relationships are seen as fundamental to the daily functioning of the practice. Furthermore, it is through positive relationships that the processes and routines of high-quality general practice are enacted, reproduced and sustained over time. [179]

This application of the relational workplace draws on Edmondson's notion of psychological safety, as published in 2018 and defined as people's perception that it is safe to take interpersonal risks (e.g. by speaking up about poor practice) in the workplace, [158] and on elements of Gittell's theory of relational coordination, as published in 2016, which foregrounds the importance of relationships and communication in achieving complex, interdependent work. [156] As work tasks in healthcare become ever more fragmented and team-based, the relational infrastructure of healthcare teams becomes critically important. [251]

I actively sought examples of disconfirming data (where the framework did not fully explain the findings) to test and extend existing theory and considered how data illustrated (or challenged) different kinds of technostress, the different ways in which suffering could be produced—and resisted—in the workplace, and their effects on relationality.

7.3 Results

7.3.1 **Overview of findings**

My analysis gave me a consistent impression that general practice staff were experiencing high levels of work stress, which they attributed variously to the intense and unremitting volume and pace of work, transformation of roles and 'role creep' (being asked to take on different tasks and responsibilities as required by new technologies), growing complexity and fragmentation of tasks (including increasing need to coordinate with others), the demands of new technologies, a sense of loss of control, and a feeling that standards of good professional practice were increasingly difficult to achieve. Broadly speaking, these findings align with those of previous studies. [170 , 179 , 242 , 245 , 255]

In the next sections, I will expand on these findings using subheadings related to my theoretical framework.

7.3.2 Technology's strengths and stressors

Though all staff reported an increase in workload, my dataset contained examples of staff who had experienced the strengths technologies could offer general practice work, particularly improving autonomy and flexibility. For some practices, digital tools offered senior support staff and clinicians the opportunity to work remotely and have a better work-life balance. Some GPs not only did clinical consultations from home but also undertook remote training, research and (in some cases) private-sector work, efficiently building a portfolio career around their home commitments. Others found that homeworking risked blurring the boundary between work and home with negative impact on their work-life balance. The option of working from home was not equally available to all staff.

In some cases, digitalisation could speed up and automate work processes – for example, sending appointment information via email or text rather than letter, using a delayed messaging function to pre-schedule prompt messages for patients to book their follow-up appointments, or engaging patients and care coordinators in information-gathering, as illustrated by the following quote.

This could benefit support staff in improving communication with patients and managing patient requests, as described by the booking coordinator in the first quote below. However, these faster and more automated processes could also generate additional work elsewhere in the system. For example, the digitalisation of discharge summary work has made this process near-effortless and near-instantaneous for secondary care staff, but this could mean that several versions with slight edits and corrections could be sent for one admission, creating de-duplication work for administrative staff in general practice, as outlined by the second quote below.

"[The software] is really good with communicating with patients with this triage system. In reception *sometimes* there's a team of six or seven, sometimes there's only two… When we get to book a patient, we don't have to sit on the phone or call them three times, that takes too long. Now we get through ten patients in the time we were taking calling

one. So good text messaging software is essential for doing this job." BB, interview with Booking Coordinator, Newbrey

"I was with the admin team on the top floor. They are constantly working with different physical and digital documents, as well as all the software for communicating within the practice, and between the practice and hospitals. [Practice Manager] has just been in to tell them he's been getting complaints from the pharmacist and clinicians about having lots of duplicate letters attached to patients' records. [S2S7] who is the team lead says that they can only cope with so much, and the duplication comes from the hospitals. Later, I asked [S2S7] to talk me through how receiving documents from the hospital works now that it's all done via this document software. She tells me "The hospital fires over the discharge copy. If they've obviously forgotten to add something or they need to tell us something else, it duplicates the whole sheet with just that bit added on the bottom. Then maybe because of their changeover of shifts at the hospital, the next somebody comes in and resends the discharge letter. Sometimes I can get six documents that should be one. It makes me really angry, because I don't have the time to sift through it. The doctors want it all dealt with ASAP. I get that, but I'm already running one person short, it's pressure." Fieldnotes from observations at Easton with S2S7, GP Support Supervisor

I identified many examples suggesting cognitive overload from (perceived) complexity of either the technology or the task, interruption (e.g. from pop-up or on-screen messages) and other kinds of invasion, insecurity or uncertainty, as well as role stress, monotony, and technologies that were unfit for purpose. Clinical staff discussed how pop-up messages could infringe on their professional autonomy, feeling they were delivering 'care by committee', and become an almost limitless source of additional (and largely unrecorded) work as the GP in the next quote outlines.

"'Screen Messages' ... is the bane of our lives because when there aren't any slots available, everything goes onto the 'Screen Messages'; it just can become never-ending. Lunchtime is when we start tackling them, which is sometimes a straightforward phone call to advise patients of how to take their medications, but sometimes more complex." CHK, interview with GP, Carleon

Online tasks and remote consultations were often scheduled in greater volume than in-person work, due to a presumption that digitalised work was faster and more efficient. This stretched workloads beyond what was feasible, as described by the nurse in the first quote below. In the second, a receptionist reflects on the sustained upsurge in telephone calls following the mandate for remote-by-default access, and the associated rise in perceived abuse from patients. These two factors combined to have a significant impact on the mental wellbeing of staff.

“The [online clinical reviews] has brought in a huge amount of extra work, they’re just there all the time. I think the *expectation* is we can do them quicker than if we were seeing them face-to-face” MS, interview with Nurse Manager, Fernleigh

“Before, we’d make 20 calls in the morning, but after COVID it went from 20 to 200. It's still like that now, two and half years later…and a queue out the door. We lost loads of staff from it. People just left because they just couldn't cope with the stress. Even yesterday, there was not one appointment on [appointment management software], the patients think we’re lying to them. It’s a lot, the anxiety that we get knowing that we're going to have no appointments to offer.” S1S4, interview with Receptionist, Westerly

The increased accessibility offered by digital consultation request platforms often led to increased clinical workloads. Some technologically able patients used these platforms extensively (either to address previously unmet clinical need or, in some cases, for problems staff classified as trivial or self-limiting), thereby creating a form of supply-induced demand. These issues are illustrated by the GP and nurse in the following quotes.

“I think, in a way, we’ve created a previously unmet need with these telephone consultations.” CHK, interview with GP, Carleon

“[Remote access] captured so many patients that would never come for an Asthma review… it’s grinding us down now, we’re a victim of the success of it” MS, interview with Nursing Manager, Fernleigh

These findings affirmed that technology-supported work was more likely to lead to stress when the work was intense and time-constrained, when multi-tasking as required, and when workers felt penalised or coerced by factors beyond their control. As I will discuss later under ‘distancing’, this could drive staff to move to part-time hours or leave practice.

7.3.3 **Technosuffering and fulfilment**

Across observations and interviews, I encountered many examples of workplace suffering,[155] which emerges when the organisation’s modes of control—either bureaucratic (to do with rules and procedures) or normative (to do with professional standards and moral codes—are incompatible with staff identities or misaligned with one another. In my dataset, I identified these modes of control to include task pathways dictated by technologies, protocols for how technologies should be used, and built-in features of technologies.

Examples of staff suffering stemming from misalignments between modes of control and staff identities, or between different modes of control, included: lack of availability of timely appointments due to supply and demand mismatch; patients struggling with remote access algorithms and waits; patients being triaged to a clinical team member who was perceived to be unsuited to their need; patients being offered a remote consultation when they wanted (or the staff member believed they needed) an in-person one; and patients who believed negative reporting of general practice in the media. These misalignments were particularly evident during interactions with patients and when patients perceived the problem to reflect staff identities or standards (for example, a perception that staff *wanted* patients to be denied in-person appointments). Patients' frustrations and fears about these scenarios would often be directed to the staff members. This elicited feelings of injustice, invisibility, and professional dissatisfaction in staff. These issues are illustrated in the next two quotes from a member of support staff and a GP partner.

"Patients can get aggressive and rude about a telephone wait. When you get sworn at down the phone on the first call. I just think, what am I doing here?" S2S10, interview with Patient Services Lead, Easton

"I don't think the media realises the impact of the way in which they portray GPs, that we aren't seeing patients. Patients believe that more than they believe their own experience. What really upsets me is to see our secondary care colleagues believe that too, even though they're also seeing people remotely. All of that builds up. You feel like you're working harder now than you've ever worked. But public perception is that you're not." S2S15, interview with GP Partner, Easton

For many clinical staff, being 'good' in their professional capacities was intrinsically linked with in-person patient interactions, as illustrated by the following quotes from a senior member of nursing staff and a GP partner.

"I much prefer seeing patients face-to-face. It's fine for some, but for the annual reviews it's much better bringing them in because we can see their inhaler techniques, or, for COPD patients if they're losing weight you can see that, you can see their breathing… I do miss the patient contact as well; that's why I'm a nurse. You get a better rapport in person" MS, interview with Nursing Manager, Fernleigh

"I don't feel like I'm as good a doctor when speaking on the phone. I think human contact is very key to delivering care to a patient. Those physical gestures of empathy and being human are harder to get across on the phone. It's less job satisfaction for clinicians." NN, interview with GP Partner, River Rd

Seeing their patients in this traditional way was a critical element in articulating their professional identity, engaging in professional practice, striving for professional standards of excellence, and achieving professional fulfilment. A requirement to engage with remote modalities that could misalign these articulations could impede professional fulfilment, causing a particular kind of dissatisfaction and suffering – which I refer to as technosuffering. Staff responded to these misalignments and injuries in various ways, which I have categorised using Gill's terms: blending, bridging, distancing, and separating.[155]

7.3.3.1 Blending

Blending refers to how staff align aspects of their selfhood with modes of control to find partial fulfilment within new working constraints. I noted that in my data staff could identify built-in features of technologies that were complementary to their existing working style. For example, GPs during observations used the built-in ambiguity of telephone consultation timings to enable them to circumvent the 10-minute limit on NHS GP appointments. Thereby using one mode of organisational control to overcome another. They felt that wait times experienced by remote patients were more acceptable than those experienced by in-person patients.

Some staff members would embody the modes of control through becoming their workplace 'self', or 'doing an act', which was separated from their own identity as discussed by the receptionist in the following excerpt.

"When I go to work I'm getting on a stage; I'm doing an act. I'm quite a shy, reserved person. It feels like you have to perform because if not, it's a lot more stressful." S2S2, Interview with Receptionist, Easton

Reception staff described how they would develop a 'thick skin' and use a particular way of speaking (phrases and tone) when speaking to patients which often obscured their identities and reflected the modes of control in which they operated (for example, referring to practice policy, inflexible digital routes, and the limitations of their role). In some practices, this protective homogenisation was supported by shared training in telephony or 'customer service', and peer training. Such intentional curtailing of staff individuality could risk a more transactional encounter between patient and service at the point of access.

7.3.3.2 Bridging

Incompatibilities could arise between the organisational modes of digitalised care and their professional guidelines or 'mindlines'. [256] To overcome these, staff used bridging: connecting selectively to modes of control they found fulfilling. [155] This response was more common in roles with clearer professional guidelines, such as GPs and nurses. For example, I observed clinical staff selectively engaging with remote consulting depending on the specific patient or condition. In some cases, the staff member would bring patients in to confirm a provisional diagnosis or clarify symptoms discussed remotely. In the following quote, one GP discusses how they overcome their fears of not being a 'good doctor' over the phone by taking more time to hear full histories and asking for clarifications.

"I don't feel like I'm as good a doctor when I'm speaking on the phone. I just prefer having someone in front of me. I think that kind of human contact is very key to delivering care to a patient… it's harder to gauge over the phone. So, you have to be a lot more in-depth with your history taking in order to kind of clarify certain things." NN, interview with GP Partner, Westerly

Bridging requires additional articulation and hidden work from staff, which increases their cognitive load, risking mental harm and burnout. I identified examples of clinical and non-clinical staff becoming prone to isolation and overworking in attempts to meet their expectations for professionalism within these new modes of control, which could blur role boundaries, as highlighted by the receptionist's experiences in the first quote below, who comments on the anxiety that she feels from meeting the new clinical expectations of her triaging role. The GP in the next quote also reflects on the burden of digitalised working and the extra workload it generates.

"I come in out of my own time to clear the eConsult backlog because it gives me pure anxiety. I have to triage them, to decide how long they wait before the doctor calls them. That's quite a lot of pressure. I'm so worried I'm gonna miss something." S1S5, interview with Reception Team Lead, Westerly

"Actually, [digital access] tends to increase workload. It reduces job satisfaction for doctors that are just having to stare at, you know, a screen with writing on it rather than actually consulting a patient…I think a lot of the time it just ends up being a double touch because you're having to read the eConsult and then you're having to ring and consult the patient anyway." NN, interview with GP Partner, Westerly

7.3.3.3 Distancing

Where modes of control conflicted with staff identities, they sometimes used distancing techniques—that is, small acts of resistance. [155] In my data, these included workarounds for protocols or processes (digital and not) that functioned poorly, bending the rules, and learning to apply workplace policies creatively. Like bridging work, these acts of resistance could increase workload, as discussed by the GP in the next quote, who reflects on a 'hidden consultation list' (which had initially been a workaround) becoming integral to meeting patient demand.

"We have the Diary Book, where all consultations that basically can't be fitted in end up. It's like a third consultation list. It's really awful… It's normally meant to be just sick notes or results requests… It's become this dumping ground for extra telephone calls." IK, interview with GP, Carleon

Some distancing behaviour was a sympathetic response to the bridging work discussed above. Other distancing behaviours aimed to relocate staff in the 'real' world as a brief respite from the ever-present digital work. Some interviewees described temporarily physically removing themselves to escape the pressures, like the receptionist who, in the next quote, reflects on taking time alone in her car to cope. Others were offered immediate support from their teams, when under visible and acute pressure, as the second quote from a member of support staff outlines.

"I just sit in my car. Just not to hear those phones going constantly." DX, interview with Receptionist/ Phlebotomist, Rhian

Someone is shouting down the phone at [S2S10] in reception, we can hear how loud the patient's voice is from across the room. [S2S10]'s voice is wavering a bit but she is keeping quite level. She says, "Please stop raising your voice at me.", "I'm not here to be shouted at.", "I haven't done anything.", "It wasn't me you spoke to originally". The call eventually ends, [S2S10] tells us that it was a pregnant patient who wanted them to call a hospital midwife for their blood results, which GPs can't do. [S2S10]'s eyes are red, she's upset. [S2S4] tells [S2S10] that she had to deal with the same patient; "They're really difficult, it's not on you. Why don't you go have a cup of tea?". They chat briefly about the interaction, which is enough to calm down [S2S10]. She then kept answering the incoming calls. Total exchange was under 5 minutes, but it was enough of a break/ enough recognition to keep going. – Fieldnotes from observations at Easton

I encountered separating occasionally, whereby a staff member used greater acts of resistance to remove themselves from modes of control. I saw and heard examples of clinical and support staff requesting internal role changes, reduced hours, and GPs

adopting a 'portfolio' approach to their careers to include multiple income streams, including private sector work. This is discussed in the following quote, where a salaried GP describes having reduced their hours to take up private work, which was not only better paid but also offered organisational modes of control that were better aligned to their identity and values.

"I do both NHS and private work. The computer system here is archaic. If the conditions were as good here, I wouldn't work in private at all. If I could have the flexibility of private, the 20-minute appointments, no admin. Yeah, I'd just do NHS, I much prefer the concept of NHS." S2S12, interview with Salaried GP, Easton

I also saw evidence of staff from multiple sub-teams (e.g. clinical, support, managerial) choosing to leave their practices entirely. Cited reasons included the increased workload and more hostile working conditions, as previously described. Some left because they felt unsupported by their workplaces during the transition to remote care, and that associated privileges were offered unequally. Some reduced their hours due to the stressful working conditions, as in the following quote from a GP, or fears of patient safety risks due to high workload. There were also instances of staff discussing retiring early.

Many clinical staff *discussed* leaving but outlined their reasons for remaining as being related to a drive to care for patients, their passion for their work, and solidarity with their colleagues. Non-clinical staff also discussed their retention as associated with social bonds with colleagues and the reliability of the work income.

7.3.4 **Relational support and relational strain**

Technostress and workplace suffering driven by the introduction of digitalised work processes had a powerful impact on staff relationships and their ability to coordinate and communicate effectively. In some places, these additional pressures elicited *relational support* between colleagues, where staff used their existing networks of relationships and communication pathways to curtail the impacts of technostress and suffering. In others, they created *relational strain*, whereby the additional stressors frayed relationships and created friction in communication, compounding the impacts of technostress and suffering and impacting overall organisational efficiency. I arrived at my estimates of 'how relational' a given practice was through 1) initial attention to how

people behaved, interacted, and spoke with/about one another in extended observations and interviews, and 2) latterly reviewing that data through relational lenses outlined in the theoretical framework.

In some practices in my sample, interpersonal relationships were strong and positive with a history of effectively and harmoniously coordinating complex tasks. In such settings, staff appeared more able to maintain the social contact required to ensure continued coordination within these new modes, as described in the next quote where a GP discusses their frequent contact with reception throughout the day to 'check in as we go'. This integration was more possible when staff had the time to learn and integrate these new technologies into established processes, understand where they fit into colleagues' workloads and how this impacted the integration of different roles' tasks.

"It's the volume, there's too many things for one person to do. I go into reception quite a lot because I don't think it's healthy to stare at screens for the whole period that you're duty. And I think the duty session runs better if you're in constant contact with [reception] as well while they're adding requests to the task list. I don't want to deal with everything [on the task list] at six o'clock, I like to check in as we go along." S2S16, interview with Salaried GP, Easton

Where staff felt sufficiently psychologically safe to speak up, I saw more common relational support. I observed clinical staff knocking on one another's consulting doors to encourage them to come to team meetings or coffee breaks, ask their opinion on a case, vent frustrations, or deliver biscuits and tea to bolster morale. I also saw that relational strain could be confronted and offset sufficiently to allow for more efficient practice function. The benefits of these supportive professional relationships are discussed by the focus group participants in the quotes below, who reflect on the emotional support that professional relationships can offer to both support staff and clinical teams.

"I think we are incredibly lucky with our colleagues here. This is a place where you can come out, and somebody is always willing to listen if you've had a bad day or it's been a busy shift. I've never had a duty [doctor] that's not asked if I'm okay." S2S20, Advanced Nurse Practitioner, Easton

"I know when I just want to burst into tears, I can always say, 'I'm going out five minutes', or I'll just walk into someone's room and say, I need to talk to someone. We're very supportive of each other, which I imagine isn't the case for every healthcare setting." S2S10, Patient Services Lead, Easton" Excerpt from focus group at Easton

Practices in my sample with weaker interpersonal relationships tended to have more evidence of relational strain. This was particularly the case, for example, in practices that were very hierarchical, where teams were socially and physically separated, or when 'cliques' had developed within/between teams. Relational strain was also more evident when staff perceived inequities in the benefits that digitalisation could afford (see homeworking example above), or when workloads were unequally distributed. These issues were made starkly clear during ethnographic observations at Westerly, an excerpt from which is provided below, when two receptionists working in practice formed an in-group that excluded those working remotely, which strained communication and created a tense working environment when those with work-from-home privileges came into the practice.

"It's 9am. Reception is sparse today. There are supposed to be five of them, but one has COVID, one has a doctor's appointment and is supposed to work from home before, and the practice manager is working from home. The reception team lead and the receptionist are the only ones in, and they are angry, suggesting those on WFH aren't working.

Verbal exchange:

'I don't mean to moan but it's a bit much for two people to handle mate. It's the same people over and over again going off to work at home, and it's the people in charge who get paid twice as much as us. I'm meant to be out front [on the desk] but there's too many e-consultations.' S1S6, Receptionist

'Is [receptionist] even working from home? It ain't fair they get to! Is she answering calls? The prescription folder's empty she should be logging in and doing calls.' S1S5, Reception Team Lead

'Yeah but she'll say she has other work to do, now [manager] has gone off [to WFH] it's hard to make sure [receptionist] does work. I don't mean to sound like I'm moaning but it's hard going. It ain't fun, but I don't wanna complain too much cause I don't want them to think we can't cope. [Practice manager] ain't here because she's got a new dog. If get a dog, can I work from home too? [Laughs].' S1S6, Receptionist

They continue to make comments throughout the morning about the two people working from home. That afternoon, the person with a doctor's appointment comes in, and it is very tense. The two who have been here all day are frosty with her and whisper between themselves." – Fieldnotes from observations with the reception team at Westerly

7.4 Discussion

7.4.1 **Summary of findings**

In this chapter, I have outlined that remote and digital working has offered opportunities for improved process efficiency, patient communication, and information gathering.

However, in many cases, integrating and adapting to these new technologies has exacerbated already high levels of workplace stress through additional 'technostress',[154] leading to unique forms of technology-induced workplace suffering.[155] Staff have developed strategies to mitigate technostress and technosuffering through a range of blending, bridging, distancing, and separating tactics. More extreme distancing and separating behaviours tended to reflect staff coming closer to their breaking points, being driven to work in a manner that was increasingly misaligned with their professional identities, as indicated by some choosing to leave the practice or move to part-time. Some teams demonstrated relational support for one another to acknowledge and reduce suffering. Critical to this was a psychologically safe and relational approach to daily (team)work. Where relational support was lacking, technostress deepened relational strain amongst teams, compounding suffering. However, there was nuance within this generalisation: instances of relational support occurring in small pockets of practices that were overall not relationally oriented, and instances where strongly relational teams were not able to weather the negative impacts of digitalisation, particularly when compounded by ongoing local and national crisis events. I expand on this in Chapters 9 and 10, where I describe the mechanisms that maintain, erode or (potentially) rebuild the 'relational workplace'.

This chapter's findings demonstrate that digitalised processes and care delivery in general practice offer some benefits (such as increased efficiency) in some tasks and processes in. However, these benefits may come with a human cost, which is often experienced unequally across internal hierarchies; with a greater burden being placed on those with the least control over their working routines, such as staff in support roles like administration and reception, as discussed in Chapter 6.

Digital technologies increase the complexity and fragmentation of working in general practice, introducing new challenges and interpersonal strain when conducting interprofessional work within and between clinical and support staff teams. I saw challenges to professional satisfaction, where staff feel they cannot perform their ideal of a 'good' doctor/nurse/receptionist, requiring them to either change roles or learn to adapt. Indeed, I found instances where staff that had experienced suffering in response

to these new organisational controls *then* adapted their working style to maintain or re-attain professional fulfilment, which was critical in preventing total resistance to system change (and, therefore, to retain them in the workforce).

Engaging with theory from other disciplines, most significantly organisation studies, has enriched this analysis significantly. The lenses of technostress, [249] organisational suffering, [155] and relationality in the workplace enabled me to see the staff-level benefits and consequences of the digitalisation of tasks and routines in UK primary care in a new way. [158, 179] Gill's proposed strategies for overcoming suffering were particularly useful in helping me to identify how staff were able to *individually* overcome technostress and suffering driven by digitalisation, such that they could continue to find fulfilment in their work (or endure it). These concepts supported me in identifying where particular staff members' hard limits were for such endurance and at what point they would separate entirely. The chosen relational concepts helped me to see the collective impacts that technostress and technosuffering had on relationships within practice teams, whether that was to elicit strain, support, or both. This theoretical framing has also provided indications as to *why* staff endure these forms of stress and suffering. Alongside practical and financial drivers for employment, staff outlined an enduring commitment to patients, to their practice(s), and to their colleagues as significant factors in retaining their positions. In subsequent chapters, I attempt to achieve a deeper understanding of these relational practices for enduring such turbulent working conditions in future research.

7.4.2 **Learning for policy and practice**

The findings presented in this chapter highlight that theory-informed approaches to research and policy add significant value in enabling us to abstract beyond the boundaries of the empirical setting, to gain insight into the after-effects of introducing complex change into a complex sociotechnical system. Such approaches also afford us, as researchers, the language to describe and communicate the issues under study and to learn from similar settings. In this setting in particular, Gill's theory of workplace suffering provided me a lens through which I could appreciate the complex responses that changes to workplace routines can have upon the heterogeneous workforce of the

GP practice. This may add nuance to debates on, and responses, to the system-wide workforce shortages and retention crisis.

At the level of the practice, there should be recognition of the technostress experienced by some clinical and non-clinical staff due to digital and remote working. Space must be given to practices to determine locally what technologies and training work best for their staff, and how to design protocols around their use to minimise the impact of workforce stress and improve job satisfaction and retention. Practice leaders and managers should continue to work with each clinical and support staff member to ensure that, as far as possible, the balance between new and digitalised processes/modes of consulting is adaptable to each person, such that they are professionally satisfying, manageable, and safe. Practices should clearly communicate changes to existing role boundaries and responsibilities and acknowledge that any changes are processual, requiring periods of adjustments and adaptations to be achieved. Where possible, staff members in digitally-heavy roles should be offered variety in their workflows and have wide team engagement built into their working days to support the endurance of relational structures. Staff must be given the time to learn and integrate new technologies into established processes, understand where they fit into colleagues' workloads and how this impacts the integration of different roles' tasks. This could be well-supported by relationally-informed training programmes to develop and strengthen individual practice's pre-conditioning for change and crisis management, as has been successful in secondary care teams. [257 , 258]

Policy must be directly informed by the reality of the workplace in which it seeks to make change. Without such real-world grounding, policy can be hard to implement for practices and individuals, creating more friction for staff. For example, whilst policies to support flexible working exist, as set out in the NHS 'flexible working principles' [259] and the 'flexibility by default' commitment in the NHS People Plan, [260] their application in practice is not widespread.

7.4.3 **Conclusion**

The integration of digital technologies in UK general practice has created unique challenges for staff across the primary care workforce. I have gone beyond description,

with a novel application of Gill and Ragu-Nathan's concepts to reconceptualise these challenges to integrating new digital technologies as 'technostress' driving new forms of workplace suffering. [154 , 155] This suffering changes what it means to work in general practice across all roles, both in terms of day-to-day functions or tasks, as well as the professional identity and morality associated with these roles. Whilst my application of the 'relational workplace' enabled me to surface how certain teams had been able to support one another through these forms of technostress and suffering, I also learned that not all teams had the capacity to support one another through these difficulties.[179] In a sector that faces its most severe workforce crisis in history, it is critical that the suffering experienced by staff be addressed and rectified as much as possible. Without mechanisms to protect from technostress, and rebuild the social structures for relational support, the caustic nature of control-driven workplace suffering will continue to erode general practice teams. This will further weaken the healthcare system, affecting the health of patients and staff.

8 Results 4: Relational practices: structures, dynamics, and environments that improve navigation of change and crisis

The findings detailed in this chapter have not yet been published in a peer-reviewed journal, but two publications based on this work are in preparation.

8.1 Introduction

Healthcare organisations have undergone rapid change and faced multiple crises in recent years. Against a background of austerity and under-investment, UK general practice in the years 2020 to 2025 has existed under increasing strain. This strain is the sum of compounding external shocks (e.g. the COVID-29 pandemic and associated infection control policies, including the mandate for 'remote by default' care) and internal setbacks (e.g. staff sickness), [261] continuous change (e.g. shifts in patient expectations or staff working patterns), discontinuous change and innovation (e.g. implementation of particular technologies and policies), [262, 263] turbulence from external contexts (e.g. political backdrop of Brexit). [264, 265] In previous chapters, I have described the staff-level impacts of working in this environment of constant change and crisis. In this chapter, I look at how staff teams navigated these changes to daily work and their effects on staff wellbeing. I look specifically at how relational practices established within the organisations contributed to making a more relational workplace in which staff were better protected from the ill effects of the change and crisis contexts in which they worked. Through attending to these relational practices in context, which in sum produce relational working conditions, I also theorise about how they may be constructed, maintained, or broken down through (in)attention over time.

In this chapter, I draw on concepts from psychological safety, [188, 189] relational coordination, [156] and attentional infrastructures, [157] together in my composite theoretical framework to examine how relational structures, dynamics, and environments contribute to developing an organisation into a more relational workplace, and how such an atmosphere can protect staff during periods of change and crisis. The concepts of relational coordination and psychological safety have demonstrated value in other healthcare workforce contexts such as resuscitation, [257]

trauma care, [258, 266] and emergency and critical care departments during the acute phase of the COVID-19 pandemic. [40]

Psychological safety has gained popularity since its introduction to the field of organisational research by Amy Edmondson in her 1999 study of hospital teams. [189] Since this introduction, it has been successfully applied to other healthcare contexts internationally, [267, 268] and in UK secondary care settings specifically, [269] The value afforded to psychological safety in improving patient safety and staff outcomes has led to increased interest in developing improvement interventions grounded in psychological safety, though there have been challenges in measuring the effectiveness of these interventions due to hard-to-define outcome measures, [270] and likely due to the inherently contextual and experiential nature of the concept.

In healthcare contexts, relational coordination has been used for in-practice team training in various secondary healthcare settings to improve medical teams' ability to relate and communicate effectively, [257, 258, 266, 271, 272] and in medical education to improve students' readiness to engage in such teamwork. [273] Attentional infrastructure, as applied by Bartel and Rockmann [157] focuses on the attention paid by organisations to interpersonal relationships among staff, with a particular focus on leadership. I use this concept in its authors' intended capacity; to generate 'new insight on the pre-crisis period; specifically, preventive measures that may reduce vulnerability'. [157] This should not be confused with Nicolini and Korica's original use of the same phrase to describe a bundle of practices designed to direct attention during work. [274]

I used these concepts to frame my understanding of 'relational practices' in GP practice organisations that contribute to the development of a relational workplace. I consider these across three 'practice domains': structural, dynamic, and environmental, as outlined in Figure 11 later. These are practices which become routine in these organisations through the daily actions (or inactions) and interactions of the individuals that comprise it. These actions, in turn, take place within a network of relations (human-human, human-technology and technology-technology) that has evolved historically and continues to change over time. This change may be more or less rapid depending on contextual factors like workforce retention, crisis events, or the frequency/scale of changes to normal working routines.

These relational practices are dynamic and contribute to the 'relationality' of the organisation being in one of three states. A state of 'maintenance' whereby it is continually and actively reproduced. A state of degradation, whereby a lack of attention to these conditions drives 'slippage' away from the ideal. Or a state of 'construction' whereby relational practices are actively and intentionally being built and (re)produced.

In this chapter, I explore the role and significance of these relational practices in helping staff in UK GP practices collectively navigate the strenuous effects of continued exposure to change and crisis. In my empirical setting, this strain was the result of the mandated integration of complex digital interventions into the daily work routines of practice staff whilst responding to and managing multiple competing crises at local and national levels, as previously discussed.

8.2 Data analysis and theoretical framework

I followed my previously described analytical approach (see 3.9). For this chapter, my targeted abductive analysis sought to understand how staff navigated the previously described changes and crises, and the challenges they created for their wellbeing (as outlined in Chapter 7). For this analysis, I again used my entire staff dataset (excluding only patient interview data). To understand this issue, I looked at first- and second-order codes related to what was or was not helpful to individuals and teams when working amidst the changes and crises that were ongoing during my data collection. First-order examples include 'asked if I'm okay', 'pulling at the same goal', 'speak up and ask questions'. Second-order examples included 'speaking up' 'operating knowledge of competencies', and 'listen and support', as outlined in Table 10. It became increasingly clear to me that interpersonal working relationships were central in this topic; whilst many of the working conditions and pressures (crises and changes) were similar or the same across case study sites, the impact on worker wellbeing differed because of embedded relational practices, dynamics, or environments, as explored in the results.

First-order codes	Second-order codes	Linked theory or concept
Everyone feels valued Policy of openness Speak up and ask questions Challenge without aggression No blame	Recognition Speaking up Blame-free	Psychological safety [188]
Pulling at the same goal Trained to work together Pool everyone's working knowledge We know who's good at what We don't know how things are done	Working across teams Working together/ Teamwork Operating knowledge of competencies	Relational coordination [275] Teamwork [276]
Making sure nobody is excluded Open-door policy (leader) Everyone does every task (good and bad)	Inclusive leadership Team socialisation (structured)	Advocate (attentional infrastructure) [157] Relational leadership
Somebody will always listen Asked if I'm okay Like a family A big support net They'll help me Supportive A strong team	Listen and support Practice unity	Team atmosphere Relational support [21]

Table 10: Examples of grouping first-order codes into second-order codes, and linking theories and concepts

As with the previous results chapters, returning to these earlier codes and concepts prompted wider theoretical engagement with concepts from organisational studies around teamwork, following Eisenhardt's method by 'enfolding' relevant literature. [103] Following a period of testing out this literature with my data, I identified that the concepts of attentional infrastructures, relational coordination, and psychological safety were most useful in this instance. These concepts captured some of the practices that I later distinguished as falling into three domains of relational practices (structural, dynamic, and environmental). I describe this theoretical framework, the composite model into which I have embedded them, and my model of change, below.

Psychological safety relates to ‘people’s perceptions of the consequences of taking interpersonal risks in a particular context such as a workplace’. [188] A psychologically safe environment is one in which organisational members feel secure and capable of changing their behaviour in response to organisational challenges, such as change and crisis. At an individual level, psychological safety enables personal engagement, creativity and knowledge sharing at work, especially in relation to uncertain tasks; it is a precondition for *speaking up*, whereby people are willing to ‘voice their observations, questions, and concerns, especially to colleagues above them in a hierarchy’. [181] At the organisational level, psychological safety is associated with improved organisational performance and learning—especially learning from failure, a critical capability in a workplace facing frequent change and uncertainty.

The concept of relational coordination begins with the observation that work is ‘increasingly complex, specialised, and interdependent, requiring coordination across roles, disciplines, organisations, and sectors’. [275] It posits that relational coordination between individuals is critical to achieving this interdependent work, particularly when work is performed in a context of unpredictability. [275] Relational coordination is defined as ‘a mutually reinforcing process of communicating and relating for the purpose of task integration’. [251] This process happens via frequent, timely, accurate, and problem-solving communication through relationships of shared goals, shared knowledge, and mutual respect. [251 , 275] It is supported by various mechanisms and structures, such as boundary-spanner roles, team meetings, relational leadership, shared accountability, and shared conflict resolution, many of which I have integrated into my model of the relational workplace. It is further supported by environmental practices of psychological safety, humble inquiry, and empathetic connection. [156 , 271]

Attentional infrastructure offers an explanation as to why relational coordination and psychological safety are stronger in some organisations than others: attentional infrastructures. Bartel and Rockmann state that ‘the attention paid to interpersonal relationships among top managers continually shapes and is shaped by the quality of relationships that emerge at the unit level’. [157] If organisation members do not trust and feel safe with one another, the organisation will not be able to maintain the sustained attention to issues needed to adapt to change and respond to crises. The authors

describe three archetypes of attentional infrastructure. First is *relational advocacy*, in which leaders advocate for the value of interpersonal relationships and take active steps to nurture those relationships. This produces attention structures in which 'organisational members are emotionally engaged and connected to others, exhibiting a capacity to listen, exercise voice, self-disclose, convey respect and stay focused on one another as they discuss task and relational matters'. [157] This archetype is infused into the overall model of the relational workplace. The second archetype is *relational antipathy*, in which leaders explicitly devalue the strategic importance of interpersonal relationships. This produces attention structures in which organisational members connect transactionally and as needed on task-specific matters, rely on formal work roles and processes, and 'exhibit a limited capacity to listen, exercise voice, self-disclose and convey respect to one another as they complete their work'. [157] Finally, there is *relational indifference*, in which leaders neither actively promote nor actively negate the value of interpersonal relationships. They may pay lip service to the value of relationships, communication and staff empowerment but enact practices which fail to reflect these espoused values. [157] This results in a failure of organisational attentiveness and compromises organisational and individual resilience. Bartel and Rockman describe *indifference* as the commonest and least understood archetype and the most likely to erode the organisation's ability to respond to crises. [157] I draw on this when discussing less relational organisational environments.

I bring together elements of each of these theories and concepts (psychological safety, relational coordination, and attentional infrastructure), as well as some previously discussed and developed in this thesis (relational workplace, relational support, relational strain) to outline my understanding of how relational structures, relational dynamics, and relational environments enable and perpetuate one another, to produce workplaces that can better manage the negative impacts of change and crisis. I understand these as 'domains of practices'; groups of kinds of relational practices (structural, dynamic, and environmental). Wenger defined practice as 'doing, but not just doing in and of itself. Doing in a historical and social context that gives meaning to what people do'. [277] Whilst I do not delve into the histories of the many tributaries to the 'grand lake' of practice-based approaches (as described by Nicolini) [278] due to the

scope and scale of the work in this chapter, I find the term practice good to think with here, and use it for several reasons.

First, due to the variety with which it is applied in practice-based research, making space for structural and dynamic practices, and the notion of environmental conditions as practice, (as outlined in Figure 11) to be unified under one concept. [278] Second, the notion of practices frames the world in relational terms, whereby practices (and thus practitioners) are intertwined with one another, [278] and producing communities that recognise, legitimise, and pass on those practices and relations as 'communities of practice'. [279] This framing helps me to convey the centrality of a relational approach to understanding how teams in GP practices navigated the challenges they faced. Third, to emphasise that these practices are learned as members become socialised into the organisation, [278] centring the importance of the tacit knowledge of longer-term employees, and the erosive effects of rapid turnover. Finally, the term 'practice' is helpful here to reflect the dynamic interactional nature of organisations, which, as Nicolini puts it, 'are made and remade thanks to material and discursive work [... wherein] objects and materials often bite back'. [278] This recognises the organisation as an ongoing social process influenced by agents, both human and non-human.

Figure 11 illustrates my understanding of this dynamic process. I distinguish between three key practice domains comprising the relational workplace as a social system (relational structures, relational dynamics, and relational environments). These all influence and enable one another. Under each practice domain, I have grouped practices that I observed and identified through data collection and analysis. Some of these practices were related to the dynamics of individuals within the organisation – how members interacted with one another. Some were structural, enacted following a specific form that engendered relationality. Others were environmental – the social context which promotes the passing-on of practices among organisation members and is perpetuated by it. These latter practices were less clearly defined through specific actions but were the organisation's practice-related identities formed through 'specific identity-making and awareness-promoting doings and sayings'. [278] All practices under these domains together determine how relational the organisation's working conditions

are, as they are or are not (re)produced and attended to over time by organisational members.

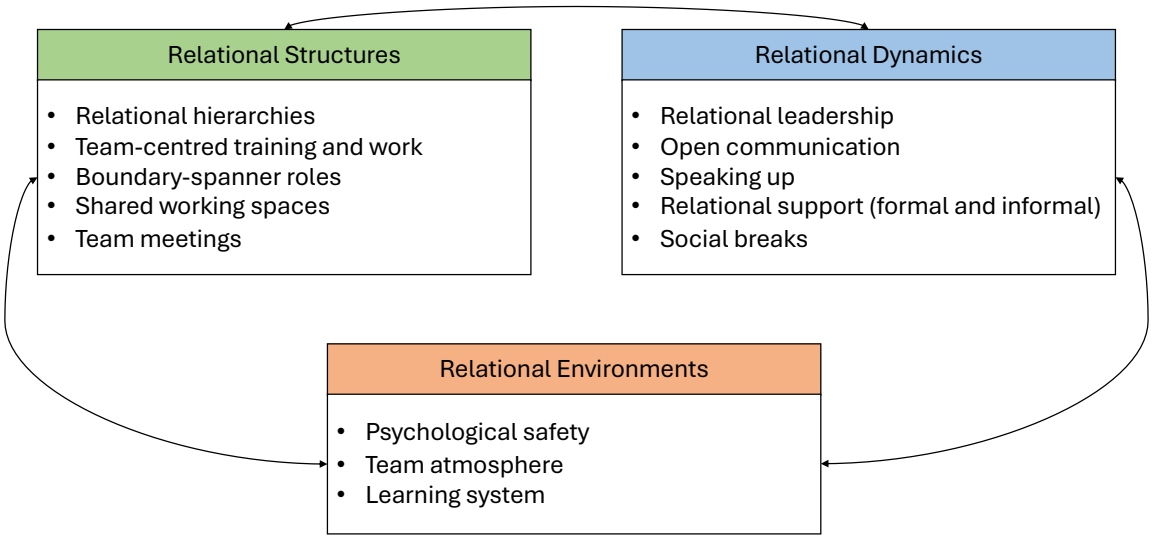


Figure 11: The three practice domains of a relational workplace (each coloured box), comprised of structural, dynamic, and environmental practices (bullet points)

Figure 12 outlines how I understand these forms to persist or erode over time, with continued active attention to (or neglect of) these organisational domains. When these practices are reproduced through the (inter)action of individuals and teams, they persist through 'relational maintenance'. Due to the highly interactional nature of the three domains, attention in one area has a domino effect in others – for example, relational leadership produces relational hierarchies, which encourage psychological safety. When these productive practices decline, so too does the strength of their broader organisational domains, which again has a compounding effect over time, thus driving relational slippage. When there is consistent and active attention to establishing and embedding relational practices across the three domains, relational working conditions may be built through relational construction.

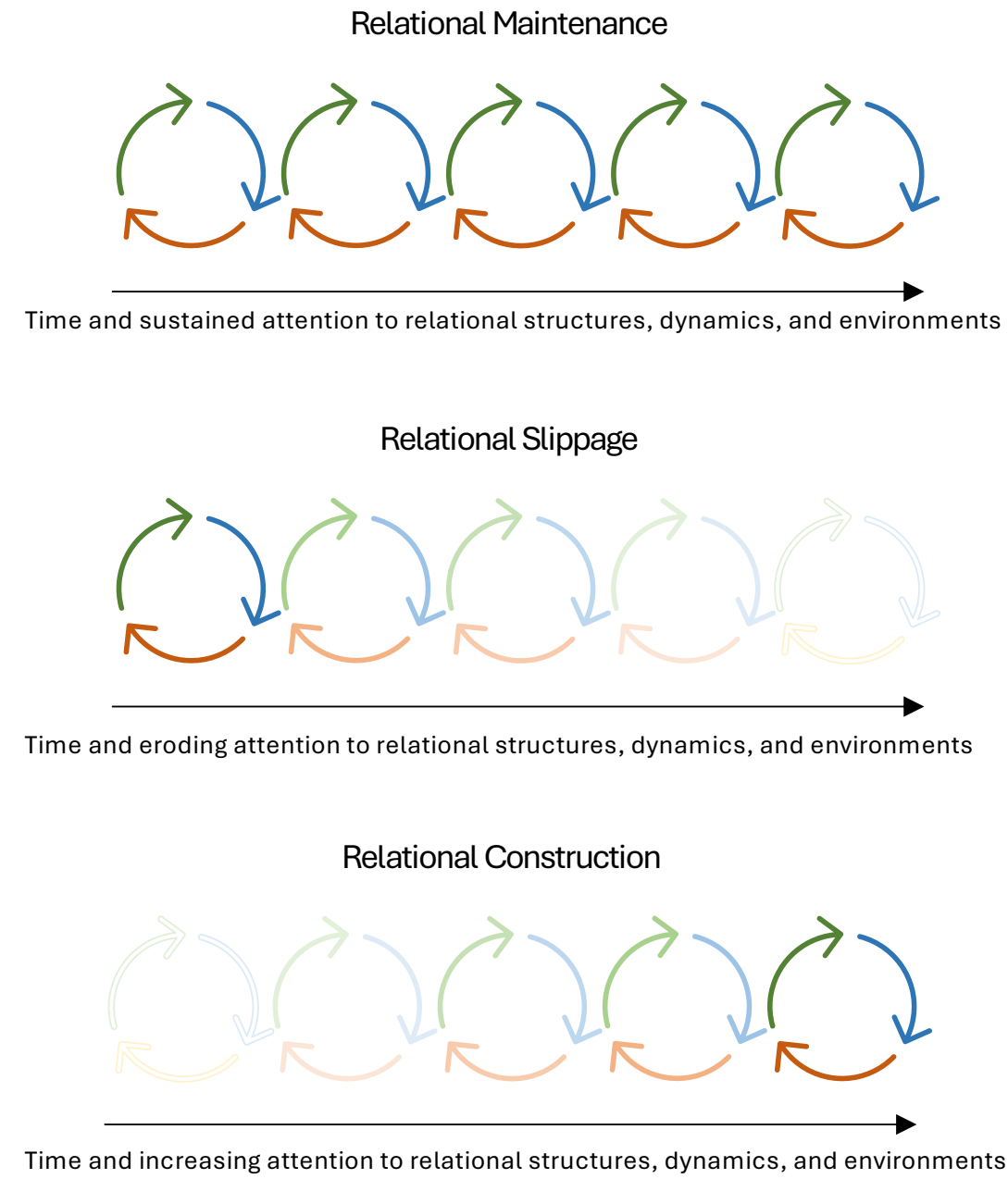


Figure 12: Model of relational change, showing the effect of (in)attention to relational working conditions over time

8.3 Results

I structure this chapter's results following Figure 11, my three domains of relational practices, beginning with relational environments, moving to relational structures, and finally relational dynamics. In each subsection, I describe the relevant practices in context, supported by empirical data, to highlight how their presence or absence affected how each case study site navigated the change and crisis events they faced during my data collection. In doing so, I explicate and substantiate why I believe that a more relational workplace is better equipped to withstand these challenges.

I also develop three novel mechanisms of practice preservation and change: relational maintenance, relational slippage, and relational construction. Related to this last mechanism, I offer the original concept of relational aspiration (which was sensitised by Bartel & Rockman's typology of attentional infrastructures) to describe organisations that wish to improve their relational practice.

8.3.1 **Relational structures**

I consider relational structures to be organisational practices which can facilitate or inhibit the development of strong working relationships between staff. They may be tangible (e.g. shared working spaces) or intangible (e.g. relational hierarchies), engendered formally (e.g. boundary spanner roles) or informally (e.g. team atmosphere). To persist over time, these must be actively attended to through the actions and attention of a strong majority in the organisation. Here, I define each relational structure and discuss examples.

8.3.1.1 Relational hierarchies

When discussing hierarchy in organisations, it was tempting to dichotomise hierarchical and flat approaches as normatively 'bad' and 'good'. However, I learned through my engagement with multiple GP practices that hierarchical configurations themselves are neutral (e.g. singular top-down, distributed top-down, clinician-led or management/clinician-led, devolved to team leads). It is the nature of the relationships within that hierarchy that inform its overall tone. In the following quotes, these various hierarchy configurations are discussed positively due to the additional attention to

relationships across the overall organisation. Firstly, a practice that had one clear leader who worked with a very small team, all of whom knew each other very well (either through working together for an extended time or through family connections) and understood the established configuration. Through enacting this relational hierarchy over an extended period, every member was confident in their position and had a willingness to (and knowledge of what was required to) 'go the extra mile'.

"In Range Park, there's one clinician who's the boss, she's in charge. The others work to her style, under her organisation…That worked because there were often just a few people: herself, her daughter [the receptionist], a nurse, and the practice manager who had been there a long time and was happy to follow orders… The practice manager knew all the tech stuff, and [the boss] had her daughter as the receptionist because she wanted someone she could trust and was educated, and she [the daughter] goes the extra mile because she has a relationship with the person in charge." S8S9RIR, interview with Researcher-in-Residence, Range Park

In some sites, leadership was shared between partners, but not devolved significantly beyond that. In these sites, partners led top-down. What was important in these cases was not the specific ordering of the hierarchy, but rather the nature and frequency of communication across that hierarchy. When communication was transparent and provided with contextual information, it would improve cross-practice understanding of why certain decisions were made, even when unpopular. The benefits of this transparent approach are indicated in the first quote below, where a researcher-in-residence for Carleon and Rhian reflects that 'everyone understood' the hierarchy and how internal changes or decisions were made in the practices, and when their opportunities to feed in were.

"There was a hierarchy in both [practices] for making decisions, which everyone understood. In Rhian, the practice manager said that all the decisions run through the senior partner, but the practice manager had more independence to try and improve workflows and processes. Whereas in Carleon, it's quite a rigid structure, where the senior person had been there a long time. The partners made the decisions." S6S7RIR-A, interview with Researcher-in-Residence, Carleon & Rhian

The next quote from a partner at Fernleigh describes why the transparency that a relational hierarchy affords is important: by providing a big-picture view, and the reason for decisions (which may include external constraints, like how funding is allocated in the NHS). In this case, navigating a workplace change (introducing a new clinical role)

which was linked to a national crisis (significant concerns around the safety and legitimacy of these new staff).

"It's hard to see why you're doing things in particular ways if you haven't got that bigger-picture overview. So, we had a meeting the other day with our salary doctors who were very upset about the fact that we employed two physicians' associates [who they would have to supervise]. The reason is because we get funded through the PCN, through the Additional Roles Reimbursements Scheme, to have them, but we can't use that money for doctors. My salaried doctors didn't know that. But the moment we explained that it made much more sense to them." S10RIR, interview with GP Partner, Fernleigh

In other practices, there was a clear hierarchy but distributed decision-making power across partners, the practice manager, and (to some extent) team leaders. Team leaders and partners had often moved vertically upwards from within their specific teams, affording them embedded relationships with other members of staff and an in-depth understanding of the roles, and how different change and crisis events could affect them.

"In Rhian's main site, receptionists had filtered up to deputy managers. So they had a very strong understanding about what receptionists were going through [with the higher workload] and very connected." S6S7RIR-A, interview with Researcher-in-Residence for Rhian

The sites with less relational hierarchies tended to have a bigger separation between clinical and support teams, given that practices were generally partner-led (which are clinical roles). There was a lack of consideration for support roles, and no routes by which their needs could be communicated. These divisions were evident in whose voices were considered when making change, how different teams worked together in the practice, and who was at the 'core' of the practice.

"At Queens Rd it was the Partners' voices that matters. You need to be a partner, if you're going to have any, any real stake in change." S4S5RIR, interview with Researcher-in-Residence, Queens Rd

"There were two layers to the hierarchy. One with the clinicians on the top. And the lower level, that's the admin and reception. In admin it's a bit less supportive, there's less of a team feeling, less connected - they're not seen as the core of the practice." S3RIR, interview with Researcher-in-Residence, Towerhill

This translated to poorer experiences for staff, particularly during crisis periods. For example, teams that were divided during the pandemic and lacked a relational

hierarchy through which to communicate their struggles suffered poor mental health, feelings of isolation, creating an atmosphere of 'misery' and neglect.

"During the pandemic, there was an 'us' and 'them' team. Inevitably, if you isolate whole staff groups, one group are going to be neglected [...] We [in admin] all felt isolated, segregated, mental health was really in great decline for all of us." S1S7, interview with Clinical Assistant, Westerly

"The people here were quite miserable. It impacts on everyone. Everybody would *say* that we're a team, but there's a divide between the admin staff, the clinical staff, the reception staff. I do think that having a big team environment and feeling supported is just needed in any job." S1S6, interview with Receptionist, Westerly

These less relational practices also had an opaque approach to decision-making and change implementation. Lack of clarity around why work processes were designed in certain ways, how decisions were made, and why changes were implemented drove feelings of being unseen, frustration, and isolation.

"People get frustrated with the systems and the processes of working and 'why do we have to do things this way' and not feeling heard. Because people are on their own, which is, is a problem" S4S5RIR, Queens Rd

"We don't know about changes until changes are actually implemented, until it's in place. It's frustrating, because the changes that are happening everyone needs to know about that." S1S5, Reception Team Lead, Westerly

8.3.1.2 Team-centred training and work

Another structural practice that facilitated relationality were the locally-established training practices. I noticed that a relational approach had been embedded into many practice teams from the beginning, through training that was formal (induction, formal training workshops) and informal (socially, ongoing through the team-focused action of individuals). This applied to clinical and support staff groups. Training staff members to approach their work as a collaborative effort helped them to feel supported and engender a shared dedication to their work, as described by the following quotes from Ogden East's practice manager, who reflects on how GPs trained in this deep-end practice.

"Quite a few of our salaried GPs are GPs who trained here and have stayed, and that says something about their intention, their dedication. It says something about their trainers particularly. I've worked with a lot of practices over 30 years and this practice genuinely is dedicated to its patients in a way that others aren't or can't be." S4BT2, interview with Practice Manager, Ogden East

This team-centred training practice contributed to staff retention by providing a workplace where staff could feel that they shared the same ethos. This was sometimes framed in opposition to an undesirable ethos, e.g. not 'narcissistic' or 'dog-eat-dog', as the following GP from Rhian describes.

"How we're trained matters. It can make you narcissistic, or that kind of person where you're dog-eat-dog to get training posts. It's also who you work with. Me and the other salaried that's just got employed both trained here and stayed. Same with all the partners. It's always a good sign when the trainees stay on at the surgery." S7ZT26, interview with Salaried GP (recently trained), Rhian

This, in turn, helped with ensuring the continuity of team-centred staff training into the future, whereby established members of staff passed on their knowledge and approach to new starters, as a partner from Fernleigh describes below.

"A load of our staff are trained through interactions with longer-term staff and the sort of tacit knowledge that they have rather than protocols and processes. I just think you can't quantify the value that those long-term staff bring," S10RIR, interview with Researcher-in-Residence and GP Partner, Fernleigh

Team-centred training helped to create cohesion around the identity of the 'team' but also contributed to building and maintaining a shared understanding of team members' roles, skills, and task interdependencies for better overall work coordination. A partner at Fernleigh discusses the function of this kind of embedded team training in context: the importance of understanding how the whole system (and its composite staff roles) function in improving understanding, communication, and efficiency during work, and the value of drawing on the different forms of knowledge that each staff member holds by virtue of their position in the organisation. What is described is essentially relational coordination, as previously defined in 8.2. Training *for* relational coordination is critical in improving the efficiency of work when under workload pressures.

"Understanding [each other's roles] is important. I think it allows you a better understanding of what their thinking was when they did something. It allows you to interface more effectively with them so that you're not duplicating or replicating what they're doing. By understanding more how each other are working, and who has responsibility for which part of the process, you can have a much more efficient thing when we're all under so much pressure." S10RIR, interview with Researcher-in-Residence and GP Partner, Fernleigh

"In this work, we're drawing on all sorts of different kinds of knowledge: interpersonal knowledge of a patient, working knowledge of the different team members, their skills, experience, and how much to trust them, knowledge about the organisation, biomedical

knowledge. We use all of those things to make it all happen in this kind of team-based clinical environment." S10RIR, interview with Researcher-in-Residence and GP Partner, Fernleigh

Where there was a lack of team-centred training, staff identified that there were gaps in their understanding of the whole system, their role in it, how specific workflows passed between teams, and where interdependencies were. Below, a receptionist from Towerhill highlights that the lack of information shared with their team made it hard for them to understand their role and responsibilities, therefore impeding their work.

"We need to understand how the systems are working, what's our role, what's our responsibilities. We don't know what's ok or not to do. It's just about structure isn't it." S3QT, Receptionist, Towerhill

Similarly, a patient liaison officer from the same practice outlines that this lack of training in how the practice system functions was driving higher turnover rates, contributing to the staffing crisis.

"The [e-consult] requests are being triaged by a doctor, but they need to be *actioned* by one of the receptionists. But there isn't the training on the system. I think if reception were shown a bit more in terms of *how* the system works or the practice works, I don't think the turnover would be as much" S3GF2, interview with Patient Liaison Officer, Towerhill

8.3.1.3 Boundary-spanner roles

Some staff had a shared understanding of multiple role functions built into the requirements of their jobs by having positions that worked across teams as boundary-spanners. This concept is drawn from Gittell's theory of relational coordination (as defined in 8.2). It refers to individuals who work across role boundaries and, in doing so, learn what is required from these different roles to improve coordination in work or tasks that have cross-role interdependencies. Whilst a relatively small proportion of the overall workforce, these individuals can engage with their team-based networks to distribute their knowledge (and thus improve coordinated working) across the organisation. This is particularly helpful during periods of crisis and change when cross-boundary work is required at pace. These roles offer unique perspectives and insights within their teams through engaging in practices across role boundaries.

"Some people had double roles. Like healthcare assistants and receptionists. They had another perspective or understanding when in reception." S6S7RIR-B, interview with Researcher-in-Residence, Carleon & Rhian

Through these windows into different teams, boundary-spanners could understand the limitations of certain roles in their broader context, combining multiple kinds of knowledge. These dual roles also offered the capacity to 'slide' between roles when workload spiked.

"It helps having the phlebotomy work: I get to know the patients a bit more doing bloods,, and enough about the clinical side to know it isn't our decision in reception. When I get a feeling that reception might be making a decision that isn't ours to make, I just remind them to stop and think." S2S9, interview with Phlebotomist-Receptionist, Easton

"[That administrator], she will come up and down. She used to work in reception. Now she works up here [in admin]. And she can slide between the two when she needs to help." S2S9, interview with Phlebotomist-Receptionist, Easton

8.3.1.4 Shared working spaces

Shared space, as a structural practice of a relational workplace, includes spatial infrastructure like places where co-working was carried out (e.g. for administrative or reception staff), locations where knowledge exchange or information transference were regularly practised (spaces where staff cross over during worktime, e.g. the reception office or clinical pidges), locations for informal social practice (e.g. break rooms), and digital discussion groups (e.g. on WhatsApp). I consider these spaces as relational practices because their relational functions develop through the actions of people within them, who use the spaces as opportunities to share information about ongoing work, ask for advice or support, get to know the competencies and functions of other staff, and interact outside of the working hierarchies.

For reception teams, working in the same physical space improved cooperation and opportunities for interaction. Reception spaces also functioned as hubs for members of the multidisciplinary team to interact, ask questions, and work across teams.

"In reception and admin, I think there's close cooperation because they all sit together. Everybody's sticking together, because they work together." S3RIR, interview with Researcher-in-Residence, Towerhill

"Rhian reception would constantly have admin people or, or clinical people coming to reception, dropping things off, asking things. A lot of cross-working there. In a positive way, they seem to be able to come and go a lot." S6S7RIR-A, interview with Researcher-in-Residence, Rhian

In more relational sites, this was more common. For example, at Easton, staff from different teams would frequently cross over in reception, ask for updates about certain

patients, and check in with one another about workload or their personal lives. Whereas in Westerly, there was minimal cross-over between teams, despite clinicians frequently moving through reception areas at break times or to check their pigeonholes.

In sites that maintained other relational practices, but where workflows did not move as clearly into other teams' physical spaces, there were still places where the staff knew that they would cross paths with others at certain times of the day, like the staff room.

"In River Road People tended not to disrupt one another because they knew at some point they'd come and get coffee in the staff room. It was a key space. A space where people felt they could join a conversation, sit, talk, eat their lunch… all the teams were relaxed when they interacted." S8S9RIR, interview with Researcher-in-Residence, River Road

When shared space was lacking, and staff were isolated by their working routines, relationships suffered. There was less opportunity for relationship-building practices, social interaction, and coordination-improving knowledge transference. Without these socialised pauses in working days, staff also experienced lowered morale, burnout, and isolation and found it difficult to seek support. In the quote below, a partner reflects on the siloed and isolated working routines instigated by the COVID-19 pandemic but retained in current practice, obstructing opportunities for interaction. This affected mood, impeded team cohesion and camaraderie, and impacted retention.

"I sit in my chair about five hours every morning and then five hours in the afternoon. I used to be able to do a three-hour clinic and get up, do something, and have half an hour for lunch. During COVID, people were in their rooms doing remote stuff, and we were losing that cohesion within the surgery. It's not conducive to the family ethos. Doctor retention and nurse retention are reduced if you can't interact with your colleagues; you can't ask advice and speak to each other as you would normally, that normal camaraderie you get in fighting the workload." S3NB, interview with GP Partner, Towerhill

Once the practice of interacting in shared spaces was lost, it could be hard to re-introduce by simply creating spatial opportunities. At Queens Rd, attempts to implement regular breaks were infrequently attended by staff who had already developed their practices of isolation, and similarly, at Towerhill, the firm separation between clinical and support staff could not be overcome by being given the opportunity to eat lunch at the same time – the divide persisted.

"Queens Rd have tried to implement regular breaks. But it's been hit-and-miss. People don't turn up to it." S4S5RIR, interview with Researcher-in-Residence, Queens Rd

"It's a two-layer system, and they don't really mingle. So during lunch break or something, they don't all eat together – clinicians eat together, reception eat together, but not both teams together." S3RIR, interview with Researcher-in-Residence, Towerhill

8.3.1.5 Team meetings

Regular team meetings provided an opportunity for relational links to develop between staff members and improved understanding of role/task interdependencies. These meetings focused on both professional and pastoral concerns, helping staff to seek support for the effects of change and crisis in the workplace. At Easton, there was a daily 'coffee morning' including representatives from all teams (reception, administration, leadership, nursing, GPs) that functioned as an opportunity for individual rostered-on that day to socially catch up and to collectively run through the emergency triage list, drawing on the knowledge of all staff to collaboratively solve each problem. This helped to ensure a smooth running of the duty list and allowed staff to raise concerns about any issues related to routine appointments or other practice work.

"Our emergency list gets triaged every day, not just by one clinician, but by multiple. Everybody that gets on that list is seen during clinicians' coffee. They call it coffee, but it's not, it is a chance to sit down with all the clinicians and me and the head of reception to talk through everybody that's on the triage list." S2S3 interview with Practice Manager, Easton

In-person team meetings could be focused on resolving problems 'quickly and in a quite informal way', which could be hard to achieve in an increasingly digitalised and isolated working environment. These meetings allowed staff the opportunity to practice speaking up about problems they were facing and seek help.

"If you're meeting with people on a regular basis, and you're saying, 'I'm really not coping at the moment', *talking* about the problems, then it can get sorted out relatively quickly and in a quite informal way. Whereas if you're siloed, you're under pressure to complete all the workload, and it's difficult to say at the end of the month *why* you struggled." S4S5RIR, interview with Researcher-in-Residence, Ogden East

In GP practices that didn't have whole practice meetings and rarely had smaller-team meetings, like Westerly, the absence of these routinised opportunities to engage in social practices, build system knowledge, share successes, and feedback problems was felt acutely. Both quotes below, from a receptionist and a reception team lead, describe the individual and organisation-level benefits that they believe shared

meetings could offer (knowing other staff, providing feedback, working together) and their frustration at being repeatedly excluded.

"I've mentioned to one of the doctors before that more practice meetings would be excellent for everybody to get to know one another. Everybody putting in their concerns, positive feedback, negative feedback. I've been here for three years, we've had one practice meeting. And that was because of the pandemic. I think as a whole, it'd just be nice to just get to know everybody and be working from the same sheet, come up with ideas, brainstorming to make the practice better." S1S6, Receptionist, Westerly

"The last two [monthly reception meetings] have been cancelled because no one could cover for us. It's frustrating because the doctors get one a week, we don't even get one a month. We need one whole team meeting a month, someone from each department, to go and say the good things, the things that need to be changed." S1S5, interview with Reception Team Lead, Westerly

8.3.2 **Relational dynamics**

Relational dynamics refers to the action and tone of interpersonal interactions between staff. These could be styles of leadership, communication, or support, taking place during work or social breaks.

8.3.2.1 Relational leadership

Relational leadership refers to a practice that I observed in one of my extended ethnographic sites and found supporting evidence of in several of my additional sites. It is an integrative organisational practice, whereby the attention of leaders focuses on enabling relationships to form within and across teams, including across hierarchies. It exemplifies the relevance of Bartel and Rockman's concept of attentional infrastructure (as defined in 8.2) as one way in which leaders can attend to relationships within their organisation. Relational leaders could be found in higher levels of a formal practice hierarchy (partners, practice managers, or team leads), but they could also be social leaders, who were established as such through an extended history of working in the practice (such as a long-standing receptionist). A person in a leadership position was specifically relational when they actively supported individual team members to build working relationships and get to know one another better, was attuned to the wellbeing of other staff and made provisions with them in mind, and established themselves as a person that could be turned to for support.

Formal leaders practised relational leadership in a variety of ways, covertly and overtly. For example, one practice manager acted to re-integrate a receptionist into the dynamics of the reception team, as they had become socially isolated from working in a separate space. Deputy managers in the same practice would help the reception team with their workload during high-workload periods.

"In Rhian, the practice manager had noticed one receptionist had become quite isolated and quite depressed. She worked in a room that was next to the reception area, but the behind some wall, and he brought her desk in with the rest of the staff, because he felt she was too isolated. He moved her to try and incorporate her into the dynamic of the workplace downstairs." S6S7RIR-A, interview with Researcher-in-Residence, Rhian

"In Rhian the deputy managers would happily take over and reception if they need to do and help them out." S6S7RIR-B, interview with Researcher-in-Residence, Rhian

In another practice, a partner established an 'open-door policy' to encourage friendlier interactions with trainees and physicians' associates.

"We've got an open door policy at the surgery, we've got numerous trainees and PA's and they can come and ask me questions, I'm probably the most friendly so they generally tend to knock on my door." S3NB, interview with GP Partner, Towerhill

A relational approach to leadership was noticed by individual team members, and translated to feelings of support and respect, helping to build a 'team' atmosphere. The following quotes, one from a dual-role phlebotomist-receptionist who had been in-post for over a decade, and the other from a recently trained GP, exemplify the impact of relational leadership on the daily experiences of staff across roles and regardless of time in-post, where they feel supported by leadership and teams.

"The doctors have got so much respect for us. We can have a laugh and also be serious. It's an additional family. I could go and knock on any one of their doors. It's really supportive. You're not separated even though you have different jobs." S2S9, interview with Phlebotomist-Receptionist, Easton

"There's support when we need it. That's the reason I stayed here. Everybody chips in. If I'm on call and we have a lot of extra patients coming in, everyone else will help too. This practice is special. I've not found another practice like it…In most practices, you don't have that teamwork." S7ZT26, interview with Salaried GP (recently trained), Rhian

8.3.2.2 Open communication

A central practice that supported relational links to develop was active and open communication between individuals and teams. This open practice of communication was established and reinforced by repetition. Some were formally established, such as

a practice-wide WhatsApp group in Carleon, or followed formal role requirements – like escalation routes for reception issues or clinical queries, as discussed in the below quote from Rhian.

"The WhatsApp group for Carleon was a good example of teams working across reception, pharmacy, GPs, they would all communicate through that group." S6S7RIR-A, interview with Researcher-in-Residence, Carleon

"In Rhian there were specific communication pathways. Nurses had a pathway for handing over the more complex cases to GPs. They also had a digital system where nurses could write directly to GPs. Everyone had a go-to person, for clinical queries and pastoral needs, and they may not be the same person. If they were a receptionist, they would go to the manager, assistant manager, or the head receptionist." S6S7RIR-A, interview with Researcher-in-Residence, Rhian

Others were informally established but had become socially embedded through their routine use, such as Rhian's information-sharing tray that sat on the stairwell between the two teams' offices, or reception's use of a messaging function within the practice management software to send urgent questions to the GPs at River Road.

"In Rhian, they had the trays in the middle of the stairs, between the admin people upstairs and the receptionist downstairs where they'd put paper things in the tray and then the downstairs people will pick them up and put stuff in so they would communicate in that way." S6S7RIR-A, interview with Researcher-in-Residence, Rhian

"If reception had an urgent question they would use the EMIS messaging system, but trainees would go in and ask GPs questions in their room. It was a very collegial environment." S8S9RIR, interview with Researcher-in-Residence, River Road

The least formal was an ever-present acceptance of impromptu communication – such as clinicians in Towerhill always being open to discussing each other's cases, or Easton's reception, admin, and clinical teams all being free to knock on one another's doors to ask questions.

"In the clinical team, everybody could step into another person's room and just ask about an issue, a case. It's always welcomed, always acceptable. They want to keep it safe for anyone that has a question." S3RIR, interview with Researcher-in-Residence, Towerhill

"You'd think there'd be barriers between the doctors down there, admin up here, reception down there. It's not like that. Everybody can go and knock on anybody's door and ask questions." S2S9, interview with Phlebotomist-Receptionist, Easton

8.3.2.3 Speaking up

Speaking up (as defined in 8.2.) refers to when staff feel able to intervene when things go wrong or when there is a safety concern. This speaking up relies on using existing

relationships and communication pathways. In the following quote, a phlebotomist-receptionist reflects on one such moment whereby they used their knowledge of the system and their relationships with other members of staff to communicate effectively about a safety concern they had for a patient. In doing so, the phlebotomist-receptionist was able to prevent a serious safety incident from progressing. In 8.3.1.2, we saw how this 'near-miss' was framed as a collective success.

"There was a gentleman that I know on the phone to another receptionist. She said it wasn't urgent. But *I know* he never phones, that was a red flag to me straight away. So I said, quietly 'he needs to go on the urgent list' [...] He's only having a heart attack. I knew there was something wrong because he called." S2S9, interview with Phlebotomist-Receptionist, Easton

Similarly, a GP partner reflects on the benefits of speaking up when under times of high pressure. When staff felt safe to speak up about feelings of anxiety, being overwhelmed, or uncertainty, it translated to a more secure and supported experience of work.

"When you are overwhelmed, people help. And I've worked in places where that is not the case. So if you put your hand up and say 'I can't cope', or there's a task that somebody says, 'this was really difficult for me last time'. Or just 'I would really like a second opinion', I'm confident that nobody would bat an eyelid; it would be done without me having to ask again. And that's really valuable." S2S15, interview with GP Partner, Easton

8.3.2.4 Social breaks

Aside from formalised meetings (be they work-centred or pastoral in nature), the practice of social breaks provided another routine opportunity to strengthen the relational infrastructure of the practice. During these informal gatherings, staff could get to know one another in a more social manner, sense-check issues, and support each other. In the quote below a reception team lead from Fernleigh reflects on the benefits of more socially focused interactions, which help staff to learn about one another.

"I think that's the good thing about like having the social events as well I think that is really important that we sort of chatter to people, it's nice to talk to each other. You learn about them and what they know." S10TS, interview with Reception Team Leader, Fernleigh

These social breaks could also have an emotional component, where staff could share stories of difficult patient interactions and help one another to manage the strain thereof or complain about mutual frustrations and hardships.

"In the coffee breaks they emotionally support each other, talking and helping each other about how patients make them feel – like drug-seeking aggressive patients or when you

can only help a patient manage chronic pain, when there are no magic pills... So those coffee breaks, they talk about how to manage those situations, and not in a practical way, but just as a kind of listening ear." S4S5RIR, interview with Researcher-in-Residence, Ogden East

"Clinicans and pharmacists all have lunch together in a regular room, so there's kind of a natural, physical, social sharing place to drink coffee together to do lunch together. Complain about the NHS, the hardship." S3RIR, interview with Researcher-in-Residence, Towerhill

These shared breaks provided opportunities for relational support, as outlined in the previous quotes. However relational support was an ongoing process throughout the practice, arising in response to contextual challenges, as explored in the next section.

8.3.2.5 Relational support (formal and informal)

Relational support is the interactional peer support that team members tend to offer one another when they have established working relationships. This support might be required during times of acutely high stress, such as the first two quotes below, where support staff had challenging interactions with patients but were supported by their direct colleagues to navigate their emotions during those moments through facilitating breaks and providing reassurance.

"I did only break down crying once and [my colleague] said just go, put the phone down. She said just go and make yourself a cup of tea, come back in ten minutes, and that ten minutes that's all I needed" S10BH19, interview with Receptionist, Fernleigh

"A patient who was a very rude person, he was being very unpleasant. He asked to speak to my manager. He told her that she's supposed to pick better members for her staff, because he didn't understand my English. Me and [manager] work from the same room, so she said to him 'but her English is perfect', and she handled him. After, she shows me a note in the system for that patient which says he's usually rude and giving problems to the admin team. This note is the warning to the others, so we don't feel it is our fault." S2S8, interview with GP Support Administrator (recently trained), Easton

Relational support would also help staff to cope during times of more protracted stress and strain, as a Fernleigh nurse outlined, who could turn to the partners and a specific receptionist for support when their morale was low.

"My morale is low. But you know, I've got a great nursing team. We get on well with the partners - we have our little rubs sometimes but that's fine. [Named receptionist] is great and always will listen." S10MS, interview with Practice Nurse Manager, Fernleigh

Sometimes these extended pressures could reach critical inflexion points, such as the incident outlined below, an extract from fieldnotes at Easton, where endemic supply

and demand crises had colluded to create a critical short-staffing situation. This put one salaried GP under significant strain, and more formal relational support was required. In this case, discussing the event at a team meeting, what could be learned from it, and how to reassure the GP that it would not happen again.

"We were in the morning team meeting, with all the clinical teams, practice manager, and head of reception. One salaried GP wants to discuss the events of the previous Monday. She was on duty that day due to a scheduling error, with one of the partners in for a routine morning session. The salaried GP said 'all the econsults came through at once, and I tried to turn them off but it didn't work. It was really unsafe. [The partner] stayed for the afternoon but I felt like we didn't have control. It felt like I could make a mistake. The volume was completely overwhelming. I was looking at other jobs it was so bad.' The same GP partner said that she had recorded it in the significant events book. The other GP partner said he was sorry that Monday had been so bad. He said he and the other partners would talk about how to avoid this happening again." Notes from observations of a team meeting at Easton

GP practices that did not foster relational support tended to have less opportunity for relationship-building. For example, at Queens Rd, where there was no way to address feedback issues or 'have a good moan' with colleagues, which previous sections indicated to be supportive in building relationships between staff members.

"At Queens Rd, there's less opportunity to really feedback anything about what's going wrong, if you're having difficulties at all, really. They do have very structured times where they meet occasionally for formal two-hour meetings. But I don't know that there's an informal way to just really have a good moan about your workload. I think that's missing. I think Queens Rd do *listen* to feedback, but it's just the opportunities aren't there." S4S5RIR, interview with Researcher-in-Residence, Queens Rd

Less relational practices tended to use 'quick fixes' in response to staff wellbeing problems, directing staff to wellbeing programmes or NHS staff therapy. However, these offers were inconsistent with the tone of the practices, which did not provide the time to attend such programmes, making the offer baseless. This issue is explored in the quotes below. In the first, a reception team lead is frustrated at being unable to get time off work to access a wellbeing programme. In the second, a clinical administrative assistant recalls being penalised for accessing therapy that was advertised within the practice and specifically ringfenced for NHS staff.

"Those wellbeing programmes don't really work because *we* work. I tried to do one before, and I couldn't do it because I couldn't get the time off work. They're in working hours and then I'm like that doesn't work, does it? I can't the time off in the afternoons. I

work 40-45 hours here. You'd think they'd do it after working hours." S1S5, interview with Reception Team Lead, Westerly

"The PCN started providing us mental health support therapy, which I used. And I got a note to file from HR to say this is fraudulent behaviour, using therapy during work hours. There's posters and emails everywhere, encouraging you to access therapy, but somehow they didn't think we would do it in work hours, because where else would I do it? I'm at work 24/7. I never take my half-hour break, I just don't have time. I come in up to two hours early, I leave two hours late. Therapy's 45 minutes. So really, you owe me four hours, I don't owe you 15 minutes. I got COVID at work twice by that point, I nearly died. The least you can do is allow me to do some therapy. So they gave me a note to file allowing it. And I just thought, should I be grateful?" S1S7, interview with Clinical Assistant, Westerly

These conflicting messages between what was formally 'offered' and what was possible within working constraints drove frustration in staff at best and caused further harm at worst. For example, the clinical assistant above had been a long-serving employee at the time of interview, but had resigned before my fieldwork ended.

8.3.3 **Relational environments**

Relational environments refer to the collective organisational conditions that recognise, facilitate, produce, and are produced by structural or dynamic relational practices. These are also practices in themselves as they are enacted (subtly or directly) through what staff do or say. I have broadly identified my cases as being 'more' or 'less' relational in their environments, and how these broad types affected staff navigation of change and crisis. However, this is a heuristic tool rather than a strict categorisation, given that 'relationality' is a spectrum on which organisations fluctuate (as per Figure 12) and which may vary depending on individual members' experiences. I judged how relational a practice's environment was through my extended observations and interviews (for the ethnographic sites), and (for the comparative sites) by asking researchers-in-residence questions specifically about how teams worked together, their comments on organisational 'culture', and analysing interview transcripts using my codebook, sensitised by relational concepts like psychological safety, adaptability to challenges, the presence of a speak-up ethos, and the presence or absence of a team-centred atmosphere.

8.3.3.1 Psychological safety

Engendering a psychologically safe working environment (as defined in 8.2) was something that had to be actively attended to. In my case study sites, I found evidence of staff in a variety of roles contributing to making their workplace psychologically safe by engaging in open discussion, encouraging questions and adaptation to work, fostering help-seeking behaviour, viewing successes as shared, and embracing learning from failure without blame. In the following quotes, various members of staff reflect on their experiences of psychological safety at the level of the whole practice and individual teams therein. The first two, from GPs at Carleon and Fernleigh, reflect on the ways that psychological safety and good team relations help them to feel appreciated and united under one goal, and describe achieving this environment (or 'culture') as a shared aim of all members of the GP practice.

"One of our aims is to make everyone feel valued in the practice so that everybody feels that they are able to contribute, and if they're not happy, they can suggest changes. We have an open policy so that everybody can say 'this isn't working' or 'I think this would be better if we did it this way'" S6CHK, interview with Salaried GP, Carleon

"If you can just have a culture where it's not a problem at all for you to just ask a question, you can have a good relationship." S10RIR, interview with GP Partner, Fernleigh

The next quotes about the clinical team at Towerhill and the whole practice at Easton, reflect on the benefits of a psychologically safe approach to failing and learning, whereby failure does not result in blame or suffering, and mistakes can be identified and overcome in a supportive manner.

"They have, on the clinical level, this open culture, open environment where people can actually just ask questions, without being blamed or suffer anything." S3RIR, Towerhill

"We're able to challenge in a nice way, not an aggressive way, if something's wrong. Not making that person feel rubbish. We all learn. There's a mistake, an apology, it happens, we move on. It's very, very supportive." S2S9, interview with Phlebotomist-Receptionist, Easton

8.3.3.2 Team atmosphere

A team atmosphere was evidenced by the way that staff spoke about (and to) another, and in how they behaved around one another. Staff talked about the organisations as being a 'strong team', 'family', 'a social net', who were 'in the same boat' during change and crisis events.

“The ethos here is like a big social net, and we all support one another.” S2S9, interview with Phlebotomist-Receptionist, Easton

“There’s a camaraderie in the practice. Culturally, they have said they’re a close-knit team. They trust each other.” S8S9RIR, interview with Researcher-in-Residence, River Road

The practice of team-making generated social ties between staff, which helped to reduce turnover and orientate them towards ‘the same goal’.

“Staff turnover in both places wasn’t high. They felt like family. They knew everybody was on the same boat.” S6S7RIR-A, interview with Researcher-in-Residence, Carleon & Rhian

“You feel like you're pulling at the same goal together.” S10RIR, interview with GP Partner, Fernleigh

Staff in more relational sites would acknowledge the value of each member of the team, contributing to a collective strength. It was also made clear that this team-making was an active practice built together through recognising and acknowledging each individual’s competencies, commitment, shared workload, and respect.

“We have a strong team; we all bring different things to it. We all have a commitment to the job, commitment to each other, and respect for each other.” S2S15, interview with GP Partner, Easton

They would engage in team-centred actions like supporting one another’s workload and working from the same task list. This shared, collective approach to managing high workloads, frustrations with system changes, and coping with crises was demonstrated in everyday actions. The quotes below discuss examples whereby staff at Ogden East would endeavour to collectively complete the day’s work between them so that nothing was taken home or pushed on to the following day’s staff.

“At Ogden East, they try to work to a policy of ‘do today's work today’…it’s much more of a shared problem. At Ogden East, people help each other.” S4S5RIR, interview with Researcher-in-Residence, Ogden East

Similarly, in Carleon and Rhian, clinical staff would take over others’ workloads when they became too high or if their own work was finished, to help navigate the ongoing workload problems.

“In Carleon, with the doctors, they supported each other. If someone was pulled somewhere, the others would take over. Same in Rhian the salaried doctors described how the reason they liked it was because of the teamwork, and they will share the workload. No one person would end up with like a massive list and the others not doing anything.” S6S7RIR-B, interview with Researcher-in-Residence, Carleon & Rhian

In River Road, this collectivisation of work was encoded into the practice software, whereby all clinical staff worked from the same task list, but the 'culture' of trust and teamwork enabled this to work without fear of workload imbalance.

"In River Road, with the online consultations, they're all working at the same time from the same list, not a set number of patients [...] They trust that each other's working their share. It's the culture there that allows that to happen." S8S9RIR, interview with Researcher-in-Residence, River Road

When there were successes, they would be framed as collective achievements rather than individual, as described by the following quote, which describes how a phlebotomist-receptionist's successful avoidance of a crisis event was framed. This quote highlights that a team atmosphere recognises the sum contribution of all team members in achieving organisational goals (in this case, patient safety).

"I'm glad that he's got the help. You can't think I did that [alone] because we all did it; we each do part of it [...] We respect each other. The whole building works as one team. " S2S9, interview with Phlebotomist-Receptionist, Easton

Where a team atmosphere was not present (or was spoken about but not reflected in action), this had negative impacts on staff health and wellbeing. This was evident in the way staff spoke about one another and about their work, and in defensive responses to workload. For example, reception staff in Westerly were highly suspicious of those working remotely, implying that they did not work when at home and that the entire workload was falling to them and increasing their stress during a period of already-high stress due a supply-and-demand gap and endemic staffing crisis:

"It's 9am. Reception is sparse today. There are supposed to be five of them, but one has COVID, one has a doctor's appointment and is supposed to work from home before, and the practice manager is working from home. The reception team lead and the receptionist are the only ones in, and they are angry, suggesting those on WFH aren't working.
'I don't mean to moan but it's a bit much for two people to handle mate. It's the same people over and over again going off to work at home, and it's the people in charge who get paid twice as much as us. I'm meant to be out front [on the desk] but there's too many econsultations.' S1S6, Reception Team Lead" – Fieldnotes from observations at Westerly

When staff consistently worked without a team atmosphere, their mindset became more solitary, and they began to devalue their own health and that of other staff. The first quote below exemplifies the individualistic and unsympathetic response of one team lead when a member of staff had raised concerns about how the effects of

changes to their work (digitalisation and increased workload) were affecting their mental health. The second describes a GP who worked in a more isolated practice, Queens Rd, who felt that health and general practice work were incommensurable.

“I think some people, they're just moaning about their job. You come to work, you’re set a job. So you can’t say one minute ‘I'm up for change’, and then when it changes be like ‘Well I'm suffering from anxiety now.’ S1S6, interview with Receptionist, Westerly

“In Queens Rd I was sat with another clinician, I said how do you manage your own health and she said, if you wanted to be healthy, I'd suggest you don't become a GP.” S4S5RIR, interview with Researcher-in-Residence, Queens Rd

8.3.3.3 Learning system

Another relational environmental practice was developing and maintaining a learning system, whereby mistakes and challenges were viewed as opportunities for organisational learning. The first quote below, from a partner at Fernleigh, reflects on the practices of a learning system, whereby significant events (local crises like a near-miss, patient safety issue, or staff safety issue) were recorded and constructively (and anonymously) discussed in team meetings to learn about how to avoid similar issues in the future.

“We do have a really good culture of recording significant events and discussing them as a team. People are very constructive and understanding... The aim is always to try and learn something. So we always record an outcome about how we were going to stop this happening again, or what have we learned from it.” S10RIR, interview with Researcher-in-Residence and GP Partner, Fernleigh

The next quotes from support staff in Easton outline a less formalised approach to maintaining a learning system, whereby issues or mistakes were openly discussed and learned from in the moment. Equally, no-fault issues were talked about so that staff could learn when negative experiences with small-scale crises (like being shouted at by a patient) were not related to their performance and learn how to seek help in such situations.

“There’s a very positive energy. Very helpful, very friendly. If there's an issue or problem, you can learn from the mistake; you can understand why it shouldn't be done in that way.” S2S8, interview with GP Support Administrator (recently trained), Easton

“I had a patient who called and was very abusive when I couldn't give him an on-the-day appointment because it wasn't medically urgent [...] I was just in shock. All the other [receptionists] were really supportive. The same day, the duty doctor came to me and said, ‘I understand why you had difficulty because he was a difficult patient and didn’t understand the processes.’ They reassured me. So now I don't hesitate to ask for help. I

can go to anyone, from the receptionists to the doctors and nurses, everyone." S2S1, interview with Receptionist (recently trained), Easton

8.3.4 **Preservation and change of relational working conditions**

Through my engagement with these GP practices, and learning about their histories, I began to reflect on the mechanisms by which relational practices were preserved or changed. As depicted in Figure 12, I refer to these mechanisms as relational maintenance, relational slippage, and relational construction.

8.3.4.1 Relational maintenance and its burden

Relational maintenance, overall, is described by the interactive relationship between the individual agents in the organisation and the relational practices. Illustrating these practices and their benefits has been the focus of the results section thus far, supported by Figure 11. Much of this maintenance work is built into the daily actions of individuals within a relational workplace, supported by the existing structures, dynamics, and environments. As explored throughout the results, this practice-based maintenance is largely perceived positively. However, it is also important to reflect on the burden that this maintenance work can place on specific individuals in the organisation, like those I leadership positions. In the examples below, relational leadership helped to protect some staff during a period of workload crisis by relocating that work onto leaders. In doing so, the issue was simply re-located rather than addressed.

"The partners were more protective of the other staff, so extra work would come to them because they felt like it was their problem, so their work was overflowing. They had a non-stopping list." S6S7RIR-B, Carleon

"Receptionists were under so much pressure with the e-consults, and they were really stressed. The partners could see it was too much for the reception staff. They all decided: they were the ones running the practice so they needed to take extra work. So now the the doctor does the triaging. I could see the strain on the partners from the additional work, working late to go through all these requests." S8S9RIR, River Road

When leaders felt that they were failing in that maintenance, they reported strong feelings of guilt and powerlessness. This was particularly acute when these leaders were themselves also under significant workload pressures, feeling like they were

experiencing ‘death by a million paper cuts’, as described in the second quote from a partner.

"As a leader, trying to navigate for change and create the space to think ‘What do we want to keep from these forced changes, and what do we want to lose?’ And how do we create space to reflect on that and understand that when we are just firefighting? It's hard to know what's working when you're feeling a bit beleaguered. General practice is death by a million paper cuts. When everything's falling over and everything's so stretched and at capacity, it becomes really hard to innovate, when you're always firefighting, and you're always running. It's really hard to stand still, and create the space to step out of it, stop and take stock." S2S15, interview with GP Partner, Easton

Staff in highly relational environments who felt loyalty towards their fellow team members tended to over-stretch themselves in order to support each other during times of crisis and change, as outlined in the excerpt from observations at an Easton team meeting.

“At the meeting discussing the unsafe overflowing of work, an ANP, who had been off sick with Long Covid, said ‘[That emergency] was why I’ve come back. Otherwise, I would’ve taken a few extra days.’” – Notes from observations of a team meeting at Easton

This could be a particular problem in the context of UK GP practices because of the ever-present and multifaceted crisis and change events being weathered by staff. When staff felt unable to meet these relational expectations, it could contribute to burnout, as described by the Fernleigh GP partner below.

“It is really a moral harm, not being able to provide that team relational stuff, that really takes its toll. And I think that that's been exacerbating GP burnout rates. That feeling of not being able to be the kind of doctor, the kind of team member, the kind of employer that you really want to be.” S10RIR, interview with Researcher-in-Residence and GP Partner, Fernleigh

8.3.4.2 Relational slippage

My data, collected over a period of 21 months, suggested that Westerly had undergone a trajectory from being a strongly relational workplace (wherein there was a distinct team atmosphere, open communication within and between teams, and shared space/breaks) to one that was much less relational (in which, for example, staff were working in isolation, there was little support available, and staff did not feel safe to speak up). Through my engagement with this practice, I learned that this slippage from more relational to less relational had been driven by two key factors. First, the increased social isolation of working styles due to infection control measures during the

pandemic, which split staff up into ‘bubbles’ across different locations or had them working from home. Second, significant loss of staff to resignations – particularly in reception and administrative roles. This meant a lack of attentive action, due initially to external constraining factors (e.g. infection control rules), which later became socially embedded as staff turnover led to a loss of organisational memory of the previously established relational working conditions. Over time, individual action reproduced this inattention to relationships, driving relational slippage. The excerpt below is from observations in Westerly. There is a clear tension between the reception team lead’s understanding of their team as it had been previously versus how it was during data collection. They use familial language to describe the team’s bonds and the protective way in which they would approach working together during times of crisis when they would ‘fight it out together and help each other’. These bonds had eroded with the disappearance of the staff that maintained them. The new team members did not seem to be significantly supportive of one another, though the remnants of this relational mindset were evident in the team lead’s preference for protecting the new staff from awareness of how supportive the environment had previously been.

“I was talking to Milda, during her lunch break. She’s a reception team lead who has been at this practice for seven years. It's her lunch break. We’re talking about the shift to digitalised processes during the pandemic. She tells me ‘It was a lot of stress on reception. We lost loads of staff from it. People just left because they just couldn't cope with it anymore.’ I asked her if she felt like there was a difference in the team now, compared to before COVID. She says ‘We were all like a little family in reception. When it got hard we'd fight it out together and help each other. We got split up into bubbles, split between here and the other surgery. Didn't see each other. Then people left. We got a whole new team as well now obviously having to train them up in how we run things. It's different.’” – Fieldnotes excerpt during informal chat with S1S5, Reception Team Lead, Westerly

Slippage can occur at multiple levels (organisation, team, interpersonal) and across both established and new relationships. This erosion, through the disruption of the relational network, could happen quickly during overwhelming periods of change, like the digitalisation of work, or crises, like the COVID-19 pandemic or the ever-worsening recruitment and retention crisis. Despite having slipped away from relationality, staff at less relational practices did retain awareness of the benefits of a more relational system. In the following quote from a Westerly focus group with clinical staff, three participants discuss some of the practices I have outlined throughout these results:

teamwork, communication, and understanding and trusting in one another's competencies. They also outline some preventative factors in growing the relational network: a larger organisation, more siloed working, and multiple different styles of working.

"The participants were discussing a slide presenting early findings on the value of teamwork and communication between teams. It prompted some reflections. 'I think we need to work more on teams. It makes the working conditions better if you've got a good team working. It also depends on the size of the organisation; with a big organisation there's loads of different teams and ways of working, it's more difficult than a small practice with less members of staff and people are crossing over more so there's more communication.' S1FG3P1, GP Partner

'I definitely think knowing the competencies of everyone else in the team makes it so much easier to book people with other professionals.' S1FG3P2, Salaried GP

'Also knowing what you don't have to do so you don't take everything on yourself because you are secure in the knowledge that this other person can do it and will do it well.' S1FG3P3, Salaried GP" – Focus group notes, Westerly

Indeed, less relational practices often aspired to relationality but were constrained by the pressures of their circumstances. The cumulative pressures of modern general practice could paralyse the ability of leaders to attend to relationships in a manner which was consistent across rhetoric and action. In turn, this affected the degree to which team members attended to and reproduced relational structures, dynamics, and environments. This relational aspiration is described by the practice manager at Fernleigh, where the value of relationships was recognised and attempts made to embed relational action, but they practice struggled at times to maintain this attention in the face of other challenges.

"Think about high turnover rates. They're very high currently because of the stretched state of NHS in general, and also how much we're able to pay staff due to the rates the NHS sets. We lose money paying our staff with the basic amount the NHS pay us. If we want to break even or offer pay raises, we have to make 'extra' money, e.g. through vaccines, research, teaching, etc. So, in times of high staff turnover, how do you build meaningful long-term relationships even if the structures are in place to do so? It's really difficult. So, what do you do when you know relationships are so important but you just can't get there? It's more complex than the general 'desire' amongst leaders!'" S10S1, interview with Researcher-in-Residence and GP Partner, Fernleigh

I found that less relational sites tended to have warning signs of relational slippage. For example, Towerhill had become a two-tiered hierarchy, split between the relational clinical team and the isolated reception and administrative teams. In the following

quotes, members of each side of this divide reflect on the warning signs and manifestation of relationship slippage. The partner recalls a time when the practice had a 'family ethos', wherein people would chat, joke, and enjoy their time at work. In this case too it's clear that growth in the organisation's size and increasing isolation (working alone and wearing masks) affected the quality of relationships in the practice.

"When we were smaller we focused on the family ethos and family practice: the Towerhill family. I didn't have anything else to give, you know. One benefit I can give to people is we can have a little chat and little joke; and that's part of why you wanna come to work, not just to do a good job and earn a wage, but to enjoy your life. But as we become a bit more corporate as we get bigger you lose that. We have a higher turnover, we've lost staff and lost that ethos a little bit. We're trying to bring it back though; we're trying to interact more with staff as partners. I think it was worsened by remote working and COVID. If you've gotta stay in your room, you've gotta wear a mask." S3NB, interview with GP Partner, Towerhill

Similarly, the patient liaison officer recalls the atmosphere in the practice five years prior, when 'people stayed a long time' and got on better. They outline frictions with leadership, digitalised and fragmented work that takes them away from patient-facing roles, and a lack of investment in relationships due to established high turnover rates as reasons as the new normal in the practice.

"I really liked it here because of the people. [Five years ago], when I started, people stayed a long time. But now we have temps, always recruiting, there's quite a lot of people who left. I think because of friction with an Assistant Practice Manager, and because of the NHS pay - you can get jobs that pay more, are a bit less stressful, and less early starts. And people don't get on anymore. Sometimes you can hardly be bothered with the new temps because you know they're maybe not back the next day." S3WM11,interview with Patient Liaison Officer, Towerhill

Sites that I considered to be more relational (or that aspired to be more relational) also had some evidence of relational slippage. This indicates that even in a workplace that actively attends to relationships through structures, dynamics, and environments is still at risk of slippage when facing a threshold level of sustained change or crisis. Below, a researcher-in-residence reflects on relational practices that had eroded; team-centred training and shared breaks. The loss of these practices is felt by staff, who 'miss' the opportunity to get together, feel more isolated as a result, and links this reduction in relational practice to staff turnover.

“At Carleon their lunchtime education sessions, where they could all get together, stopped during COVID. And I think they all miss that, and they describe the impact of being isolated.” S6S7RIR-A, interview with Researcher-in-Residence, Carleon

“A couple of reception staff left, possibly from the recent pressures… We used to do more social things together as a practice. Less so now, since COVID we haven't quite got back into the swing of doing these things.” S6CHK, interview with Salaried GP, Carleon

Similarly, a practice manager at Fernleigh describes the erosive effects of malfunctioning IT systems which disrupted relational dynamics between staff and patients, for both clinical and support roles, by breaking down.

“The NHS are behind in our tech. That impacts staff because you have to move staff around to increase capacity, because the online system is forever breaking down. People doing the job, they just wanna speak to the patients, help them, but they’ve gotta contend with all these different IT things. Clinical and reception.” S10UH, interview with Practice Manager, Fernleigh

8.3.4.3 Relational construction

Relational construction (or reconstruction) required a significant amount of effort and sustained attention from practice leaders and staff. Leaders recognised that relational practices were hard to build, requiring significant resource investment. Time, attention, infrastructure, and pay (to retain) are just a few factors my participants named as being important in this, as described by a GP partner at Fernleigh, who worked and aspired to have a more relational GP practice but faced practical limitations.

“How do you get there [to a relational workplace] from here when nobody has the time? There are other limitations beyond time: for example, consider infrastructure. We're two sites. We would love to have a daily meeting of all staff as a sort of check-in and team bonding. We could practically only do this online, but people don't really want to do that because they feel it's not the same, and then you lose the value of what you're trying to achieve.” S10S1, interview with Researcher-in-Residence and GP Partner, Fernleigh

Through understanding more about the history of Easton, which was strongly relational, I learned that relational structures, dynamics, and environments could be actively constructed. In that case, it was the result of intentional and strategic change-oriented actions. Below are quotes from a partner and a patient services manager (reception team) reflecting on the old culture compared to the new. The partner recalls an unsupportive, gendered, and top-down working environment that devalued the female workforce. They reflect on how the new partners actively articulated the trajectory of the practice’s ethos towards one of support and equality. Similarly, the support staff

member describes the old environment from their perspective; wherein there was a lack of relationships and communication between support and clinical teams. Whereas now, following the introduction of coffee meetings, shared socialisation, and an open atmosphere for discussing problems, the two teams interact more frequently and have stronger, more authentic relationships.

"I was talking to a GP Partner about the culture of the practice, and why everyone talked about it like it was a family. She said 'That's very intentional. When I started here as a GP, a long time ago, it wasn't like this. It was very top-down and very gendered. We [female GPs] were called assistants, and had to do combined half-time roles because we had families, even though we worked more hours. We all just decided we wouldn't put up with it anymore.' She told me the story of her and the other salaried GPs getting together and demanding fairer conditions, and that the partners, who were all men, basically threatened to all leave the practice. The salaried GPs didn't back down, and the partners did leave. The salaried GPs had to take on the partnership together. She says 'We were really intentional from the start that we wanted it to be different. We wanted a more supportive workplace.'" – Notes from ethnographic observations with S2S15, GP Partner, Easton

"When I started here, there was the odd clinician, you could have a joke with but as you reception was terrified of all the doctors. But actually, they're a lot better now. You can have a laugh with the doctors. I think it's partly doing more social stuff, like the Christmas party we used to do two separate ones, now we do the whole team. COVID, too, we only had each other to talk to. We'd do daily coffee meetings to talk about the work plan, or difficult patients. We're more social, doctors pop into reception more. Reception can be themselves more." S2S10, interview with Patient Services Manager, Easton

As mentioned, Fernleigh was actively seeking to strengthen its relationality by establishing several of the previously discussed relational practices (structural and dynamic). For example, setting up regular team meetings in which individuals 'communicate pretty well' and fostering good working relationships between team members and managers. They note that there was still a perception that individuals struggled to see how the work of different roles interacted and were considering setting up whole-team meetings to improve that.

"We have regular meetings for different teams. I sit in on all of them as the safeguarding person. I think they communicate pretty well. They generally get on well with the managers within the different teams. But there's a perception that they have a lack of understanding of different roles and what they do. I think there are probably structures you can set up to try and make some of these interactions being more successful. So examples might be a whole-staff meeting, to facilitate better relationships." S10RIR, interview with Researcher-in-Residence and GP Partner, Fernleigh

8.4 Discussion

8.4.1 **Summary of findings**

Through engaging with literature from organisational studies in close conversation with my empirical data on UK GP practices, I have presented what I interpret to be the three domains of relational practices that constitute a relational workplace: relational environments, relational structures, and relational dynamics. I chose the practices in each domain because they were consistently evident in my data, across my in-depth ethnographic case studies and my comparative case studies. However, there are likely more practices that I did not observe, or did not perceive due to my particular lenses. To describe the practices presented here, I used terms developed elsewhere that fit strongly within my data (for example, attentional infrastructure, [157] relational coordination, [280] psychological safety and speaking up). [189, 281] I also used terms that I have developed independently that seemed to best describe what I was seeing. The composite whole offers a novel model of the relational workplace (Figure 11).

These three domains of relational practices reproduce one another through the actions of the individuals in the organisation. When there is sufficient attention by individuals to these practices, the whole system of the relational workplace is maintained (relational maintenance). When action is insufficient, due to an erosion of personnel and attention, that process begins to slip away from relationality (relational slippage). When an organisation is in a less relational state and aspires to become relational, it can rebuild these practices by consistently working to facilitate a favourable environment for working relationships to flourish (relational construction). Pool and Van de Ven [263] stated that for an organisation to be 'stable', they must engage in active repair and reconstruction work of their 'practices, organizations [sic] and institutions'. My results and my model of relational change (Figure 11) look beyond apparent 'stability' to focus on the dynamism of practice forms. In doing so, I highlight not only the active repair and reconstruction work required for maintenance but also how the erosion of that work allows practices to slip away from a relational state. Maintaining these practices involves the repeated efforts of a minimum threshold of individuals within the organisation. It is at the level of the individual and the everyday that relationality is

(re)produced sufficiently to be established in the normal practices of a workplace. I have developed these novel mechanisms for organisational change in the context of the relational workplace, but the model could be considered generalisable, with the capacity to scale to other organisational features. In this case, a relational workplace is the desired state because of its capacity to enable organisation members to support one another through everyday relational practices during change or crisis events.

However, relational practices are not a magic bullet; even in relational workplaces, staff experience suffering and strain in the face of significant workplace change and crisis (as discussed in Chapters 6 and 7). Relational practices can help staff to weather these pressures, as has been the focus of this chapter, but not indefinitely. Working in an environment of consistent and compounding crises and changes provides no space for periods of recovery and rejuvenation. In such a setting, personnel are increasingly difficult to recruit and retain, and thus maintaining the necessary degree of attention to establish and maintain relational practices becomes extremely difficult for people at all levels of the organisational hierarchy.

Pool and Van de Ven commented on the importance of 'endings' in organisational change and crisis; 'for something new to emerge, something that has been needs to be concluded'. I suggest that part of the problem in navigating change and crisis in UK general practice is that these events rarely *end*; they are folded into daily work and re-established as normal. This means that multiple co-occurring changes and crisis events compound workload pressures, increasing the strain on staff and thereby speeding the erosion of relational structures. These findings, therefore, serve as an important warning that the unrelenting firefighting conditions are destroying the organisational resilience of GP practices in the UK, as well as the individual health, morale, and will of staff. Relational practices alone cannot provide sufficient protection from the seemingly inevitable wellbeing impacts of constant and unrelenting high workloads on GP practice staff. Long-term solutions for these endemic pressures must be sought.

8.4.2 Learning for policy and practice

My model of the relational workplace within GP practices, which specifies three central domains of relational practices and empirical evidence of their benefits on staff, offers a series of practical steps that can be taken to develop better working relationships between staff in GP practices. By integrating more tangible relational structures and dynamics (e.g. shared spaces, shared breaks, team meetings), and being mindful of attending to the less tangible (e.g. open communication, learning system, and relational hierarchies), working relationships and communication between staff will strengthen. Over time, and with attention from leaders, relational values will begin to be embedded.

At the level of policy, it must be acknowledged that a protective relational system is something that is built over time and relies on the retention of personnel. More care must be taken to create attractive and favourable working conditions for staff across all roles in GP practices. It is critical to be aware that relational practices are not sufficient in isolation to protect staff from the strains of working in an environment of constant change and crisis. Future policy should be sensitive to the additional burden that each required workplace change (e.g. new systems, new policies, new configurations) has on individual organisations and their people, and that unrelenting change (particularly alongside multiple co-occurring crises) will erode the primary care workforce.

8.4.3 Conclusion

In summary, I sought to understand how various relational practices in GP practices helped or hindered staff in weathering the effects of multiple ongoing change and crisis events. Through engaging with a composite theoretical framework, I found that workplaces that were more relational in their environments, structures, and dynamics tended to be more resilient to these strains than those that were less relational, leading me to design a model of the relational workplace. In attending to these relational practices, I also developed a deeper understanding of how they are changed or maintained over time.

9 Discussion, implications, and conclusion

9.1 Introduction

In this chapter, I will discuss how the findings from this study answer my original research questions, as well as their relevance in the current research and policy landscape of UK general practice. I will then describe how I have so far adapted my findings into usable resources for policy and practice, and how I have disseminated this work. I then highlight where this work has revealed potentially fruitful avenues for further research. Finally, I offer my conclusions.

9.2 Summary of contributions: methodological, empirical, and theoretical

This ethnographic case study of UK GP practices originally sought to understand the effect of digitalisation during the COVID-19 pandemic on the working conditions and wellbeing of GP practice staff. At the outset of this study, there was a developing literature on these topics in the context of GP practices, though studies focused on clinical roles (GPs, trainees, and specialist nurses), [10 , 43-46 , 57-59 , 62] overlooking support staff and the cohesive whole practice unit. These studies were also largely descriptive, leaving the topic under-theorised. Through this project, which was closely shaped by scoping work, PPIE, the literature review, and the field, I have adaptively sought to address these gaps, and in doing so, I have produced a deep-dive analysis of what the impact of digitalisation (during the multiple crises of 2020-24) has been on staff and patient work, the effects thereof on staff wellbeing and team relations, and of the value of relational working conditions in improving practice teams' ability to navigate change and crisis.

In 1.2 I outlined my central research questions and the aims of this study, included again below.

Research questions:

1. How did digitalisation during multiple crises affect work in UK GP practices?
2. What was the effect on staff working conditions and wellbeing?

3. How did GP practice teams navigate these changes and crises?

Aims:

1. Identify how digitalisation during the crises of 2020-2024 have affected work performed in GP practices (by patients and staff)
2. Understand the impact of these changes on staff working conditions and wellbeing
3. Identify what organisational traits supported practice teams to better navigate change and crisis
4. Engage specifically with under-represented staff groups
5. Enable meaningful public engagement with the study findings

Each of my three research questions and aims 1-3 are the focus of my four results chapters, as previously illustrated by Figure 8. I summarise the empirical contribution of these chapters (and the literature review) in section 9.2.2 below. Aim 4, which was focused on engaging with under-represented staff groups, was met through my dedicated multi-level approach to PPIE (which foregrounded support staff, as described in section 3.9). This constituted a distinct methodological contribution (see 9.2.1) and was the reason for having a chapter dedicated to the work and wellbeing of support staff. The extent to which I have met aim 4, focused on public engagement, is outlined in section 9.5 which describes my multi-arm approach to dissemination and impact. Though not an explicit aim, my choice to use Eisenhardt's method for this study implies my intention to make a theoretical contribution through this study. [103, 105] I outline that contribution in section 9.2.3 below.

9.2.1 Methodological contribution

Through this project, I have made three methodological contributions. This is the first application of the Eisenhardt method in the context of primary care research, [103, 105] demonstrating its flexibility and cross-disciplinary usefulness. The method provides a helpful framework for first-time users of case study research and retains a strong focus on theory-building, making it particularly valuable to early-career researchers with an interest in both empirical research and theory.

Secondly, in designing this study using a combined case study and ethnographic methodology to conduct multi-sited research, I have contributed to better use of both methodologies in health services research. I applied these flexibly, in a way that I felt worked best for my context, highlighting the importance of reflexivity and participant inclusion in study design.

My final methodological contribution is my approach to PPIE, using three levels of engagement, as previously described in section 3.8 and illustrated by Figure 4. This unique approach was designed to allow input from those who would be impacted by the study's results at three levels: those with fresh eyes, not involved in the research (scoping discussion); those who were providing oversight over the project, with direct steering power (whole study PPIE group); and those who were contributing to the research (local site-specific PPIE groups). This approach was delivered thanks to additional NIHR funding that acknowledged its novelty and potential value. It was used as an example of best practice by the University of Oxford's Nuffield Department of Primary Care Health Sciences in a PPIE-focused departmental seminar, [282] with the funding report available publicly as an exemplar, [283] and is being scaled to other health services research projects.

9.2.2 Empirical contribution

I outline my empirical contribution in relation to my three research questions, described in sections 1.2 and 9.2. I addressed my first research question in Chapters 5, 6, and 7. Digitalising general practice during the pandemic changed the nature of daily practice work and the requirements for achieving that work for patients (Chapter 5), support staff (Chapter 6), and the entire practice team across clinical, support, and leadership roles (Chapter 7). Digital technologies contain inscribed assumptions about their users' competencies which come to limit who can use them and how, driving new digital inequalities in patient access as well as new training needs to staff. In doing so, they generate new kinds of articulation work and translational work for others, who act as bridges between excluded users and the healthcare system. This work is often performed by members of support staff (reception and administrative) who are patient-facing and who possess linguistic, cultural, or social traits that help them to identify

translational needs and act upon them, making them uniquely valuable to GP practices. These staff members can also be exposed to prejudiced behaviour and abuse by virtue of possessing these traits, highlighting a critical need to put protective policies in place at the practice level. Changes to the complex and interdependent work that is performed in GP practices (which is increasingly fragmented across multiple human and technological actors) drive a greater need for practice teams to be able to coordinate this work with one another.

I addressed my second research question in Chapters 6 and 7. In Chapter 6, by looking at the effect of the pandemic and its required digitalisation on support staff, finding that this group shouldered an unequal burden of adaptation work. This was due to their workflows being entirely changed with the shift from analogue to digital access and triage (as described in Chapter 5), as well as from the integration of infection control measures, necessitating learning new processes and technological functions. This burden was also due to their position as the first human access point of the GP practice, which required them to perform additional articulation work and translational work to navigate patients into the digitalised service, and weather the frustrations of patients at these changes. In Chapter 7 I focused explicitly on the challenges to staff wellbeing driven by implementing and integrating digital technologies into daily practice function, in the context of multiple crises ongoing at local and national levels. Specifically, this new requirement to deliver and organise care digitally triggered a unique form of technology-driven stress, technostress. These technologies, in their inflexibility, contributed to new forms of organisational control over how staff could perform their work instigating technosuffering from misalignments between the technologies' rules and the individual person's preferences to personal or professional standards of excellence. These compounding strains and system frustrations could impede communication between staff and, in doing so, negatively affect working relationships, creating relational strain. Importantly, this stress, suffering, and strain could be mitigated in organisations with strong relational ties, where members of staff would actively support one another.

My third question was the focus of Chapter 8. I found that the GP practices involved in my study navigated these changes, crises, and their ill effects with different degrees of

success. Those who attended to relationships and engaged in relational practices were better able to communicate the problems caused by the various changes and crises that occurred during my data collection and, in so doing, could seek and give appropriate relational support when it was needed. I found that there were three key domains of relational practice that contributed to a relational workplace: relational structures, relational dynamics, and relational environments. These practices were developed and strengthened through the actions and interactions of individuals within the organisation. Over time, this attentive action (or lack thereof) contributed to the construction, maintenance, or slippage of relational practices. The integration of change, the management of crises, and the impacts thereof on staff wellbeing all occur *within* the practice. This means that understanding how to navigate or overcome these issues must also begin at the level of the practice. Practice teams navigated change and crisis collectively, supported by relational practices established and maintained locally – within each organisation. These results call for closer attention to be paid to relational structures, dynamics, and environments in GP practices, and to the value of retaining staff long-term, through whom those conditions are enacted and reproduced over time.

These empirical findings reiterate Barley's point that the introduction of new technologies into organisations does not *determine* particular outcomes or impacts. [284] For example, mandating online access does not determine that a GP practice will only be accessed via an online pathway, and implementing digital triage will not necessarily deliver greater efficiency. Rather, technologies create opportunities and disruptions. [284] Opportunities for people to use them (in ways that were or were not intended by their designers) and disruptions that may demand a reformulation of how work is performed and by whom. This interpretive flexibility means that the same technology applied homogeneously across UK GP practices might lead to one set of changed routines that increase work efficiency and staff wellbeing in one practice but to another set of routines that decrease work efficiency and staff wellbeing in another.

My findings indicate that one way to direct these opportunities and disruptions away from the ill effects described in Chapters 5, 6, and 7 is through attending to the working conditions of individual GP practices (as determined by the local relational practices staff do or do not perform). Equally, to pay careful attention to how such wide-reaching

changes are implemented into the existing working practices of staff to ensure they can be aligned with them (or, at a minimum, not disrupt them).

In a national and global context that is increasingly digital-first, there are benefits to be had from the digitalisation of UK general practice. However, taking a homogenous and mandatory approach to implementing this kind of complex and far-reaching change in a heterogeneous setting, wherein there are inconsistencies in resourcing (human, financial, and technological), working practices, staff and patient populations, and capacity for change, creates complex integration issues. These integration issues – the burden of enactment – could have been avoided with careful and considered implementation strategies that were locally appropriate and achievable. Indeed, since the mandate for 'remote by default' care has loosened, with a digital-first approach to access, triage, and delivery of care no longer mandated by infection control protocols, [285] GP practices *have* been determining what works best locally for their patients and their staff. This is a process which has taken time and attention from staff. It is also a process that is likely to have no end; local integration of innovation should be driven by local needs, which will change over time as populations change and technologies develop.

9.2.3 Theoretical contribution

I have contributed to the development of cross-disciplinary theory at three levels. For some, I applied them in a novel or expanded context, like Allen's concept of 'invisible work' in Chapter 6, [160] or Ragu-Nathan's 'technostress' in Chapter 7. [154] For others, I made novel extensions to existing theory through dialogue with my data, for example developing digital candidacy through combining Dixon-Woods' candidacy theory with sociotechnical theory in Chapter 5, [171] or developing the notion of 'technosuffering' from Gill's concept of workplace suffering in Chapter 7. [155] Through extended dialogue and theory-testing, I also developed a new model to understand the practices that produce (and are enacted in) more relational workplaces, and how they develop or change over time, as outlined in my models of the relational workplace and how it may be maintained, eroded, or constructed in Chapter 8. I now consider each results chapter's theoretical contribution.

In Chapter 5, my central theoretical contribution is the extension of Dixon-Woods' candidacy theory by combining it with sociotechnical and sociological concepts, particularly those of user configuration, [172, 173] articulation, [174] distanciation, [176] and disembedding, [177] to understand how digitalisation has fundamentally reconfigured the landscape in which a patient's candidacy must be identified and articulated, then communicated to the healthcare system for adjudication. In doing so, I reformulate candidacy theory for a digitalised healthcare system ('digital candidacy') and outline a new feature of this digital candidacy process: digital facsimilisation, whereby a patient must craft (or have crafted on their behalf) a convincing digital copy of themselves which accurately and convincingly conveys their health need and candidacy for care. I hope to take this work forward by extending this novel theorisation to the use of AI digital tools in healthcare settings to understand how this new form of digital agency interacts with patient candidacy.

In Chapter 6, I applied Allen's concept of 'invisible work' alongside Habermas' concepts of 'lifeworld' and 'lay translation'[184] (as previously applied in healthcare contexts by Mishler and Greenhalgh et al.) [185, 225] to theorise about the new forms of hidden work that digitalisation drove in reception and administrative work, expanding an area previously explored by Swinglehurst et al. [224] Through engaging with these concepts and considering the findings of Chapter 5, I identified three novel forms of hidden translational work performed by staff in these roles: generalist, specialist, and occupational. Generalist translation is the hidden articulation work that most reception and administrative staff will perform for an average patient, translating the healthcare system's processes and rules in lay terms understandable in the patient's lifeworld. Specialist translational work involves performing these articulations across any existing linguistic and cultural divides for patients whose first language is not English, and/or are not used to the UK's healthcare system. Occupational translational work occurs between staff working in different roles, where there may be knowledge gaps in one another's roles, responsibilities, or understanding of one another's competencies – occupational translation improves task integration and smoothens work processes. This translational work occurs at the margins of formalised tasks and was not formally accounted for. Regardless, this hidden work demands particular competencies that

support staff must develop to do their job well, some of which include system comprehension, communication skills, linguistic skills, socio-cultural knowledge, understanding of multiple practice roles and tasks, and an understanding of other team members' specific competencies. This theorisation, therefore, has deepened what 'staffing for quality' [286] means in this context: ensuring that the support team has the correct skill mix to meet the hidden translational needs of its patient and staff population.

In Chapter 7, I extended the use of Ragu-Nathan's concept of 'technostress' to UK general practice research for the first time. I also extend Gill's notion of 'workplace suffering' by considering the digitalisation of GP practice work as a mechanism of control, constricting how staff could perform their work and (in doing so) causing technosuffering. Through applying these two concepts through the lens of relationality, I also theorised about how such stress and suffering could cause strain on working relationships between staff ('relational strain') – and how strong relational networks could engender support to help overcome those strains ('relational support').

In Chapter 8, I combine three theories from organisation studies to support my theorisation of the relational workplace. This included the concepts of psychological safety, [188] relational coordination, [156] and attentional infrastructure. [157] My use of each of these concepts in this thesis constitutes a novel application. I use these to develop a model of the 'relational workplace' comprised of three domains of relational practices: structural, dynamic, and environmental, illustrated by Figure 11.

I also developed four novel concepts; relational aspiration (where an organisation wishes to become more relational, but lacks the resources or knowledge on how to develop relationality), relational maintenance (how relational practices are maintained over time with attention from members), relational construction (how they are actively constructed), and relational slippage (how these practices degrade over time with inattention from members and loss of organisational memory). Through developing these concepts, I created a model of relational change (Figure 12), which offers a theoretical contribution in proposing how relational practices in organisations may develop, be maintained, or degrade over time with member (in)attention. This model

also has the potential to be adapted to understand how other organisational features change over time as a generalisable model of organisational change, which Van de Ven and Poole noted to be 'less known than *why* they change.' [263] I hope to take this work further by focusing specifically on the interaction between agents and these relational practices in the ongoing structuring of a relational workplace.

9.3 Implications for policy, practice, patients, and research

Policy that makes radical and complex changes to already complex working processes in a high-stakes working environment like general practice should be wary of mandates and enforced uptake of specific technologies. UK general practice has been adapting to seismic shifts in its working infrastructure, which will take time to stabilise. Four years on from the crisis-driven integration of many of these new remote consulting and remote access technologies, practices have developed significant learning about what works for their staff and patients. Some have been more able to identify and capitalise on this than others. It is critical for this learning to be shared across the community of primary care to enable good practice to scale up, on the understanding that not all approaches will work across all contexts.

Throughout my results, I have presented learning for policy and practice as relevant to each chapter. Here, I synthesise these implications across policy and practice.

9.3.1 **Policy**

Policymakers and decision-makers should be critical of the research and development behind new technology products and whose voices may have been overlooked or biased in its development. They should avoid top-down mandates for using specific modalities or taking up specific technologies and allow individual practices the space to determine what works locally (for staff and patients). When new technologies and modalities are offered, over-protocolisation should be avoided, such that staff are able to work creatively within these new pathways to find solutions to the inequities and misrepresentations that digitalised pathways can catalyse. 'Success' or 'efficiency' should not be based on measures that rely on the use of these new technologies, as this obscures additional labour required to make them work and devalues efforts to

offer access through non-digital routes (which are more appropriate for some patients). When a new technology or process proves to be ineffective in local contexts, there should be policy flexibility to allow for de-implementation or a suite of traditional and digital options.

Policy should attend to the unique value that support staff bring to practices, who use their unique translational capacities to help patients across the UK to access appropriate care in a timely manner. They may have established informal approaches for achieving this work, which may not fit neatly into top-down changes to how care is accessed, managed, organised, and delivered. This includes relational work with patients and other staff members. Policy should be flexible to allow these workers to adapt practice processes where needed for individual patient needs and ensure that the value of these relational networks is recognised. Support staff are often the outward face of the practice; the first contact for patients accessing care, and for secondary or community services interacting with general practice. This means they are often exposed the brunt of frustrations when new processes or technologies function poorly. It is, therefore, critical that they be kept abreast of policy changes that will impact how patients and other care sectors interact with them.

Future policy that deals with digital technologies in GP practices must recognise that more technologies will not necessarily lead to greater efficiency or to 'freeing up' staff.

It should be alert to technostress, technosuffering, and strained team relations as unintended consequences of digitalisation. When introducing new technologies or new technology-supported work routines, resources should be allocated not just to purchasing the technology but also to optimising its use in the practices and pathways of real-world general practice, given that the same technology may be embedded and used differently in different local settings. Without policy-level measures to protect staff from technostress, technosuffering, and relational strain, the workforce crisis in general practice will continue to worsen.

Throughout this thesis, my findings have pointed (implicitly and explicitly) to the central importance of relationships and practice conditions in facilitating good communication, coordination, and staff wellbeing. Policy for the future of general practice should prioritise fostering good working relationships between staff, relational

practices and working conditions, improving staff retention, making workloads manageable, and promoting work processes that foster collaboration over isolation.

9.3.2 **Practice**

At the level of the practice, staff must be made aware of the new requirements that digital technologies demand of patient users, and this may negatively affect the quality of information that they have about those patients. Thus, care should be taken not to assume the non-viability of an electronic request that appears non-urgent or unclear. Equally, staff must be made aware that some patients are able to 'game' the digital systems and speed up their access through their combined system, digital, and health literacy. Practice processes should not prioritise clearing digital access requests ahead of telephone or in-person requests but rather try to allocate an equal number of appointments to each modality. Without such equity in appointment availability, practice systems will favour patients who are more digitally capable and deprioritise those who require additional support or more traditional access routes.

To recognise the value that support staff bring to practices, I developed a set of recommendations for practice leaders (see Chapter 6). This included a focus on appropriate staffing, such that support staff are not overloaded with an unending stream of work, and prioritising safe capacity over demand. This work should be evenly distributed across staff, noting particularly the unequal support burden faced by team members from underserved communities. My previous recommendations outline that practices should ensure that support staff are given the opportunity to engage with one another away from their desks, develop their working relationships, and share their tacit knowledge of various patients and communities. Practices should strive to present a united external front, such that support staff do not 'take the fall' for over-promises made by clinical staff, or for the frustrations of new practice systems. This unity should also be reflected internally, so that support staff are solidified as members of the practice team, whose voices matter and whose needs are considered by leadership. Practices should consider which staff are performing translational roles (between patients and the practice, and between different practice teams) and ensure that those staff members feel this work is seen and valued.

When introducing digital technologies in work performed by the whole practice team, staff should be afforded time and support to adapt their individual and collective work routines to new technologies (and new uses of existing technologies). Within this, ensuring that each staff member has an acceptable balance of digital/remote and traditional (face-to-face) work. Practices should be alert to situations where technologies constrain work in ways that make staff feel uncomfortable or deprofessionalised. Surface these concerns, talk them through, and, where appropriate, reconsider the benefit-harm balance of technologies. Centrally, GP practice leaders must be aware that efficient and safe general practice depends on good team relations. Staff who are stressed or suffering may develop strained relationships, which must be alleviated wherever possible to ensure good practice function. The model of the relational workplace provided in Figure 11, Chapter 8, may be viewed as a series of practices that can be developed in GP practices to improve or maintain team cohesion through a focus on relationships and communication. For example, integrating more tangible relational practices (e.g. shared spaces, shared breaks, team meetings), and being mindful of attending to the less tangible (e.g. open communication, learning system, and relational hierarchies), working relationships and communication between staff will strengthen. Over time, and with attention from leaders, structural, dynamic, and environmental relational practices will begin to be embedded.

The findings of this thesis are a reminder for practices to attend to these relational practices and environments, which offer benefits to patients and staff. GP practices that prioritise strong working relationships and embed that in their normal daily routines are better able to collectively navigate the integration of complex change into daily work, manage ongoing local or national crises, and protect staff wellbeing from the negative wellbeing effects these changes and crises can instil. This contributes to the maintenance of a working environment that can better retain staff, negating the risk of losing the tacit knowledge of longer-term staff members and reducing the pressure to continually recruit and train new staff.

9.3.3 **Patients**

The most direct implications for patients from this work are my findings regarding how digitalisation reconfigures the process of (and landscape in which) candidacy for care is determined and negotiated, and my findings on the unique translation work that support staff perform to help them gain appropriate access to GP practice services. As described in Chapter 5, in digital-first services, there are new threshold requirements of patients' digital, system, and health literacy to be able to identify, articulate, and negotiate their candidacy for care, and to locate and access those services. For some patients who have sufficiently high literacy across these three areas, the digital candidacy process is intuitive, and their ability to apply their knowledge to 'game' the system means access has become easier. This perceived ease of access has lowered these high-powered patients' threshold of perceived health need, meaning they will access sooner and more frequently than they otherwise would have. For others, the process of digital candidacy is fraught with barriers, repetitive loops, and safety-traps that can prevent them from accessing timely care. Yet, their absence can be obscured by the volume of higher-powered patients. Often, the patients that struggle most with digital candidacy are those already at risk of the inverse care law, [287] or who experience the negative effects of the social determinants of health and illness. [288 , 289]

These experiences have recursive effects on future health episodes, causing a negative impact on health-seeking behaviour. This contributes to the deepening of the (digital) inverse care law, [204 , 287] affecting patients both now and in the future. Overcoming the frictions of digital candidacy requires levelling up patient education in health and system literacy and ensuring that there are alternative routes available for those with low digital literacy. Some of this articulation work is already performed by staff in GP practices, as described in Chapters 5 and 6; however, as workload pressures continue to rise, the capacity of this skilled hidden work is reducing.

A linked implication for patients from this work is, therefore, that a busier, more overworked, and more stressed workforce is less beneficial to patients. Ensuring all patients access the most appropriate care (particularly patients who struggle with digital candidacy) requires strong working relationships between staff, along which

embedded knowledge about patients' circumstances, needs, and requirements can be shared and action coordinated. [156]

9.3.4 **Research**

Each of this thesis' results chapters indicate areas for future research. In Chapter 5, I presented my focused analysis of the equity issues in digitalised access and triage pathways. I outlined that the landscape of digital access and triage is polarised and strongly patterned by markers of disadvantage, including income (and associated access to material and digital infrastructure), education, literacy (linguistic, system, health, digital), social inclusion, disability and life conditions. [170] Future research should focus on collating and determining the efficacy of locally developed measures for overcoming these disadvantages to share learning about what works with the broader primary care community. Equally, future research focusing on designing and implementing new digital solutions in general practice should address the risk of built-in assumptions in technology products and the inequity it may produce, particularly as the application of artificial intelligence, such as large language models, decision-support tools, chatbots, and generative-AI more broadly diversifies and becomes more embedded in daily practice function.

Chapter 5 also outlined my novel theoretical contribution of 'digital candidacy' to set out what is now required of the patient (and practice) to successfully identify, articulate, adjudicate, and achieve candidacy for care. Future research into inequity in digitalised healthcare may focus on testing and extending this novel theory to determine its application in other care settings or whether it continues to be useful in the context of general practice as technologies (particularly artificial intelligence) continue to develop. Another extension of this chapter's findings would be to follow the impact of the facsimilisation of patients (the crafting of a digital facsimile) downstream in their healthcare journey. For example, the impact of a poorly articulated health need (incomplete symptom list/ severity of symptoms) or access need (e.g. lack of information about ability, best methods for contact, relevant social context) on whether or how future care is organised, offered, and delivered.

In Chapter 6, I outlined my findings on the working conditions, wellbeing, and needs of support staff in modern general practice. This population of the general practice workforce is critically under-researched yet is integral to the daily running of practices. They hold substantial knowledge about the needs and preferences of patients and staff and apply this by performing translational work to reduce friction between and within these groups. Support staff warrant dedicated research to fully understand the complexities of this translational work to underscore their value to policymakers and ensure future policy adequately recognises and remunerates this work. Support staff are also the staff group with the least control over their organisational constraints (ways of working, workflow, daily schedules), and so they offer novel insights into what innovations work or don't and how to integrate or work around them.

In Chapter 7, I discussed my findings related to the staff-level impacts of the digitalisation of general practice during the pandemic. Whilst remote and digital working has offered opportunities for improved process efficiency, patient communication, and information gathering, integrating and adapting to these new technologies has exacerbated already high levels of workplace stress through additional 'technostress',[154] leading to unique forms of technology-induced workplace suffering.[155] Therefore, future research should focus on understanding what is needed pre-implementation to improve the integration of new digital technologies into complex workflows so that the burden of adaptation can be reduced for the workforce. Equally, research should identify what more immediate solutions there are for the technostress and technosuffering afflicting the practice workforce currently to arrest further retention problems.

In Chapter 7, I also discussed how digital technologies have increased the complexity and fragmentation of working in general practice, introducing new challenges and interpersonal strain when conducting interprofessional work within and between clinical and support staff teams, which could compound the effects of technostress and technosuffering through 1) adding an additional source of stress, and 2) removing a potentially supportive social structure. Future research into technostress and technosuffering in general practice could focus on harnessing the protective properties of strong relational networks between staff and improving coordinative capacity within

the practice team to be better prepared for the increasingly fragmented and technology-saturated work. For example, research into how to train staff for better relational coordination. [156] There are currently two training programmes explicitly informed by relational coordination, both designed for secondary care settings using embedded training models. One is a programme of theoretical training and e-learning for better communication, leadership, and mutual support. [290] The other is an embedded simulation-style training programme to practically improve the coordination of tasks in emergency surgery teams, followed by guided team debriefs to improve communication and relationships, [257 , 258 , 272] with a broader aim of long-term cultural change. [291] The success of these programmes in secondary care warrants attention from primary care as a potential means to strengthen staff relations and improve staff readiness for the significant coordination required in modern general practice.

Finally, in Chapter 8, I presented my extensive analysis of the effect of *more* or *less* relational approaches to work on the wellbeing of general practice staff, findings that in more relational workplaces, staff felt more supported and valued and demonstrated a greater ability to navigate change and crisis conditions. I provided a model of what I identified as three domains of relational practices that are generative of a relational workplace and how these can be constructed, maintained or lost over time with (in)attention. Future research in this area may seek to test these models and determine their usefulness and transferability across contexts. Similarly to Chapter 7, future research may also seek to determine how to translate these findings into a useful intervention or policy change that can support building or maintaining relationality within practice teams.

9.4 Dissemination of findings

Throughout my DPhil, as my results developed and were published in academic journals, I worked to disseminate the findings presented in this thesis. I have done so across several different streams at the level of individual practices, policy, system stakeholders, think tanks, patients and public audiences, and national and international academic communities.

9.4.1 **Practice**

I have embedded engagement with practices throughout the lifecycle of this DPhil project, as illustrated by my approach to PPIE described in section 3.8. This PPIE work highlighted to me the central importance of translating my findings into formats that would be more easily digestible and accessible than a traditional peer-reviewed journal article. As such, I have engaged in various practice-centred dissemination strategies, including co-authoring an editorial to summarise my research in a shorter format, giving presentations (online and in practice), and collaborating with a design company to produce visual summaries of two papers and their recommendations.

For clinical audiences, I co-authored an editorial with a clinical colleague on 'The Place of Remote Consulting in Modern General Practice' for BJGP. [292] This provided an overview of the background and findings of my DPhil research, and that of the broader RBD2 programme of work. I was also interviewed about my findings for an article published in The Doctor (a clinician's magazine) about digital general practice to promote dissemination to a more casual readership. [293]

For whole-practice audiences, I have given two in-person dissemination presentations to practice staff during planned team meetings and training days (one at Westerly on the 10th of October 2023, and one at Easton on the 27th of February 2024). These focused on the results of the overall project and shared early suggested recommendations for local policy changes in practices. They also sought to gather additional insights into what elements of my results/recommendations practice staff most wanted to be represented to policymakers, system stakeholders, and MPs ahead of a planned visit to parliament for dissemination (discussed in 9.5.6). I also shared learning reports with these practices following previously described PPIE work, attached in Appendix 4.

To reach UK clinical audiences not included in the study (for dissemination and to determine resonance) I presented my research at an educational webinar for primary care clinicians in Northern Ireland in May 2024. The event was attended by more than 70 GPs and GP leaders. It was also recorded and has since been watched by more who could not attend on the day. It garnered positive feedback and was rated 4.8 out of 5 by present attendees.

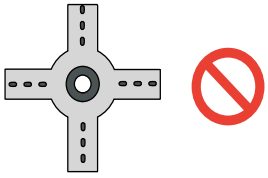
To share clear summaries of my research with broader audiences than could be reached with the above strategies (and to provide a tangible resource that could be returned to after my departure), I have developed two policy and practice-facing findings summaries covering the results and recommendations from Chapter 5 and Chapter 7. These were produced in collaboration with a design company, Design Science, to help with translation and user-friendliness. Both are attached in full in Appendix 6, with condensed versions provided below in Figures 13 and 14.

9.4.2 **Policy**

From the beginning of my DPhil, I have maintained awareness of the need to make my findings transferable to policy. However, this is practically challenging for a researcher at the beginning of their career. Through my affiliation with the RBD2 project, I was able to work directly with the policy think-tank The Nuffield Trust, and in doing so learn from policy-oriented colleagues about what the best avenues and approaches were to have a policy-level impact. RBD2 and The Nuffield Trust organised a collaborative event to target parliamentarians, policymakers, and relevant system-level stakeholders. The event was held on the 24th of April 2024 at the House of Commons in Westminster, supported by Baroness Finlay of Llandaff and Dr James Davies, MP for Vale of Clwyd. During the event, I was actively engaging policymakers from England, Wales, and Scotland about my research findings through conversation and Q&A discussions. I also distributed a printed document summarising Chapter 5's findings, an excerpt of which is provided in Figure 15. This was later adapted into the practice and policy-facing document in Figure 13 and Appendix 6. I also later developed Figure 14 to summarise the findings of Chapter 7 for policy audiences, as well as practice. To further raise awareness of the event and its outputs, I authored a blog piece on the topic for my funder. [294] My publications from this DPhil have also been disseminated by The Nuffield Trust in policy briefing title "Getting the best out of the new world of remote and digital general practice". [295]

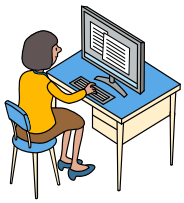
To get care in today's GP system, patients need to:

- **Find and navigate services**
- **Clearly state their needs**
- **Advocate for themselves**
- **Work with staff and technology at various stages of the process.**

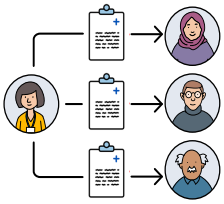


These **systems assume** people have certain **skills** and **abilities**, which limits who can use them effectively.
Patients' ability to understand their health needs, access digital care, speak for themselves and navigate the system varies widely.

How well patients use these technologies affects how accurate their **digital copy*** is. People with low digital, health or system literacy are less likely to create an accurate digital copy of themselves, which may misrepresent their needs, lead to wrong care pathways or put them in 'safety-traps'.



Staff use the patient's digital copy to decide what triage or care they need but a good assessment depends on the quality of the copy!



Staff can use their knowledge of individual patients and the wider population to fill in gaps, help patients create more accurate digital copies and find those likely to have inaccurate ones.

Patients' experiences at the 'digital front door' of general practice affect how they engage with the healthcare system later. If they're told they're 'not eligible' for care once, it can affect how they assess their needs and look for help in the future.

For practice

- Digital access and triage depends on patients successfully using **technology to create a digital profile** that shows their eligibility for care.
- These **technologies assume certain abilities** which restrict who can use them and how.
- Some patients find them easy to use, which can **help staff quickly assess** simpler cases.
- However, the **assumptions these technologies make discourage some patients** from engaging with health services.
- Making access easier for some can hide the **struggles of those who find it harder**.
- **Long-term staff who know their patients** well can help overcome issues with digital access and inaccurate digital copies.
- Without careful design, **digital systems may worsen inequalities** and create new ones.
- These findings highlight the importance of **local approaches to designing and setting up multi-modal services**.

For policy

- **Avoid top-down mandates** for using specific technologies or methods. Give practices the freedom to decide what works best locally for their staff and patients.
- When investing in new technologies, **critically assess the research and development** behind the products, considering whose voices and needs might have been overlooked.
- Don't hesitate to **stop a technology or method** if it proves unsuitable for local needs.
- **Avoid measuring success** or efficiency solely on the use of these technologies.
- **Avoid making access and triage pathways too rigid**. Staff need the flexibility to creatively address issues caused by digital systems.

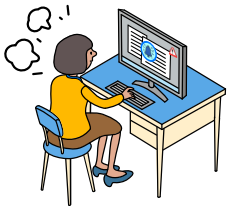
Figure 13: Summary of findings and learning from Chapter 5 (full version provided in Appendix 6)

Technologies are not inherently good or bad

They can improve efficiency but need careful integration. If not thoughtfully embedded into our work, they can introduce new frictions like extra steps, awkward interactions and physical clunkiness.

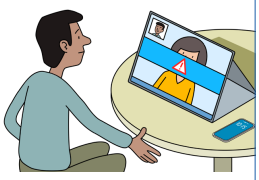
Poor integration leads to 'technostress'

Poorly designed technologies overwhelm staff, causing cognitive overload, reducing autonomy and making tasks more complex or uncertain. Over time, these stresses can lead to burnout.



Efficiency tools can sometimes reduce efficiency

Pop-up messages and task lists can interrupt work flow and hide what needs to be done. Patient-facing tools can also create new requests and demands, leading to more technostress.



Technologies can cause distress in staff and patients

When technologies limit the kind of care that can be provided, e.g. when face-to-face options are denied, both patients and staff can experience 'technosuffering'.

Technostress and technosuffering affect team relationships

They strain staff communication, reducing teamwork and camaraderie. When this happens staff may hesitate to speak up about patient safety concerns or their own wellbeing.

Some staff have strategies to cope, but outcomes vary

They might adjust their hours, change their roles or balance digital and in-person tasks. Others, unable to find a solution, may experience burnout, choose to resign or retire.

For practice

- Give staff time and support to adapt their individual and collective work routines to new technologies (and new uses of existing technologies).
- Ensure that each staff member has an acceptable balance of digital/remote and traditional (face-to-face) work.
- Be alert to situations where technologies constrain work in ways that make staff feel uncomfortable or deprofessionalised. Surface these concerns and talk them through. Where appropriate, reconsider the benefit-harm balance of technologies.
- Be aware that efficient and safe general practice depends on good team relations, and that staff who are stressed or suffering may develop strained relationships. Maintain team cohesion through a focus on relationships and communication.

For policy

- Recognise that more technologies in general practice will not necessarily lead to greater efficiency or to 'freeing up' staff.
- Be alert to technostress, technosuffering, and strained team relations as unintended consequences of technologisation.
- When introducing new technologies or new technology-supported work routines, allocate resources not just to purchasing the technology but also to optimising its use in the practices and pathways of real-world general practice. The same technology may be embedded and used differently in different local settings.
- Without policy-level measures to protect staff from technostress, technosuffering, and relational strain, the workforce crisis in general practice will continue to worsen.

Figure 14: Summary of findings and learning from Chapter 7 (full version provided in Appendix 6)

Remote by Default 2: The new normal? | NUFFIELD DEPARTMENT OF PRIMARY CARE HEALTH SCIENCES | NIHR | School for Primary Care Research | UNIVERSITY OF OXFORD

Digital access, triage, and inequalities: navigating digital candidacy

Reflections from the Remote by Default 2 study

The landscape of UK general practice has changed. It now involves a web of organisations, people, and technologies. Patients and staff navigate this multi-modal network to access and deliver care. This resource outlines how the assumptions made by technologies can introduce, compound, and reinforce inequities in access to care, and makes suggestions for practice and policy.

To access care in modern GP, patients must: **locate and navigate services**, **assert and articulate their needs**, **self-advocate**, and **negotiate** their way through multiple stages in the access pathway.

These pathways and technologies have **inbuilt assumptions** about the **capacities**, **needs**, and **skills** of 'intended users', limiting who can use them effectively. There is a **consistent disparity** in patients' capability to judge their health needs as worthy of care, access digital healthcare platforms, advocate for themselves, and navigate the healthcare system.

How well patients can use these technologies dictates how accurate the **digital facsimile** they create is. Patients with low **digital literacy, health literacy, and system literacy** are less likely to create an accurate digital facsimile, misrepresenting their needs to the practice, or sending them down **inappropriate algorithmic pathways** or into **'safety-traps'.**

Staff use the information provided digitally by patients to help them **determine their eligibility for care**, and **appropriately triage**. An accurate **assessment relies on the accuracy of the digital facsimile.**

Some staff could share situated knowledge about their patient population and individual patients to fill in the gaps, help patients create more accurate digital facsimiles, and **anticipate patients likely to have inaccurate digital facsimiles**.

Patients' experiences at the 'digital front door' of general practice influenced their ongoing engagement with the healthcare system. Being deemed 'not eligible' for care on one occasion shaped their future self-assessment and help-seeking behaviour.

Learning summary for practice

- Digitalised access and triage require patients to successfully **interact with technological gatekeepers to build a digital picture of their candidacy** for care.
- These technologies are **encoded with inbuilt assumptions** about users, which limits how they can be used, and by whom.
- For some patients, the **technologies are intuitive and can speed up triage** of simpler cases for staff.
- However, the **technologies' assumptions push back other users, with downstream effects** on patients' willingness to engage with health services.
- Making access much easier for some but not all **can obscure those who find access more difficult**.
- Without careful design, **digitalised systems may exacerbate existing inequities**, and create new ones.
- These findings underscore the need for **localised approaches to multi-modal service configuration and design**.

Learning summary for policy

- **Avoid top-down mandates** for using specific modalities or taking up specific technologies, allow the practice the space to determine what works locally (for staff and patients).
- When investing in new technologies, **be critical of the research & development** behind the product, and whose voices/needs may have been overlooked.
- Don't be afraid to **allow for de-implementation** when a technology/modality has proven inappropriate for local needs (and do not measure success or efficiency based on the use of such technologies).
- **Avoid over-protocolising** access/triage pathways: staff need to be able to work creatively for solutions to inequities and misrepresentations caused by digitalised pathways.

These digitalised pathways and systems mean new competencies are required of staff and patients.

Figure 15: Findings summary of Chapter 5, distributed at Parliamentary event

9.4.3 System stakeholders

To share my findings with system stakeholders, I have presented my research at three workshops associated with the RBD2 research project. First, I presented my Chapter 5 results at a workshop focused on access and triage held in April 2022 and attended by 50 stakeholders from clinical, academic, policy, third sector and lay sectors. Second, I presented my findings from Chapters 6 and 7 at another, which was focused on workforce and training. That workshop was held in January 2023 and attended by 51 stakeholders from clinical, academic, policy, third sector and lay sectors. Finally, I presented my Chapter 5 results and some Chapter 8 results at a final policy and practice workshop held at Green Templeton College on the 5th of July 2024. This final workshop was focused on sharing the key findings of the RBD2 and determining the best mechanisms by which to implement the study's recommendations into three areas: 1) contracts and regulation, 2) education and training, and 3) within the practice.

These events have led to ongoing discussions with Healthwatch about integrating my Chapter 5 findings into ongoing patient access work, a collaborative piece of work with NHS England and Health Education England on the remote technology training needs of staff across practice roles, and contributing to a feedback exercise with the Health Services Safety Investigation Branch (HSSIB) to share key relevant findings from the overall RBD2 project (drawing on the results of Chapters 5-7 as 8 was yet to be finalised).

9.4.4 Patients and the public

I have shared relevant research findings with patients and the public through a mix of online and in-person lectures (aimed at public audiences and student audiences). I presented at two online public engagement lectures. One was held in June 2024, which was open to any interested members of the public and focused on sharing the patient-level impact of digitalising primary care services, advertised using mailing lists and social media. The other, held in December 2024, was focused on deeper learning about digital primary care to improve public understanding of the current and future landscape of the use of digital technologies in primary care settings internationally. These events mainly presented Chapter 5's results, as they seemed most relevant to

patient audiences. I have also shared my research findings with public audiences via two lectures held at Somerville College at the University of Oxford; one was aimed at students (26th of January 2023), and the other was aimed at alumni (16th of March 2024).

I had hoped to take this public dissemination work further through a science communication collaboration with the Pitt-Rivers Museum. Together with colleagues at the museum, I had planned a mixed-media exhibition of art, artefacts, and staff experiences related to working through the acute phase of the pandemic. The focus had been on improving public understanding of the pressures faced by GP practice staff during the acute phase of the pandemic, the resultant integration of new technologies, and the impact of ongoing pressures on staff. However, we failed to secure funding across two applications and so could not execute the final product, though it is a project we hope to reignite in the future.

9.4.5 **Academic audiences**

I have shared my findings with academic audiences nationally and internationally through multiple conference posters and presentations, listed below:

Conference presentations:

- Navigating change and crisis in UK general practice: The value of relational coordination in teams. Nuffield Department of Primary Care Annual Conference. 2024.
- Transformation in primary care: change, crisis, and innovation. Nuffield Department of Primary Care Annual Conference. 2024.
- Navigating change and crisis in UK general practice: The value of relational coordination in teams. Organisational Behaviour in Health Care (OBHC) Conference. 2024.
- Navigating the Future: Innovations in UK General Practice. Organisational Behaviour in Health Care (OBHC) Conference. 2024.
- Remote by Default 2 and The Long Recovery: Access, triage, inequalities. Digital Health Horizons Conference. 2024.
- What is the 'new normal' in general practice, how does it affect staff wellbeing, and how can we improve? Oxford-Berlin-London Medical Humanities PG/ECR Conference 2023.
- Navigating change and crisis in UK general practice: The value of relational coordination in teams. WONCA x Royal Australian College of General Practitioners Conference. 2023.
- What can we learn about improving the “new normal” in primary care from the experiences of practice staff during the pandemic? WONCA Europe x Royal College of General Practitioners Conference. 2022.

Conference posters:

- Navigating change and crisis in UK general practice: the value of relational coordination in teams. HSR UK. 2024
- Primary Care’s Long Recovery: What is the 'new normal' in general practice, how does it affect staff wellbeing, and how can we improve? NIHR SPCR Showcase. 2023.

- Primary Care's Long Recovery: Learning from the experiences of primary care workers during the COVID-19 pandemic to improve staff wellbeing and working conditions. WONCA Europe x Royal College of General Practitioners Conference. 2022.
- Ethnography in the NHS: What can healthcare improvement research learn from the negotiations of accessing ethnographic field sites? WONCA Europe x Royal College of General Practitioners Conference. 2022
- Primary Care's Long Recovery: Learning from the experiences of primary care workers to improve staff wellbeing and working conditions. NIHR Academy Conference. 2022.

Additional presentations:

- How did digitalisation during the pandemic impact the working conditions and wellbeing of GP practice staff? SPCR BMA Showcase. 2024
- Academic general practice: career pathways for medical students. Oxford University Undergraduate Medical Pathways. 2024.
- Digital access, triage, and inequalities. Digital Primary Care Seminar Series. 2024.
- Navigating change and crisis in UK general practice: relational coordination in teams. Somerville Medics Day. 2024.
- Navigating organisational change during crisis: Relational teamwork in UK general practice. Pandemic Sciences Institute. 2024.
- Chair and organiser. Digital Health Forum. 2024
- What is it like working in an NHS GP practice? (And why should we care?) Somerville Annual Symposium. 2023.
- Remote consulting in UK general practice. vCare Research Webinar "Sharing knowledge on video consultation in general practice - daytime and out-of-hours". Syddansk Universitet. 2023.
- Navigating change in UK general practice: The value of relational coordination in teams. SPCR Trainees Event. 2023
- The Long Recovery: reflections on ethnographic access of UK general practice. UCL Ethnographers of the NHS. 2022.

My experiences presenting in these contexts has challenged me to become a better public speaker and science communicator. I will continue to present my DPhil work at academic conferences in the upcoming calendar year.

9.4.6 International research partners

My research has also led to collaborations with international research partners, which has facilitated cross-national learning opportunities and further comparative research. First, my project's relevance to the international audience led to my selection as the NIHR's representative on the annual Transdisciplinary Understanding and Training on Research - Primary Health Care", or TUTOR-PHC, a programme based at Western University in Canada. This year-long programme has enabled me to share learning and build strong links with researchers and clinicians in Canada, France, Australia, and New Zealand. I have published a blog post on this experience to encourage other junior researchers to engage with the programme. [296] Secondly, I was able to visit and build

direct links with two groups in Bond University, Australia, to 1) compare the experiences of healthcare staff working through the pandemic in the UK and Australia and 2) to inform future work on the use of simulation training for improved relational coordination in primary care. Third, I was able to contribute to the SHARE Collaborative's rapid response work on the impact of the MPOX outbreak on healthcare staff internationally. Finally, I am leading an ongoing knowledge exchange programme between the Netherlands and the UK to understand what learning each nation can gain from their local successes and failures in the use of digital technologies in GP practices.

9.4.7 **Additional research this DPhil has contributed to**

This research has also contributed to several other academic outputs not included in this thesis. This is a product of working with a team of researchers on the wider RBD2 project. Through these connections, I have contributed to additional publications by sharing my DPhil data, conducting analysis, or contributing to manuscript drafting. These have focused on the impact of digital technologies on safety, [297] quality, [298] staff training needs in UK general practice, [299] and two final findings papers currently in print, as well as an ongoing learning exchange project on the impact of digitalisation between the UK and the Netherlands.

9.5 Conclusion

To conclude, through a novel application of Eisenhardt's approach to multiple case study research, I have conducted a multi-sited ethnographic case study of UK GP practice. I engaged with (and extended) theories and concepts from several disciplines to understand the data from my case study sites, drawing on the healthcare improvement tradition, sociology, internet studies, and organisation studies.

I found that the kind of work performed by patients, support staff, and clinical staff was significantly changed by digitisation during the multiple crises of 2020-24. I also found that working through these change and crisis events had a clear toll on staff across all roles, and that relational practices helped staff to weather these ill effects. Through this work, I have made contributions to methodologies in health services research, the empirical literature on the use of digital technologies, workforce wellbeing, and

organisational change in UK GP practices, and contributed to the development of theory across multiple disciplines.

At its core, this thesis has revealed the central importance of relational practices and relational workplace conditions in helping staff (and, by extension, patients) navigate the effects of significant changes to daily work during crisis events. I have worked to translate these findings into meaningful change in practice and policy through my previously outlined dissemination activities. Above all, I hope the findings presented in this thesis and its outputs resonate with the participants who allowed me access to their lives and perspectives during this period.

References

1. World Health Organisation. QD85 Burnout. *International Classification of Diseases, Eleventh Revision (ICD-11)* 2019
2. Miller S. What were clinical commissioning groups? NHS Confederation. nhsconfed.org, 2021.
3. World Health Organisation. RA0.10 COVID-19. *International Classification of Diseases, Eleventh Revision (ICD-11)* 2020
4. World Health Organisation. 1E71 Mpox. *International Classification of Diseases, Eleventh Revision (ICD-11)* 2024
5. Hwang P, Lichtenthal JD. Anatomy of Organizational Crises. *Journal of Contingencies and Crisis Management* 2000;8(3):129-40. doi: https://doi.org/10.1111/1468-5973.00132
6. Papoutsi C, Shaw S, Greenhalgh T. Implementing video group consultations in general practice during COVID-19: a qualitative study. *Br J Gen Pract* 2022;72(720):e483-e91. doi: 10.3399/bjgp.2021.0673
7. Wherton J, Greenhalgh T, Shaw SE. Expanding Video Consultation Services at Pace and Scale in Scotland During the COVID-19 Pandemic: National Mixed Methods Case Study. *J Med Internet Res* 2021;23(10):e31374. doi: 10.2196/31374
8. Razai MS, Majeed A. General Practice in England: The Current Crisis, Opportunities, and Challenges. *J Ambul Care Manage* 2022;45(2):135-39. doi: 10.1097/jac.0000000000000410
9. Pilbeam C, Edwards G, Tonkin-Crine S, et al. Primary care preparedness for the SARS-CoV-2 pandemic: a survey of NHS GPs. *Fam Pract* 2022;39(3):332-39. doi: 10.1093/fampra/cmab145
10. Jefferson L, Golder S, Heathcote C, et al. GP wellbeing during the COVID-19 pandemic: a systematic review. *Br J Gen Pract* 2022;72(718):e325-e33. doi: 10.3399/bjgp.2021.0680
11. Sethi S, Manuelpillai N, Mandal A, et al. COVID-19 seroprevalence after the first UK wave of the pandemic and its association with the physical and mental wellbeing of secondary care healthcare workers. *Brain Behav Immun Health* 2022;24:100492. doi: 10.1016/j.bbih.2022.100492
12. Lange M, Joo S, Couette PA, et al. Impact on mental health of the COVID-19 outbreak among general practitioners during the sanitary lockdown period. *Ir J Med Sci* 2022;191(1):93-96. doi: 10.1007/s11845-021-02513-6
13. Dominic C, Gopal DP, Sidhu A. 'It's like juggling fire daily': Well-being, workload and burnout in the British NHS - A survey of 721 physicians. *Work* 2021;70(2):395-403. doi: 10.3233/wor-205337
14. 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(12):e043949. doi: 10.1136/bmjopen-2020-043949
15. Parisi R, Lau Y-S, Bower P, et al. GP working time and supply, and patient demand in England in 2015–2022: a retrospective study. *British Journal of General Practice* 2024;74(747):e666-e73. doi: 10.3399/bjgp.2024.0075
16. Mroz G, Papoutsi C, Greenhalgh T. From ‘A Rapid and Necessary Revolution’ to ‘Telemedicine Killed the PE Teacher’: Changing Representations of Remote GP Consultations in UK Media During the COVID-19 Pandemic. In: Lewis M,

Govender E, Holland K, eds. Communicating COVID-19: Media, Trust, and Public Engagement. Cham: Springer International Publishing 2024:125-44.
17. Shembavnekar N, Buchan J, Bazeer N, et al. REAL Centre Projections: NHS workforce projections 2022. London: The Health Foundation, 2022.
18. NHS England. NHS Long Term Workforce Plan. 2023
19. Royal College of General Practitioners. GP consultations post-COVID should be a combination of remote and face to face, depending on patient need, says College RcGP2021 [Available from: https://www.rcgp.org.uk/News/GP-consultations-post-COVID.
20. Royal College of General Practitioners. The future role of remote consultations & patient 'triage': general practice COVID-19 recovery. London: RCGP, 2021.
21. Dakin F, Hemmings N, Kalin A, et al. Technostress, techno-suffering, and relational strain: a multi-method qualitative study of how remote and digital work affects staff in UK general practice. *Br J Gen Pract* 2025
22. Hughes G, Rybczynska-Bunt S, Shasha'h S, et al. Protocol: How can people with social care needs be supported through processes of digital care navigation to access remote primary care? A multi-site case study in UK general practice of remote care as the 'new normal'.[version 1; peer review: 2 approved]. *NIHR Open Res* 2023;3:17. doi: 10.3310/nihropenres.13385.1
23. Turner A, Morris R, Rakhra D, et al. Unintended consequences of online consultations: a qualitative study in UK primary care. *Br J Gen Pract* 2022;72(715):e128-e37. doi: 10.3399/bjgp.2021.0426
24. Dixon S, Frost L, Feder G, et al. Challenges of safeguarding via remote consulting during the COVID-19 pandemic: a qualitative interview study. *British Journal of General Practice* 2022;72(716):e199-e208. doi: 10.3399/bjgp.2021.0396
25. Fu L, Lindenmeyer A, Phillimore J, et al. Vulnerable migrants' access to healthcare in the early stages of the COVID-19 pandemic in the UK. *Public Health* 2022;203:36-42. doi: 10.1016/j.puhe.2021.12.008
26. Norman C, Wildman JM, Sowden S. COVID-19 at the Deep End: A Qualitative Interview Study of Primary Care Staff Working in the Most Deprived Areas of England during the COVID-19 Pandemic. *Int J Environ Res Public Health* 2021;18(16) doi: 10.3390/ijerph18168689
27. Gehman J, Glaser VL, Eisenhardt KM, et al. Finding Theory–Method Fit: A Comparison of Three Qualitative Approaches to Theory Building. *Journal of Management Inquiry* 2018;27(3):284-300. doi: 10.1177/1056492617706029
28. Mays N, Pope C. Synthesising Qualitative Research. Qualitative Research in Health Care 2020:151-68.
29. Guidance on the conduct of narrative synthesis in systematic Reviews. A Product from the ESRC Methods Programme. Version 1; 2006.
30. NHS England. NHS health and wellbeing framework: elements of health and wellbeing. In: England N, ed. https://www.england.nhs.uk/publication/nhs-health-and-wellbeing-framework/, 2021.
31. Greenhalgh T, Peacock R. Effectiveness and efficiency of search methods in systematic reviews of complex evidence: audit of primary sources. *Bmj* 2005;331(7524):1064-65. doi: 10.1136/bmj.38636.593461.68

32. Clarkson J, Dean J, Ward J, et al. A systems approach to healthcare: from thinking to practice. *Future healthcare journal* 2018;5(3):151. doi: 10.7861/futurehosp.5-3-151
33. Greenhalgh T, Papoutsi C. Studying complexity in health services research: desperately seeking an overdue paradigm shift: Springer, 2018:1-6.
34. Borek AJ, Pilbeam C, Mableson H, et al. Experiences and concerns of health workers throughout the first year of the COVID-19 pandemic in the UK: A longitudinal qualitative interview study. *PLoS One* 2022;17(3):e0264906. doi: 10.1371/journal.pone.0264906
35. BMA. Pressures in general practice data analysis. bma.org.uk: BMA, 2022.
36. Anderson H, Scantlebury A, Galdas P, et al. General Practice Nurses' experiences of changing care delivery during COVID-19. Implications for future practice: Qualitative study protocol. *J Adv Nurs* 2022;78(9):3061-68. doi: 10.1111/jan.15312
37. Mroz G, Papoutsi C, Greenhalgh T. 'From disaster, miracles are wrought': a narrative analysis of UK media depictions of remote GP consulting in the COVID-19 pandemic using Burke's pentad. *Medical Humanities* 2021;47(3):292-301. doi: 10.1136/medhum-2020-012111
38. Billings J, Ching BCF, Gkofa V, et al. Experiences of frontline healthcare workers and their views about support during COVID-19 and previous pandemics: a systematic review and qualitative meta-synthesis. *BMC Health Serv Res* 2021;21(1):923. doi: 10.1186/s12913-021-06917-z
39. Hoernke K, Djellouli N, Andrews L, et al. Frontline healthcare workers' experiences with personal protective equipment during the COVID-19 pandemic in the UK: a rapid qualitative appraisal. *BMJ open* 2021;11(1):e046199. doi: 10.1136/bmjopen-2020-046199
40. Grailey K, Lound A, Brett S. Lived experiences of healthcare workers on the front line during the COVID-19 pandemic: a qualitative interview study. *BMJ Open* 2021;11(12):e053680. doi: 10.1136/bmjopen-2021-053680
41. Trivedi N, Trivedi V, Moorthy A, et al. Recovery, restoration, and risk: a cross-sectional survey of the impact of COVID-19 on GPs in the first UK city to lock down. *BJGP Open* 2021;5(1):BJGPO.2020.0151. doi: 10.3399/bjgpo.2020.0151
42. Taylor AK, Kingstone T, Briggs TA, et al. 'Reluctant pioneer': A qualitative study of doctors' experiences as patients with long COVID. *Health Expect* 2021;24(3):833-42. doi: 10.1111/hex.13223
43. Roberts NJ, Kelly CA, Lippiett KA, et al. Experiences of nurses caring for respiratory patients during the first wave of the COVID-19 pandemic: an online survey study. *BMJ Open Respir Res* 2021;8(1) doi: 10.1136/bmjresp-2021-000987
44. Seidu S, Hambling C, Holmes P, et al. The impact of the COVID pandemic on primary care diabetes services in the UK: A cross-sectional national survey of views of health professionals delivering diabetes care. *Prim Care Diabetes* 2022;16(2):257-63. doi: 10.1016/j.pcd.2021.12.015
45. Davies M, Carr D, Dugan J, et al. SUPPORT FOR GENERAL PRACTITONERS DURING COVID-19. *Ulster Med J* 2021;90(3):151-56.
46. Ansell S, Read J, Bryce M. Challenges to well-being for general practice trainee doctors: a qualitative study of their experiences and coping strategies. *Postgrad Med J* 2020;96(1136):325-30. doi: 10.1136/postgradmedj-2019-137076

47. Ashdown K. GP receptionists 'walking out in droves' due to patient abuse. *Stoke on Trent Live* 2021.
48. Tapper J. Doctors, receptionists and practice teams quit after wave of hostility over GP appointments. *The Observer* 2021 2021-10-02T15:00:03.000Z.
49. Smith M. GP receptionist punched by patient who couldn't get an appointment Wales Online 2021.
50. Reed J. 'We're not battle-axes', say GP receptionists. *BBC News* 2021 2021-11-17.
51. Nekkir, Naveen. A receptionist's view from a GP Surgery during COVID-19 | *Our Healthier South East London* 2021.
52. Gallagher P. GPs and receptionists facing 'daily and relentless' abuse from public over remote appointments. *iNews* 2021
53. Chua D, Barnes K, Ball L. Be kind: GP receptionists are taking the heat with every policy update during COVID, vaccines included. *The Conversation* 2021
54. Anon. GP receptionists face increasing abuse, doctors say. *BBC News* 2021 2021-11-24.
55. Anon. 'I know where you live': GP surgery receptionists face extreme abuse. *Shropshire Star* 2021 25/10/2021.
56. Anon. Majority of GP receptionists face unprecedented levels of abuse at work, new research shows. *NHS Tees Valley CCG* 2021.
57. Pilbeam C, Edwards G, Tonkin-Crine S, et al. Primary care preparedness for the SARS-CoV-2 pandemic: a survey of NHS GPs. *Fam Pract* 2021;39(3):332-39. doi: 10.1093/fampra/cmab145
58. van Hout D, Hutchinson P, Wanat M, et al. The experience of European hospital-based health care workers on following infection prevention and control procedures for COVID-19. *medRxiv* 2020:2020.12.23.20248793. doi: 10.1101/2020.12.23.20248793
59. Jefferson L, Heathcote C, Bloor K. General practitioner wellbeing during the COVID-19 pandemic: a qualitative interview study. *medRxiv* 2022:2022.01.26.22269874. doi: 10.1101/2022.01.26.22269874
60. Morgantini LA, Naha U, Wang H, et al. Factors contributing to healthcare professional burnout during the COVID-19 pandemic: A rapid turnaround global survey. *PLoS One* 2020;15(9):e0238217. doi: 10.1371/journal.pone.0238217
61. Rossi R, Socci V, Pacitti F, et al. Mental Health Outcomes Among Healthcare Workers and the General Population During the COVID-19 in Italy. *Front Psychol* 2020;11:608986. doi: 10.3389/fpsyg.2020.608986
62. Mayne RS, Hart ND, Tully MA, et al. Exploration of sedentary behaviour among GPs: a cross-sectional study. *BJGP Open* 2022;6(2) doi: 10.3399/bjgpo.2021.0196
63. Windak A, Frese T, Hummers E, et al. Academic general practice/family medicine in times of COVID-19 - Perspective of WONCA Europe. *Eur J Gen Pract* 2020;26(1):182-88. doi: 10.1080/13814788.2020.1855136
64. 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(695):270-71. doi: 10.3399/bjgp20X709937
65. Cadogan CA, Hughes CM. On the frontline against COVID-19: Community pharmacists' contribution during a public health crisis. *Res Social Adm Pharm* 2021;17(1):2032-35. doi: 10.1016/j.sapharm.2020.03.015

66. Department of Health & Social Care. Our plan for patients. In: Department of Health & Social Care, ed. gov.uk, 2022.
67. Mroz G, Papoutsi C, Rushforth A, et al. Changing media depictions of remote consulting in COVID-19: analysis of UK newspapers.*Br J Gen Pract* 2021;71:e1-e9.
68. Mroz G, Papoutsi C, Greenhalgh T. 'From disaster, miracles are wrought': a narrative analysis of UK media depictions of remote GP consulting in the COVID-19 pandemic using Burke's pentad. *Med Hum* 2021;47:292-301.
69. Cox CL. 'Healthcare Heroes': problems with media focus on heroism from healthcare workers during the COVID-19 pandemic. *Journal of Medical Ethics* 2020;46(8):510-13. doi: 10.1136/medethics-2020-106398 [published Online First: 20200616]
70. Rosen R. It's not just about speed of access: we must ensure patients with the greatest needs can see a GP. nuffieldtrust.org: Nuffield Trust, 2022.
71. NHS England. General practice england.nhs.ukN.D [Available from: https://www.england.nhs.uk/gp/expanding-our-workforce/.
72. Dixon-Woods M. How to improve healthcare improvement-an essay by Mary Dixon-Woods. *BMJ* 2019;367:l5514. doi: 10.1136/bmj.l5514
73. Greenhalgh T, Papoutsi C. Spreading and scaling up innovation and improvement. *BMJ (Clinical research ed)* 2019;365:l2068. doi: 10.1136/bmj.l2068
74. NHS England. General practice. Improving GP appointment data. england.nhs.uk: NHS England, 2020.
75. NHS England and NHS Improvement. Advice on how to establish a remote 'total triage' model in general practice using online consultations, April 2020.
76. NHS Digital. Appointments in General Practice. Leeds: NHS Digital,, 2022.
77. Sinnott C, Georgiadis A, Dixon-Woods M. Operational failures and how they influence the work of GPs: a qualitative study in primary care. *Br J Gen Pract* 2020;70(700):e825-e32. doi: 10.3399/bjgp20X713009
78. McCallum M, MacDonald S. Exploring GP work in areas of high socioeconomic deprivation: a secondary analysis. *BJGP Open* 2021;5(6) doi: 10.3399/bjgpo.2021.0117
79. Spooner S. 'Hidden in plain sight'; the unseen work of general practitioners in general practices in England scpr.nihr.ac.uk: NIHR SPCR; 2022 [Available from: https://www.spcr.nihr.ac.uk/research/projects/2018hidden-in-plain-sight2019-the-unseen-work-of-general-practitioners-in-general-practices-in-england.
80. Picker. Take part in testing a new questionnaire for staff experience in primary care picker.org2022 [Available from: https://picker.org/staff-survey-in-primary-care/?highlight=primary%20care.
81. NHS England. NHS Staff Survey in England england.nhs.uk: NHS England; 2024 [
82. Anderson H, Scantlebury A, Galdas P, et al. The well-being of nurses working in general practice during the COVID-19 pandemic: A qualitative study (The GenCo Study). *J Adv Nurs* 2024;80(4):1574-91. doi: 10.1111/jan.15919
83. Wood E, King R, Taylor B, et al. Moral distress in advanced practice nurses during the COVID-19 pandemic. *Nurs Stand* 2022;37(11):44-50. doi: 10.7748/ns.2022.e11885

84. Golder S, Jefferson L, McHugh E, et al. General practitioners' wellbeing during the COVID-19 pandemic: Novel methods with social media data. *Health Info Libr J* 2023;40(4):400-16. doi: 10.1111/hir.12466
85. Jefferson L, Heathcote C, Bloor K. General practitioner well-being during the COVID-19 pandemic: a qualitative interview study. *BMJ Open* 2023;13(2):e061531. doi: 10.1136/bmjopen-2022-061531
86. Heywood P. Ontological turn, the. In: Stein F, ed. The Open Encyclopedia of Anthropology. The Cambridge Encyclopedia of Anthropology2017.
87. Pope C, Mays N. The Role of Theory in Qualitative Research. Qualitative Research in Health Care 2020:15-26.
88. Schwandt T. Qualitative inquiry: A dictionary of terms: Sage Publications, Inc, 1997.
89. Tashakkori A, Johnson RB, Teddlie C. Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences: Sage publications 2020.
90. Mays N, Pope C. Introduction. Qualitative Research in Health Care2020:1-13.
91. Tavory I, Timmermans S. Abductive analysis: theorizing qualitative research. Chicago: The University of Chicago Press 2014.
92. Pope C, Allen D. Observational Methods. Qualitative Research in Health Care 2020:67-81.
93. Greenhalgh T, Shaw S, Alvarez Nishio A, et al. Protocol: Remote care as the "new normal?": Multi-site case study in UK general practice. *NIHR Open Res* 2022;2(46):46. doi: 10.3310/nihropenres.13289.1
94. Greenhalgh T, Shaw S, Alvarez Nishio A, et al. Remote care in UK general practice: baseline data on 11 case studies. *NIHR Open Res* 2022;2(47):47. doi: 10.3310/nihropenres.13290.2
95. Hinton L, Ryan S. Interviews. Qualitative Research in Health Care2020:43-55.
96. Tritter JQ, Landstad BJ. Focus Groups. Qualitative Research in Health Care2020:57-66.
97. Marshall M, Pagel C, French C, et al. Moving improvement research closer to practice: the Researcher-in-Residence model. *BMJ Qual Saf* 2014;23(10):801-5. doi: 10.1136/bmjqs-2013-002779
98. Sandelowski M. "Casing" the research case study. *Research in Nursing & Health* 2011;34(2):153-59. doi: https://doi.org/10.1002/nur.20421
99. Becker HS, Geer B, Hughes EC, et al. Boys in white: Student culture in medical school. Chicago: University of Chicago Press 1916.
100. Hughes G, Shaw SE, Greenhalgh T. Why doesn't integrated care work? Using Strong Structuration Theory to explain the limitations of an English case. *Sociol Health Illn* 2022;44(1):113-29. doi: 10.1111/1467-9566.13398
101. Ledger JE. Competing Knowledges in Turbulent Times: The Use of Management Knowledge in Commissioning Organisations in the English NHS. King's College London, 2014.
102. Smith K. Beyond Evidence Based Policy in Public Health: TheInterplay of Ideas. Basingstoke: Palgrave Macmillan 2013.
103. Eisenhardt KM. What is the Eisenhardt Method, really? *Strategic Organization* 2021;19(1):147-60. doi: 10.1177/1476127020982866

104. Eisenhardt KM, Graebner ME. Theory Building From Cases: Opportunities And Challenges. *Academy of Management Journal* 2007;50(1):25-32. doi: 10.5465/amj.2007.24160888
105. Eisenhardt KM. Building Theories from Case Study Research. *The Academy of Management review* 1989;14(4):532-50. doi: 10.2307/258557
106. Langley A. Strategies for Theorizing from Process Data. *The Academy of Management Review* 1999;24(4):691-710. doi: 10.2307/259349
107. DiBenigno J, Kellogg KC. Beyond occupational differences: The importance of cross-cutting demographics and dyadic toolkits for collaboration in a U.S. Hospital. *Administrative Science Quarterly* 2014;59(3):375-408. doi: 10.1177/0001839214538262
108. Fitzgerald L, Ferlie E, McGivern G, et al. Distributed leadership patterns and service improvement: Evidence and argument from English healthcare. *The Leadership Quarterly* 2013;24(1):227-39. doi: https://doi.org/10.1016/j.leaqua.2012.10.012
109. Madon S, Krishna S. Theorizing community health governance for strengthening primary healthcare in LMICs. *Health Policy Plan* 2022;37(6):706-16. doi: 10.1093/heapol/czac002
110. Marshall M, Pagel C, French C, et al. Moving improvement research closer to practice: the Researcher-in-Residence model. *BMJ Quality & Safety* 2014;23(10):801. doi: 10.1136/bmjqs-2013-002779
111. Soss J. On Casing a Study versus Studying a Case. In: Simmons ES, Rush Smith N, eds. Rethinking Comparison: Innovative Methods for Qualitative Political Inquiry. Cambridge: Cambridge University Press 2021:84-106.
112. Braithwaite J, Wears RL, Hollnagel E. Resilient health care. Volume 3, Reconciling work-as-imagined and work-as-done / edited by Jeffrey Braithwaite, Robert L. Wears, Erik Hollnagel: Boca Raton : CRC Press 2016.
113. Reeves S, Kuper A, Hodges BD. Qualitative research methodologies: ethnography. *BMJ* 2008;337:a1020. doi: 10.1136/bmj.a1020
114. Candea M. Schools and styles of anthropological theory. 1st ed. London: Routledge 2018.
115. Vindrola-Padros C, Johnson GA. Rapid Techniques in Qualitative Research: A Critical Review of the Literature. *Qualitative Health Research* 2020;30(10):1596-604. doi: 10.1177/1049732320921835
116. Vindrola-Padros C, Vindrola-Padros B. Quick and dirty? A systematic review of the use of rapid ethnographies in healthcare organisation and delivery. *BMJ Quality & Safety* 2018;27(4):321-30. doi: 10.1136/bmjqs-2017-007226
117. Hammersley M. What's Wrong with Ethnography?: National Council of Teachers of English, 1994:278-78.
118. Vindrola-Padros C, Chisnall G, Cooper S, et al. Carrying out rapid qualitative research during a pandemic: emerging lessons from COVID-19. *Qualitative health research* 2020;30(14):2192-204. doi: 10.1177/1049732320951526
119. Malinowski BK. Argonauts of the Western Pacific: An Account of Native Enterprise and Adventure in the Archipelagoes of Melanesian New Guinea. Long Grove, IL: Waveland Press, Inc 1984.
120. Kopytoff I. The cultural biography of things: commoditization as process. In: Appadurai A, ed. The Social Life of Things: Commodities in Cultural Perspective. Cambridge: Cambridge University Press 1986:64-92.

121. Appadurai A. Introduction: commodities and the politics of value. In: Appadurai A, ed. The Social Life of Things: Commodities in Cultural Perspective. Cambridge: Cambridge University Press 1986:3-63.
122. Marcus GE. Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography. *Annual Review of Anthropology* 1995;24:95-117.
123. Hage G. A not so multi-sited ethnography of a not so imagined community. *Anthropological Theory* 2005;5(4):463-75. doi: 10.1177/1463499605059232
124. Herzfeld M. The body impolitic : artisans and artifice in the global hierarchy of value. Chicago ;: University of Chicago Press 2004.
125. Schools and Styles of Anthropological Theory. 1 ed: Routledge 2018.
126. Edwards R, Holland J. What is Qualitative Interviewing?: Bloomsbury Publishing 2013.
127. Gubrium JF, Holstein JA. Handbook of Interview Research: Context and Method: SAGE Publications 2002.
128. Kitzinger J. The methodology of Focus Groups: the importance of interaction between research participants. *Sociology of Health & Illness* 1994;16(1):103-21. doi: https://doi.org/10.1111/1467-9566.ep11347023
129. Sawyer T, French H, Ades A, et al. Neonatal-perinatal medicine fellow procedural experience and competency determination: results of a national survey. *J Perinatol* 2016;36(7):570-4. doi: 10.1038/jp.2016.19
130. Greenwood N, Ellmers T, Holley J. The influence of ethnic group composition on focus group discussions. *BMC Medical Research Methodology* 2014;14(1):107. doi: 10.1186/1471-2288-14-107
131. Greenhalgh T, Voisey C, Robb N. Interpreted consultations as 'business as usual'? An analysis of organisational routines in general practices. *Sociol Health Illn* 2007;29(6):931-54. doi: 10.1111/j.1467-9566.2007.01047.x
132. Greenhouse CJ. Anthropology at Home: Whose Home? *Human Organization* 1985;44(3):261-64.
133. Bauman Z, May T. Thinking Sociologically: Blackwell Publishers 2001.
134. Murphy E, Dingwall R. Handbook of Ethnography: SAGE Publications Ltd, 2001.
135. Duke K. Getting Beyond the 'Official Line': Reflections on Dilemmas of Access, Knowledge and Power in Researching Policy Networks. *Journal of Social Policy* 2002;31(1):39-59. doi: 10.1017/S0047279402006505
136. Reeves CL. A difficult negotiation: fieldwork relations with gatekeepers. *Qualitative Research* 2010;10(3):315-31. doi: 10.1177/1468794109360150
137. Simpson B. Ethical moments: future directions for ethical review and ethnography. *Journal of the Royal Anthropological Institute* 2011;17(2):377-93. doi: https://doi.org/10.1111/j.1467-9655.2011.01685.x
138. Beauchamp TL, Childress JF. Principles of Biomedical Ethics: Oxford University Press 1979.
139. Stones R. Structuration theory. Basingstoke: Palgrave Macmillan 2005.
140. Pollard A. Field of screams: difficulty and ethnographic fieldwork. *Anthropology Matters* 2009;11(2) doi: 10.22582/am.v11i2.10
141. Greenhalgh T, Hinton L, Finlay T, et al. Frameworks for supporting patient and public involvement in research: Systematic review and co-design pilot. *Health Expect* 2019;22(4):785-801. doi: 10.1111/hex.12888

142. Evans D, Coad J, Cottrell K, et al. Public involvement in research: assessing impact through a realist evaluation. 2014
143. Shippee ND, Domecq Garces JP, Prutsky Lopez GJ, et al. Patient and service user engagement in research: a systematic review and synthesized framework. *Health Expectations* 2015;18(5):1151-66. doi: 10.1111/hex.12090
144. National Institute for Health Research. Patient and Public Involvement in Health and Social Care Research: A Handbook for Researchers. Leeds: NIHR, 2014.
145. Dillon EC, Tuzzio L, Madrid S, et al. Measuring the impact of patient-engaged research: how a methods workshop identified critical outcomes of research engagement. *Journal of Patient-Centered Research and Reviews* 2017;4(4):237. doi: 10.17294/2330-0698.1458
146. Pollock A, George BS, Fenton M, et al. Development of a new model to engage patients and clinicians in setting research priorities. *Journal of health services research & policy* 2014;19(1):12-18. doi: 10.1177/1355819613500665
147. Oliver S, Clarke-Jones L, Rees R, et al. Involving consumers in research and development agenda setting for the NHS: developing an evidence-based approach. *Health Technol Assess* 2004;8(15):1-148, III-IV. doi: 10.3310/hta8150
148. Greenhalgh T, Hinton L, Finlay T, et al. Frameworks for supporting patient and public involvement in research: Systematic review and co-design pilot. *Health Expectations* 2019;22(4):785-801. doi: https://doi.org/10.1111/hex.12888
149. Eisenhardt KM. Making Fast Strategic Decisions in High-Velocity Environments. *The Academy of Management Journal* 1989;32(3):543-76. doi: 10.2307/256434
150. Clarke V, Braun V. Thematic analysis. *J Posit Psychol* 2017;12(3):297-98.
151. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology* 2006;3(2):77-101. doi: 10.1191/1478088706qp063oa
152. Manning J. In Vivo Coding. The International Encyclopedia of Communication Research Methods:1-2.
153. Van Maanen J. The Fact of Fiction in Organizational Ethnography. *Administrative Science Quarterly* 1979;24(4):539-50. doi: 10.2307/2392360
154. Ragu-Nathan T, Tarafdar M, Ragu-Nathan BS, et al. The consequences of technostress for end users in organizations: Conceptual development and empirical validation. *Inform Syst Res* 2008;19(4):417-33.
155. Gill MJ. The significance of suffering in organizations: Understanding variation in workers' responses to multiple modes of control. *Acad Manage Rev* 2019;44(2):377-404.
156. Gittell JH. Transforming Relationships for High Performance: The Power of Relational Coordination. Stanford: Stanford University Press 2016.
157. Bartel CA, Rockmann KW. EXPRESS: The Disease of Indifference: How Relational Systems Provide the Attentional Infrastructure for Organizational Resilience. *Strategic Organization* 2023;22(1):14761270231183441. doi: 10.1177/14761270231183441
158. Edmondson AC. The fearless organization: Creating psychological safety in the workplace for learning, innovation, and growth: John Wiley & Sons 2018.
159. Braun V, Clarke V. Toward good practice in thematic analysis: Avoiding common problems and be(com)ing a knowing researcher. *International Journal of Transgender Health* 2023;24(1):1-6. doi: 10.1080/26895269.2022.2129597

160. Allen D. The invisible work of nurses : hospitals, organisation and healthcare. Place of publication not identified: Routledge 2014.
161. Tavory I, Timmermans S. Abductive analysis : theorizing qualitative research. Chicago: The University of Chicago Press 2014.
162. Ashforth BE, Sluss DM. Relational identities on organizations: healthy versus unhealthy. In: Kyriakidou O, Özbilgin M, eds. Relational perspectives in organizational studies : a research companion. Cheltenham: Edward Elgar 2006.
163. Bertels S, Howard-Grenville J, Pek S. Cultural Molding, Shielding, and Shoring at Oilco: The Role of Culture in the Integration of Routines. *Organization Science* 2016;27(3):573-93. doi: 10.1287/orsc.2016.1052
164. Weber K, Dacin MT. The Cultural Construction of Organizational Life: Introduction to the Special Issue. *Organization Science* 2011;22(2):287-98. doi: 10.1287/orsc.1100.0632
165. Mauss M, Guyer JI, Maurer B. The gift. Expanded ed. Chicago: HAU Books 2016.
166. Jackson J. The Invisible Anthropologist. Book Forum: A Possible Anthropology. Fieldsights: Society for Cultural Anthropology 2020.
167. Assing Hvidt E, Grønning A, Nisbeth Brøgger M, et al. Multilevel structures and human agency in relation to email consultations: A strong structuration theory analysis of the Danish general practice setting. *Social science & medicine (1982)* 2021;282:114155-55. doi: 10.1016/j.socscimed.2021.114155
168. Greenhalgh T, Stones R. Theorising big IT programmes in healthcare: Strong structuration theory meets actor-network theory. *Soc Sci Med* 2010;70(9):1285-94. doi: 10.1016/j.socscimed.2009.12.034
169. Günel G, Varma S, Watanabe C. A Manifesto for Patchwork Ethnography. Fieldsights: Society for Cultural Anthropology, 2020.
170. Dakin FH, Rybczynska-Bunt S, Rosen R, et al. Access and triage in contemporary general practice: A novel theory of digital candidacy. *Soc Sci Med* 2024;349:116885. doi: 10.1016/j.socscimed.2024.116885
171. Dixon-Woods M, Cavers D, Agarwal S, et al. Conducting a critical interpretive synthesis of the literature on access to healthcare by vulnerable groups. *BMC Medical Research Methodology* 2006;6(1):35. doi: 10.1186/1471-2288-6-35
172. Woolgar S. Configuring the User: The Case of Usability Trials. *The Sociological Review* 1990;38(1_suppl):58-99. doi: 10.1111/j.1467-954X.1990.tb03349.x
173. Oudshoorn N, Rommes E, Stienstra M. Configuring the User as Everybody: Gender and Design Cultures in Information and Communication Technologies. *Science, Technology, & Human Values* 2004;29(1):30-63. doi: 10.1177/0162243903259190
174. Star SL, Strauss A. Layers of silence, arenas of voice: The ecology of visible and invisible work. *Computer supported cooperative work (CSCW)* 1999;8:9-30.
175. Giddens A. The constitution of society: Outline of the theory of structuration: Univ of California Press 1984.
176. Stones R. Disembedding. In: Ritzer G, ed. The Wiley-Blackwell Encyclopaedia of Globalization. Oxford: John Wiley & Sons. Accessed 13.2.24 at http://dx.doi.org/10.1002/9780470670590.wbeog154 2012.
177. Stones R. Distanciation. In: Ritzer G, ed. The Wiley-Blackwell Encyclopedia of Globalization2012.

178. Greenhalgh T, Stones R. Theorising big IT programmes in healthcare: Strong structuration theory meets actor-network theory. *Social Science & Medicine* 2010;70:1285-94. doi: 10.1016/j.socscimed.2009.12.034
179. Dakin F, Rai T, Paparini S, et al. Supporting your support staff during crises: recommendations for practice leaders to develop a relational workplace. *BMJ Lead* 2023;7(Published Online First) doi: doi:10.1136/ leader-2023-000780
180. Donabedian A. The quality of care. How can it be assessed? *Jama* 1988;260(12):1743-8. doi: 10.1001/jama.260.12.1743
181. Maben J, Ball J, Edmondson AC. Workplace Conditions. Cambridge: Cambridge University Press, 2023.
182. Brand SL, Thompson Coon J, Fleming LE, et al. Whole-system approaches to improving the health and wellbeing of healthcare workers: A systematic review. *PLoS One* 2017;12(12):e0188418-e18. doi: 10.1371/journal.pone.0188418
183. Boorman S. Health and Well-Being: Final Report. London: Department of Health,, 2009.
184. Habermas J. The theory of communicative action: v.2: Lifeworld and system: a critique of functionalist reason. 3rd corrected 1985 ed. Boston: Beacon Press 1987.
185. Greenhalgh T, Robb N, Scambler G. Communicative and strategic action in interpreted consultations in primary health care: a Habermasian perspective. *Soc Sci Med* 2006;63(5):1170-87. doi: 10.1016/j.socscimed.2006.03.033
186. Ragu-Nathan T, Tarafdar M, Ragu-Nathan BS, et al. The consequences of technostress for end users in organizations: Conceptual development and empirical validation. *Information systems research* 2008;19(4):417-33.
187. Gill MJ. The significance of suffering in organizations: Understanding variation in workers' responses to multiple modes of control. *Academy of Management Review* 2019;44(2):377-404.
188. Edmondson AC, Lei Z. Psychological Safety: The History, Renaissance, and Future of an Interpersonal Construct. *Annual Review of Organizational Psychology and Organizational Behavior* 2014;1(1):23-43. doi: 10.1146/annurev-orgpsych-031413-091305
189. Edmondson A. Psychological safety and learning behavior in work teams. *Administrative science quarterly* 1999;44(2):350-83. doi: Doi 10.2307/2666999
190. NHS England. Delivery plan for recovering access to primary care. In: Department of Health & Social Care, ed. London: NHS England, 2023.
191. 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(704):e166-e77. doi: 10.3399/bjgp.2020.0948
192. Zhang J, Gallifant J, Pierce RL, et al. Quantifying digital health inequality across a national healthcare system. *BMJ Health & Care Informatics* 2023;30(1):e100809. doi: 10.1136/bmjhci-2023-100809 [published Online First: 20231124]
193. Koehn S. Negotiating candidacy: ethnic minority seniors' access to care. *Ageing Soc* 2009;29(4):585-608. doi: 10.1017/s0144686x08007952
194. Mackenzie M, Conway E, Hastings A, et al. Is 'Candidacy' a Useful Concept for Understanding Journeys through Public Services? A Critical Interpretive

Literature Synthesis. *Social Policy & Administration* 2013;47(7):806-25. doi: https://doi.org/10.1111/j.1467-9515.2012.00864.x
195. Liberati E, Richards N, Parker J, et al. Qualitative study of candidacy and access to secondary mental health services during the COVID-19 pandemic. *Social Science & Medicine* 2022;296:114711. doi: https://doi.org/10.1016/j.socscimed.2022.114711
196. Mackintosh N, Gong QS, Hadjiconstantinou M, et al. Digital mediation of candidacy in maternity care: Managing boundaries between physiology and pathology. *Soc Sci Med* 2021;285:114299. doi: 10.1016/j.socscimed.2021.114299 [published Online First: 20210806]
197. Hinton L, Kuberska K, Dakin F, et al. A qualitative study of the dynamics of access to remote antenatal care through the lens of candidacy. *Journal of Health Services Research & Policy* 2023;0(0):13558196231165361. doi: 10.1177/13558196231165361
198. Orlikowski WJ. Using technology and constituting structures: A practice lens for studying technology in organizations. *Organization science* 2000;11(4):404-28.
199. Stones R. Structuration Theory. London: Palgrave 2005.
200. Bourdieu P. Outline of a Theory of Practice. Cambridge: Cambridge University Press 1977.
201. Wherton J, Greenhalgh T, Hughes G, et al. The role of information infrastructures in scaling up video consultations during COVID-19: mixed methods case study into opportunity, disruption, and exposure. *Journal of Medical Internet Research* 2022;24(11):e42431.
202. Greenhalgh T, Swinglehurst D, Stones R. Rethinking resistance to 'big IT': a sociological study of why and when healthcare staff do not use nationally mandated information and communication technologies. *Health Services and Delivery Research* 2014;2(39):1-86. doi: 10.3310/hsdr02390
203. Veinot TC, Mitchell H, Ancker JS. Good intentions are not enough: how informatics interventions can worsen inequality. *Journal of the American Medical Informatics Association* 2018;25(8):1080-88. doi: 10.1093/jamia/ocy052
204. Alami H, Lehoux P, Shaw SE, et al. Virtual Care and the Inverse Care Law: Implications for Policy, Practice, Research, Public and Patients. *Int J Environ Res Public Health* 2022;19(17):10591. doi: 10.3390/ijerph191710591
205. Husain L, Finlay T, Husain A, et al. Developing user personas to capture intersecting dimensions of disadvantage in marginalised older people: a qualitative study. *Brit J Gen Pract* 2024
206. Hunter C, Chew-Graham C, Langer S, et al. A qualitative study of patient choices in using emergency health care for long-term conditions: The importance of candidacy and recursivity. *Patient Education and Counseling* 2013;93(2):335-41. doi: https://doi.org/10.1016/j.pec.2013.06.001
207. Carayon P, Hoonakker P. Human Factors and Usability for Health Information Technology: Old and New Challenges. *Yearb Med Inform* 2019;28(1):71-77. doi: 10.1055/s-0039-1677907
208. Clarke J. New Labour's citizens: activated, empowered, responsibilized, abandoned? *Critical social policy* 2005;25(4):447-63.
209. Thirunavukarasu AJ, Ting DSJ, Elangovan K, et al. Large language models in medicine. *Nature medicine* 2023;29(8):1930-40.

210. Williamson AK, Antonio MG, Davis S, et al. Human technology intermediation to reduce cognitive load: understanding healthcare staff members' practices to facilitate telehealth access in an FQHC patient population. *Journal of the American Medical Informatics Association under review* 2024
211. Greenhalgh T, Payne R, Hemmings N, et al. Training needs for staff providing remote services in general practice: a mixed-methods study. *British Journal of General Practice* 2024;74(738):e17-e26.
212. Ladds E, Greenhalgh T, Byng R, et al. A contemporary ontology of continuity in general practice: Capturing its multiple essences in a digital age. *Social science & medicine (1982)* 2023;332:116112.
213. Payne R, Clarke A, Swann N, et al. Patient safety in remote primary care encounters: multimethod qualitative study combining Safety I and Safety II analysis. *BMJ Quality & Safety* 2023
214. Dakin F, Rai T, Paparini S, et al. Supporting your support staff during crises: recommendations for practice leaders to develop a relational workplace. *BMJ Leader* 2023;7(Suppl 2):1-7. doi: 10.1136/leader-2023-000780
215. NHS Digital. General Practice Workforce Interactive Dashboard 2023 [Available from: https://digital.nhs.uk/data-and-information/publications/statistical/general-and-personal-medical-services/31-january-2023 accessed 23/02/2023.
216. Anderson M, O'Neill C, Macleod Clark J, et al. Securing a sustainable and fit-for-purpose UK health and care workforce. *Lancet* 2021;397(10288):1992-2011. doi: 10.1016/s0140-6736(21)00231-2 [published Online First: 20210506]
217. Hammond J, Gravenhorst K, Funnell E, et al. Slaying the dragon myth: an ethnographic study of receptionists in UK general practice. *Br J Gen Pract* 2013;63(608):e177-84. doi: 10.3399/bjgp13X664225
218. Swinglehurst D, Greenhalgh T, Russell J, et al. Receptionist input to quality and safety in repeat prescribing in UK general practice: ethnographic case study. *BMJ (Clinical research ed)* 2011; 343.
219. Litchfield I, Burrows M, Gale N, et al. Understanding the invisible workforce: lessons for general practice from a survey of receptionists. *BMC Prim Care* 2022;23(1):230. doi: 10.1186/s12875-022-01842-4
220. UK Government. Ethnicity facts and figures [2021 census data] Gov.uk,2021 [Available from: https://www.ethnicity-facts-figures.service.gov.uk accessed 23/02/2023.
221. NHS Digital. NHS Staff Earnings Esimates 2023 [Available from: https://digital.nhs.uk/data-and-information/publications/statistical/nhs-staff-earnings-estimates/september-2022-provisional-statistics.
222. Dall'Ora C, Ball J, Reinius M, et al. Burnout in nursing: a theoretical review. *Hum Resour Health* 2020;18(1):41. doi: 10.1186/s12960-020-00469-9
223. Edmondson A. Psychological Safety and Learning Behavior in Work Teams. 1999 doi: 10.2307/2666999
224. Swinglehurst D, Greenhalgh T, Russell J, et al. Receptionist input to quality and safety in repeat prescribing in UK general practice: ethnographic case study. *BMJ* 2011;343:d6788. doi: 10.1136/bmj.d6788
225. Mishler E. The discourse of medicine: The dialectics of medical interviews. Norwood, NJ: Ablex 1984.

226. NHS England. Advice on how to establish a remote 'total triage' model in general practice using online consultations. London: NHS England. Accessed 23rd March 2023 at https://madeinheene.hee.nhs.uk/Portals/0/Advice%20on%20how%20to%20establish%20a%20remote%20total%20triage%20model%20in%20GP%20using%20online%20consultations.pdf 2020.
227. NHS England. Remote Working in Primary Care Guidance for GP Practices during COVID-19 Emergency Response. London: NHS England. Accessed 16th October 2020 at https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/C0165-remote-working-in-primary-care-gp-practices-during-covid-19-v1.2.pdf 2020 (30th March).
228. NHS England. NHS Long Term Workforce Plan. London: NHS England. Accessed 29th February 2024 at https://www.england.nhs.uk/publication/nhs-long-term-workforce-plan/ 2023.
229. Department of Health and Social Care. A plan for digital health and social care. London: gov.uk. Accessed 13.2.24 at https://www.gov.uk/government/publications/a-plan-for-digital-health-and-social-care/a-plan-for-digital-health-and-social-care 2022.
230. Health and Social Care Committee. The Future of General Practice. London: H M Government. Accessed 16th July 2022 https://committees.parliament.uk/work/1624/the-future-of-general-practice/. 2022.
231. Department of Health and Social Care. Delivery Plan for Recovering Access to Primary care. London: DHSC. Accessed 29th February 2024 at https://www.england.nhs.uk/wp-content/uploads/2023/05/PRN00283-delivery-plan-for-recovering-access-to-primary-care-may-2023.pdf 2023.
232. Welsh Government. Digital and data strategy for health and social care in Wales. Cardiff: gov.wales. Accessed 12th February 2024 at https://www.gov.wales/digital-and-data-strategy-health-and-social-care-wales-html 2023.
233. Barford A, Gray M. The tattered state: Falling through the social safety net. *Geoforum* 2022;137:115-25.
234. Care Quality Commission. The state of health care and adult social care in England 2022/23. London: CQC. Accessed 12.2.24 at https://www.cqc.org.uk/publications/major-report/state-care/2022-2023 2023.
235. British Medical Association. Safe working in general practice. London: BMA. Accessed 15.2.24 at https://www.bma.org.uk/advice-and-support/gp-practices/managing-workload/safe-working-in-general-practice 2024.
236. Levell NJ. NHS outpatient secondary care: a time of challenges and opportunities. *Future Health J* 2022;9(2):106.
237. Campbell JL, Fletcher E, Britten N, et al. Telephone triage for management of same-day consultation requests in general practice (the ESTEEM trial): a cluster-randomised controlled trial and cost-consequence analysis. *Lancet* 2014;384(9957):1859-68.
238. Payne R, Clarke A, Swann N, et al. Patient safety in remote primary care encounters: multimethod qualitative study combining Safety I and Safety II analysis. *BMJ Qual Saf* 2023

239. 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. *Brit J Gen Practtice* 2021;71(704):e166-e77.
240. Wieringa S, Neves AL, Rushforth A, et al. Safety implications of remote assessments for suspected COVID-19: qualitative study in UK primary care. *BMJ Qual Saf* 2022:bmjqs-2021-013305. doi: 10.1136/bmjqs-2021-013305
241. Rosen R, Wieringa S, Greenhalgh T, et al. Clinical risk in remote consultations in general practice: findings from in-Covid-19 pandemic qualitative research. *BJGP Open* 2022:BJGPO.2021.0204. doi: 10.3399/bjgpo.2021.0204
242. Donaghy E, Huang H, Henderson D, et al. Primary care transformation in Scotland: a qualitative study of GPs' and multidisciplinary team members' views. *Br J Gen Pract* 2024;74(738):e1-e8.
243. Greenhalgh T, Payne R, Hemmings N, et al. Training needs for staff providing remote services in general practice: a mixed-methods study. *Br J Gen Pract* 2024;74(738):e17-e26.
244. Ladds E, Greenhalgh T, Byng R, et al. A contemporary ontology of continuity in general practice: Capturing its multiple essences in a digital age. *Soc Sci Med* 2023;332:116112.
245. Burch P, Whittaker W, Bower P, et al. Factors affecting the experience of joined-up, continuous primary care in the absence of relational continuity: an observational study. *Br J Gen Pract* 2023
246. Rybczynska-Bunt S, Byng R, Spitters S, et al. The reflexive imperative in the digital age: Using Archer's 'fractured reflexivity' to theorise widening inequities in UK general practice. *Sociol Health Illn* 2024;n/a(n/a) doi: https://doi.org/10.1111/1467-9566.13811
247. Darley S, Coulson T, Peek N, et al. Understanding How the Design and Implementation of Online Consultations Affect Primary Care Quality: Systematic Review of Evidence With Recommendations for Designers, Providers, and Researchers. *J Med Internet Res* 2022;24(10):e37436. doi: 10.2196/37436
248. Borek AJ, Pilbeam C, Mableson H, et al. Experiences and concerns of health workers throughout the first year of the COVID-19 pandemic in the UK: a longitudinal qualitative interview study. *PLoS One* 2022;17(3):e0264906.
249. Umair A, Conboy K, Whelan E. Examining technostress and its impact on worker well-being in the digital gig economy. *Internet Res* 2023;33(7):206-42.
250. Gittell JH. Organizing work to support relational co-ordination. *Int J Hum Res Man* 2000;11(3):517-39.
251. Bolton R, Logan C, Gittell JH. Revisiting Relational Coordination: A Systematic Review. *J Appl Behav Sci* 2021;57(3):290-322. doi: 10.1177/0021886321991597
252. Fischer T, Reuter M, Riedl R. The digital stressors scale: development and validation of a new survey instrument to measure digital stress perceptions in the workplace context. *Front Psychol* 2021;12:607598.
253. Cassell EJ. The nature of suffering and the goals of medicine. *Loss Grief Care* 1998;8(1-2):129-42.
254. Weber MC, Smith AJ, Jones RT, et al. Moral injury and psychosocial functioning in health care workers during the COVID-19 pandemic. *Psychol Serv* 2023;20(1):19.

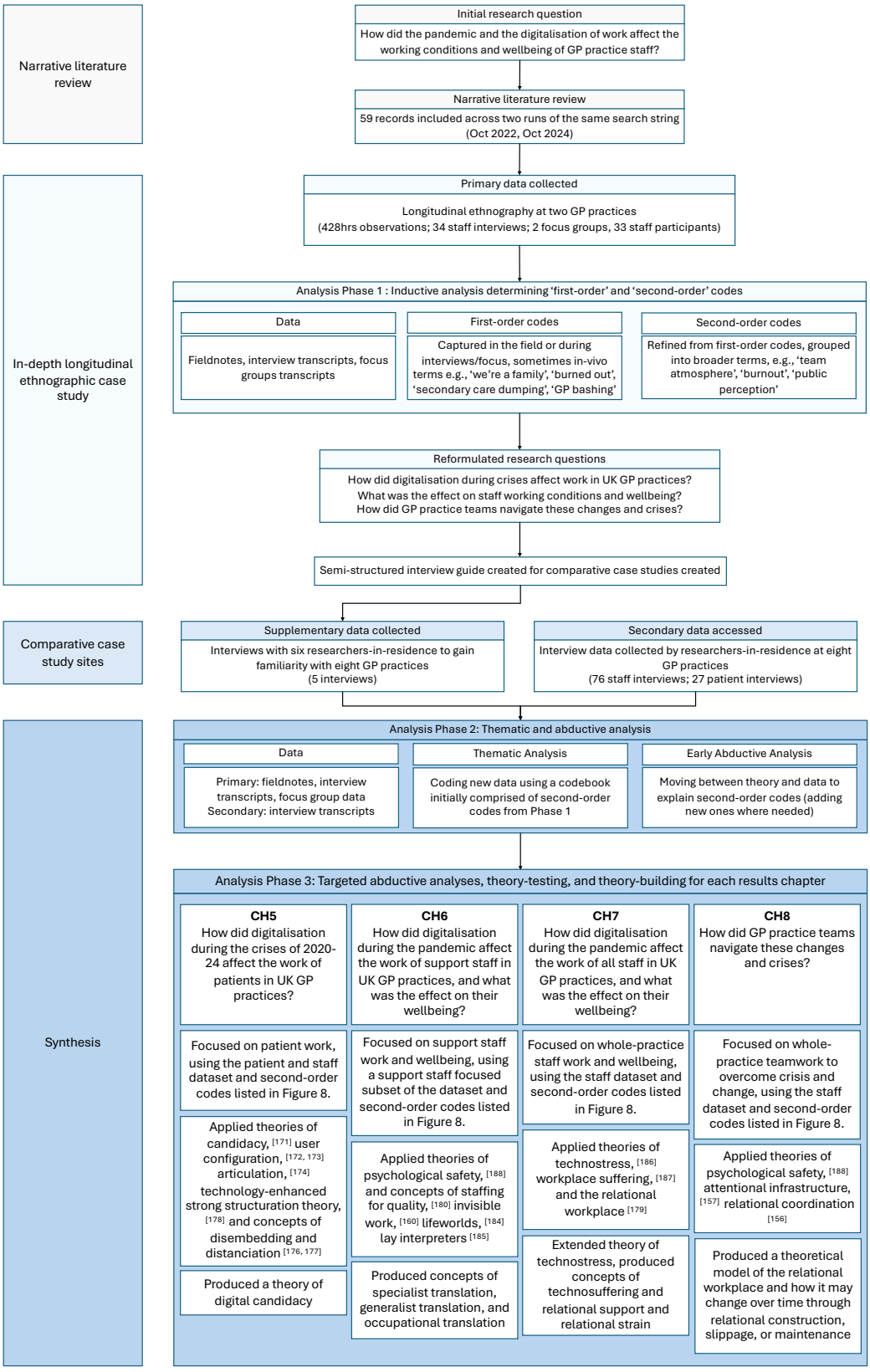
255. Francetic I, Gibson J, Spooner S, et al. Skill-mix change and outcomes in primary care: longitudinal analysis of general practices in England 2015–2019. *Soc Sci Med* 2022;308:115224.
256. Gabbay J, le May A. Mindlines: making sense of evidence in practice. *Br J Gen Pract* 2016;66(649):402-03. doi: 10.3399/bjgp16X686221
257. Purdy E, Alexander C, Shaw R, et al. The team briefing: setting up relational coordination for your resuscitation. *Clin Exp Emerg Med* 2020;7(1):1-4. doi: 10.15441/ceem.19.021
258. Brazil V, Purdy E, Alexander C, et al. Improving the relational aspects of trauma care through translational simulation. *Adv Simul* 2019;4(1):10. doi: 10.1186/s41077-019-0100-2
259. NHS England. Flexible working: Raising the standards for the NHS 2022
260. NHS England. We are the NHS: People Plan 2020/21 - action for us all. 2020
261. Van de Ven AH. The innovation journey: you can't control it, but you can learn to maneuver it. *Innovation* 2017;19(1):39-42. doi: 10.1080/14479338.2016.1256780
262. Greenhalgh T, Robert G, Macfarlane F, et al. Diffusion of innovations in service organizations: systematic review and recommendations. *Milbank Q* 2004;82(4):581-629. doi: 10.1111/j.0887-378X.2004.00325.x
263. Poole MS, Van de Ven AH. The Oxford Handbook of Organizational Change and Innovation. 2 ed. Oxford: Oxford University Press 2021.
264. Boyne GA, Meier KJ. Environmental Turbulence, Organizational Stability, and Public Service Performance. *Administration & Society* 2009;40(8):799-824. doi: 10.1177/0095399708326333
265. Scambler G. Combining experiential knowledge with scholarship in charting the decline of the National Health Service in England. *Frontiers in Sociology* 2023;8:1185487. doi: 10.3389/fsoc.2023.1185487 [published Online First: 20231121]
266. Purdy EI, McLean D, Alexander C, et al. Doing our work better, together: a relationship-based approach to defining the quality improvement agenda in trauma care. *BMJ Open Quality* 2020 doi: 10.1136/bmjoq-2019-000749
267. Newman A, Donohue R, Eva N. Psychological safety: A systematic review of the literature. *Human Resource Management Review* 2017;27(3):521-35. doi: 10.1016/j.hrmr.2017.01.001
268. Grailey KE, Murray E, Reader T, et al. The presence and potential impact of psychological safety in the healthcare setting: an evidence synthesis. *BMC Health Services Research* 2021;21(1):773. doi: 10.1186/s12913-021-06740-6
269. Liberati EG, Tarrant C, Willars J, et al. How to be a very safe maternity unit: An ethnographic study. *Social Science & Medicine* 2019;223:64-72. doi: 10.1016/j.socscimed.2019.01.035 [published Online First: 20190124]
270. O'Donovan R, McAuliffe E. A systematic review exploring the content and outcomes of interventions to improve psychological safety, speaking up and voice behaviour. *BMC Health Services Research* 2020;20(1):101. doi: 10.1186/s12913-020-4931-2
271. Abu-Rish Blakeney E, Lavallee DC, Baik D, et al. Purposeful interprofessional team intervention improves relational coordination among advanced heart failure care teams. *Journal of Interprofessional Care* 2019;33(5):481-89. doi: 10.1080/13561820.2018.1560248

272. Brazil V, McLean D, Lowe B, et al. A relational approach to improving interprofessional teamwork in post-partum haemorrhage (PPH). *BMC Health Services Research* 2022;22(1):1108. doi: 10.1186/s12913-022-08463-8
273. Warde CM, Vermillion M, Uijtdehaage S. A medical student leadership course led to teamwork, advocacy, and mindfulness. *Fam Med* 2014;46(6):459-62.
274. Nicolini D, Korica M. Attentional Engagement as Practice: A Study of the Attentional Infrastructure of Healthcare Chief Executive Officers. *Organization Science* 2021;32(5):1273-99. doi: 10.1287/orsc.2020.1427
275. Gittell JH. Coordinating Mechanisms in Care Provider Groups: Relational Coordination as a Mediator and Input Uncertainty as a Moderator of Performance Effects. *Management Science* 2002;48(11):1408-26.
276. Edmondson AC, Schein EH. Teaming. 1 ed. Hoboken: Hoboken: Jossey-Bass 2012.
277. Wenger E. Communities of practice: learning, meaning, and identity. Cambridge, New York, N.Y.: Cambridge University Press 1998.
278. Nicolini D. Practice theory, work, and organization : an introduction. 1st ed. Oxford: Oxford University Press 2012.
279. Lave J, Wenger E. Situated learning : legitimate peripheral participation. Cambridge: Cambridge University Press 1991.
280. Gittell JH, Rob Seidner, and Julian Wimbush. A Relational Model of How High-Performance Work Systems Work. *Organization Science* 2010;21(2):490–506. doi: 10.1287/orsc.1090.0446
281. Edmondson AC. The Fearless Organization. Newark: Newark: John Wiley & Sons, Incorporated 2018.
282. NDPCHS Departmental Meeting February, PPI; 2023. Nuffield Department of Primary Care Health Sciences,.
283. Nuffield Department of Primary Care Health Sciences. PPI Funding Reports phc.ox.ac.uk/ppi2023 [
284. Barley SR. Work and technological change. First edition. ed. New York, NY: Oxford University Press 2020.
285. Nikki Kanani EW. UPDATED STANDARD OPERATING PROCEDURE (SOP) TO SUPPORT RESTORATION OF GENERAL PRACTICE SERVICES In: NHS England, ed. england.nhs.uk, 2021.
286. Donabedian A. The Quality of Care: How Can It Be Assessed? *JAMA* 1988;260(12):1743-48. doi: 10.1001/jama.1988.03410120089033
287. Hart JT. The inverse care law. *Lancet* 1971;1(7696):405-12. doi: 10.1016/s0140-6736(71)92410-x
288. Marmot M. The Health Gap: The Challenge of an Unequal World: the argument. *Int J Epidemiol* 2017;46(4):1312-18. doi: 10.1093/ije/dyx163
289. Marmot M. Social determinants of health inequalities. *Lancet* 2005;365(9464):1099-104. doi: 10.1016/s0140-6736(05)71146-6
290. TeamSTEPPS. TeamSTEPPS 3.0 Curriculum Materials. Rockville: Agency for Healthcare Research and Quality; 2023 [
291. Purdy E, Alexander C, Caughley M, et al. Identifying and Transmitting the Culture of Emergency Medicine Through Simulation. 2019 doi: 10.1002/aet2.10325
292. Payne R, Dakin F. The place of remote consultation in modern general practice. *British Journal of General Practice* 2023;74(738):7-8. doi: 10.3399/bjgp24X735873

293. Blackburn P. The human factor: the effects of remote working on doctor and patient. The Doctor: BMA, 2024.
294. Dakin F. SPCR Trainee Blog Post: Reflections on a visit to Parliament. In: SPCR, ed. spcr.nihr.ac.uk: NIHR SPCR, 2024.
295. The Nuffield Trust. Getting the best out of the new world of remote and digital general practice. nuffieldtrust.org: The Nuffield Trust, 2024.
296. Dakin F. TUTOR-PHC 2024 | Building the Research Networks of the Future. In: SPCR, ed. spcr.nihr.ac.uk: NIHR SPCR, 2024.
297. Payne R, Clarke A, Swann N, et al. Patient safety in remote primary care encounters: multi-method qualitative study combining Safety I and Safety II analysis *BMJ Qual Saf* 2023
298. Payne RE, Dakin F, MacIver E, et al. What are the challenges to quality in modern, hybrid general practice? A multi-site longitudinal study. *British Journal of General Practice* 2024:BJGP.2024.0184. doi: 10.3399/bjgp.2024.0184
299. Greenhalgh T, Payne RE, Hemmings N, et al. Remote services in general practice: who needs to be trained in what, when and how? *Br J Gen Pract* 2023;74(738):BJGP.2023.0251. doi: 10.3399/bjgp.2023.0251

Appendices

Appendix 1: Full data collection and analytical process map



Appendix 2: Interview topic guide

WS3 Interview Topic Guide

Opening topics

- Which site were you?
- When did you do your fieldwork?
- Your engagement with your sites (observations, interviews)
- How you feel your interests/presence influenced what you were seeing

Wellbeing and working conditions

- The "normal" working conditions there – use of remote tech, workload, how teams work together/between one another, hierarchies
- How would you describe the workload at the site?
- Where is the hidden work in your practice? (Push for hidden work in specific teams: admin, reception, managers, clinical).
- How would you describe the working conditions?
- How do these working conditions affect staff wellbeing
- How was negative wellbeing managed at the practice?
- Prompt for examples

Crisis and change

- Do you think the pandemic/digital technologies has affected workload and working conditions for people in your site? In what ways?
- Have they affected staff wellbeing? How?
- Examples

Organisational culture and teamwork

- What is the organisational culture like? (Flat, hierarchical)
- How do staff manage these workloads? Collectively or individualistically?
- What helps them? What hinders?
- Do staff support one another?
- Do staff speak up (psych safety)?
- How do teams work together/ across?
- Are there frictions? (Individuals, teams, processes)
- Examples

Relational coordination

- In what manner do staff speak to one another? (Frequent, timely, accurate, problem-solving communication)
- Shared goals?
- Shared knowledge (know about one another's role)?
- Mutual respect?

Appendix 3: Participant Information Sheet, consent form, and study poster

Participant Information Sheet

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PARTICIPANT INFORMATION SHEET – STAFF AND STAKEHOLDER INTERVIEW

Study Title: Remote-by-Default 2: The New Normal?

We'd like to invite you to take part in our research study. Before you decide, it is important that you understand why the research is being done and what it would involve for you. Please take time to read this information and discuss it with others if you wish. If there is anything that is not clear, or if you would like more information, please ask us. You can also find further information about how researchers use information from patients at;
www.hra.nhs.uk/patientdataandresearch

What is the purpose of the study?

In response to the Covid-19 (or coronavirus) pandemic, NHS and related care services have had to undergo rapid transformations in how they organise their care for patients. The aim of this research is to inform a more fit-for-purpose remote care model in general practice which takes account of: a) quality and safety of care, b) equity and inclusivity, c) staff wellbeing and training, and d) the wider technical and regulatory infrastructure.

Some of the research being undertaken may also help a similar educational research project (e.g. a doctoral thesis).

The University of Oxford is the study sponsor organisation. When the term 'we' is used it means the sponsor.

Why have I been invited?

You have been invited to take part in this research study because you are over 18 and have been involved in setting up or working with healthcare services during the pandemic. Altogether, we plan to interview 100 staff from general practice and related services and 20 broader stakeholders about their thoughts and experiences of remote healthcare services during this time.

Do I have to take part?

No, taking part in this study is entirely voluntary and you can withdraw at any time if you later change your mind, without giving a reason.

What will happen to me if I decide to take part?

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Prof Trish Greenhalgh trish.greenhalgh@phc.ox.ac.uk

If you are happy to be interviewed for this study, a researcher will ask you to consent to take part. Consent will be written or may be recorded verbally if you prefer. A copy of the record of consent will be sent by email for you to keep in your records.

Depending on what you prefer, the researcher will interview you once, twice or three times about your experiences. A second or third interview might happen if you talk about something interesting in the first interview that is worth talking about again later. Interviews will be recorded via audio (i.e. over the phone or face-to-face) or via video (i.e. over the computer), or in some cases both. If this happens you will have the option to turn off the camera if you don't want to be seen. Please indicate during the verbal consent process whether you are willing to take part in one, two or three interviews and whether you are happy for the interview to be recorded.

Participants may also be invited to share photographs with the researcher that are particularly relevant to them when thinking about their experiences of the pandemic and shift in working styles. This is called photo elicitation. Where photographs are taken or shared and intended to be used as part of the public research findings, verbal permission will be sought from the subject(s) in the photograph and/or photographer. Where permission is not given, or it is not possible to obtain permission from subjects in the photographs, then those photographs will be redacted from public use or subjects within photographs will be anonymised using blurring software.

What should I consider?

The main thing to consider about being interviewed is whether you are comfortable with researchers speaking to you about your experiences and views on healthcare services. If sharing photographs, the main thing to consider is whether you are comfortable sharing details of spaces and experiences that may be personal to you.

Are there any possible disadvantages or risks from taking part?

A disadvantage is that for an interview, we would be asking you to commit some time on one or two occasions (of up to 60 minutes) for which you will not be reimbursed. In the unlikely event of disclosure of evidence of poor practice by yourself, a colleague, or an institution we are duty bound to notify the appropriate regulatory authority in a confidential manner.

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What are the possible benefits of taking part?

Whilst we cannot guarantee any direct benefit to you, our aim is to use the research results to help improve NHS services as it responds to the changing Covid-19 pandemic.

Will I be reimbursed for taking part?

No, you will not be reimbursed for taking part in this study

How will we use information about you?

We will need to use information from your interview for this research project.

This information will include your:

- Name
- Contact details

People will use this information to do the research or to check your records to make sure that the research is being done properly. We will keep all information about you safe and secure on a networked computer at the University of Oxford.

People who do not need to know who you are will not be able to see your name or contact details. Your data will have a code number instead. We will keep a separate record of your real name and corresponding code number stored in separate password protected digital folders.

All data from recorded interviews will be pseudonymised when they are transcribed. This means that identifiable information about participants will not be written on audio files or transcripts (i.e. the text from the interview is written out). If we keep video-recordings, these will be pseudonymised. We will apply a visual filter to make participants unrecognisable (i.e., blurring of images) from the video recording and remove any identifiable information (e.g. names) from the audio recording.

Where photographs are taken or shared and intended to be used as part of the public research findings, verbal permission will be sought from the subject(s) in the photograph and/or photographer. Where permission is not given, or it is not possible to obtain permission from other subjects in the photographs, then those photographs will be redacted from public use or subjects within photographs will be anonymised using blurring software.

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Some of your information will be sent to our research partners, Plymouth University and Nuffield Trust, and a professional transcription service (i.e., they write out the text of the whole interview). They must follow our rules about keeping your information safe by signing a confidentiality agreement. Identifiable information about you will be removed (pseudonymised) from audio and visual files before sharing with them.

Once we have finished the study, we will keep some of the data so we can check the results. We will write our reports in a way that no-one can work out that you took part in the study.

Responsible members of the University of Oxford [and the relevant NHS Trust(s)] may be given access to data for monitoring and/or audit of the study to ensure that the research is complying with applicable regulations.

What are your choices about how your information is used?

You can stop being part of the study at any time, without giving a reason, but we will keep information about you that we already have.

We need to manage your records in specific ways for the research to be reliable. This means that we won't be able to let you see or change the data we hold about you.

If you agree to take part in this study, you will have the option for your anonymous data saved from this study to be used in future research.

UK data protection regulation requires that we state the legal basis for processing information about you. In the case of research, this is 'a task in the public interest.' The University of Oxford, based in the UK is the data controller and is responsible for looking after your information and using it properly.

Further information about what this means is available at:

https://compliance.web.ox.ac.uk/individual-rights

Where can you find out more about how your information is used?

You can find out more about how we use your information

- at www.hra.nhs.uk/information-about-patients/
- by asking one of the research team
- by sending an email to rbd2@phc.ox.ac.uk
- by contacting the sponsor's data protection officer nicola.small@phc.ox.ac.uk

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What will happen to my data at the end of the study?

The members of our research team will analyse the data and write some papers and reports, including a summary written for the general public (i.e., a lay summary). Our findings will be published and available through journal publications. You will not be identified from any report or publication placed in the public domain. We may wish to use anonymised quotes (i.e. containing no personally identifiable information) from your interview or our notes in a conference presentation or teaching session, but you do not have to agree to this. If you are happy for this to happen, please indicate during the consent process.

We will keep identifiable information about you including your name, home address, and telephone number - for 12 months after the study has finished, so as to contact you about the research study and feedback results of the research in future should you so wish. All interview recordings and photographs will be destroyed at the end of the study.
However, research documents with personal information, such as consent forms, and copies of the interview text will be held securely at the University of Oxford for 15 years after the end of the study.

Can I change my mind about participating?

You can stop at any time, without giving a reason and without penalty, by advising the researchers of this decision. Participation is voluntary and even if you originally said yes, you may change your mind at a later stage.

A member of our study team may wish to record a reason about why you have withdrawn for our record keeping, but you are under no obligation to provide one.

What if there is a problem?

The University of Oxford, as Sponsor, has appropriate insurance in place in the unlikely event that you suffer any harm as a direct consequence of your participation in this study.

If you wish to complain about any aspect of the way in which you have been approached or treated, or how your information is handled during the course of this study, you should contact the chief investigator, Prof Trish Greenhalgh, contact details (trish.greenhalgh@phc.ox.ac.uk, 0186517831) or you may contact the University of Oxford Research Governance. Ethics & Assurance (RGEA) office email ctrq@admin.ox.ac.uk.

For further advice about complaints, please contact the local NHS Patient Advice and Liaison Service (PALS), at 01865 221473 or here: https://www.nhs.uk/service-search/other-services/Patient-advice-and-liaison-services-(PALS)/LocationSearch/363

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How have patients and the public been involved in this study?

Potential participants helped develop the research topic and what the research questions should be.

Who is organising and funding the study?

This research is funded by the National Institute for Health Research.

Who has reviewed the study?

All research in the NHS is looked at by an independent group of people, called a Research Ethics Committee, to protect participants' interests. This study has been reviewed and given favourable opinion by East Midlands – Leicester South Research Ethics Committee.

Further information and contact details:

If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please email the research team at rbd2@phc.ox.ac.uk in the first instance and someone will get back to you promptly.

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If you would like to contact the Chief Investigator, their details are as follows:

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0186517831

Thank you for considering taking part.

Consent form

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RECORD OF WRITTEN CONSENT FORM – STAFF and STAKEHOLDER INTERVIEW

This is a record of the written consent process for our interview. Please keep this copy safe. For details about contacting the research team or to lodge a complaint, please see the participant information leaflet.

Study Title: Remote-by-Default: The New Normal?

1. I confirm that I have read the information sheet dated 06-05-2022 (version 2.1) for this study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.		
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.		
3. I agree to the interview being audio/video recorded.	YES	
	NO	
4. I agree to the use of de-identified quotes in future research reports and publications.	YES	
	NO	
5. I understand that data collected during the study may be looked at by individuals from University of Oxford and from regulatory authorities, where it is relevant to my taking part in this research.		
6. I agree to take part in this study		
ADDITONAL		
7. I agree to be contacted about a follow up interview about my experiences with primary/secondary care services following the Covid-19 Pandemic	YES	
	NO	

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_____	_____	_____
Name of Participant	*Date*	*Signature*
Francesca H. Dakin		*Francesca H. Dakin*
Name of person taking consent	*Date*	*Signature*

**1 copy for participant, paper copy given in person or posted, or sent via secure e-mail; original for researcher site file kept on a secure, networked computer at the University of Oxford.*

Study poster

NIHR | School for Primary Care Research

UNIVERSITY OF OXFORD | NUFFIELD DEPARTMENT OF PRIMARY CARE HEALTH SCIENCES

ADVANCE NOTICE OF OBSERVATION

Study Title: Remote-by-Default: The New Normal?

Our practice is taking part in a study about how the changes in primary care have affected the wellbeing of staff working in GP surgeries. More information is available in the participant information sheets placed in the reception area.

WHO IS CONDUCTING THE RESEARCH?

The researcher is **Francesca Dakin**, a PhD student and researcher at the University of Oxford's Nuffield Department of Primary Care Health Sciences. If you have any queries or concerns, please contact her using the below email.

WHAT WILL HAPPEN AND HOW WILL I BE INVOLVED?

Part of this study involves a researcher being present in the GP surgery to observe staff working and interactions with patients. This may also include informal chats with staff and patients and an invitation to be interviewed.

- The researcher will visit the practice during working hours (**8:00 am – 6:30 pm**) over **20 days** to observe staff and patients and talk to staff as they carry out their work.
- Observed areas include all public working spaces within the surgery (e.g. reception, waiting room, break room), and will include all activities undertaken by site staff.
- The researcher will make anonymous notes during observations for research purposes only.
- Your work and care will not be affected in any way.
- If you are happy to be observed, you do not need to do anything.
- If the researcher is not in the room, you are not being observed.
- If you would like to opt out, please tell the researcher or use the red stickers provided to show that you do not want to be observed.
- Any observations of consultation rooms will be agreed upon with the individual doctor(s), patient(s) and family member(s) in attendance.

Appendix 4: Local PPIE study bulletins

Easton

THE LONG RECOVERY

FEEDBACK
YOUR IMPACT

Thank you for taking part in the recent focus group held in your practice to inform my D.Phil research project "The Long Recovery" which is learning from the experiences of primary care workers during the pandemic to improve wellbeing and working conditions and improve workforce retention. In the focus group I asked you about your priorities, and how appropriate you thought the aims and methods of the project were for you and your practice.

YOU SAID

The methods and timeline of work are appropriate and feasible for your practice. You agreed with the aims and research questions, and no further aims were suggested. Discussed research priorities included: the stress and anxiety felt by all staff throughout the pandemic and workplace changes; the vaccine rollout; the impact of the negative media and political rhetoric on staff and patients; team-working and inter-colleague support systems in the practice. The biggest priority for you was improving patient understanding of general practice, its function, its people, and the pressures they face.

YOUR IMPACT

- When collecting and analysing data from your practice, the research priorities outlined above will be attended to and highlighted in any dissemination materials you receive.
- A final summary report or presentation will be offered to your practice once data are analysed.
- You will be invited to a public engagement exhibition in 2023 that will draw on this study's data and findings. We will also invite the public, members of the local council, and local MPs to support change in the community and political arenas.

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THE LONG RECOVERY

FEEDBACK

YOUR IMPACT

Thank you for taking part in the recent focus group held in your practice to inform my D.Phil research project "The Long Recovery" which is learning from the experiences of primary care workers during the pandemic to improve wellbeing and working conditions and improve workforce retention. In the focus group I asked you about your priorities, and how appropriate you thought the aims and methods of the project were for you and your practice.

YOU SAID

The methods and timeline of work are appropriate and feasible for your practice. You agreed with the aims and research questions, and no further aims were suggested. Discussed research priorities included: the strain and responsibility that digital services place on non-clinical staff; communication across teams in the practice; relationships and support within teams, and; the misalignment between public perception of GP "openness" and the high workloads you face. When discussing dissemination, you suggested that in-person presentations or newsletters would be best.

YOUR IMPACT

- When collecting and analysing data from your practice, the research priorities outlined above will be attended to and highlighted in any dissemination materials you receive.
- A final summary report or presentation will be offered to your practice once data are analysed.
- You will be invited to a public engagement exhibition in 2023 that will draw on this study's data and findings.

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Appendix 5: Remote-by-Default 2 interview guide

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Nuffield Department of Primary Care Health Sciences • University of Oxford • Radcliffe Primary Care Building • Radcliffe Observatory Quarter • Woodstock Road • Oxford OX2 6GG • www.phc.ox.ac.uk

Prof. Trish Greenhalgh trish.greenhalgh@phc.ox.ac.uk

Study Title: Remote-by-Default: The New Normal?

Interview Questionnaire for staff

Background/context

What is your job/role?

Can you tell me about your practice (e.g. size, urban/rural, part of a federation, PCN, CCG)?

Can you describe any important changes to how remote and face to face care has been given in your practice during the pandemic?

Has this changed over time?

What is the appointment system?

How is it decided whether a patient should be cared for in person or remotely?

Are video consultations running in your patch/practice? What needed to happen? Does it feel okay?

Are there any infrastructure issues in terms of supporting remote care in your practice (e.g. WiFi, computers)?

Are there issues in terms of access and inequalities in respect to digital tools and remote care?

Have patients provided feedback on any of the above issues?

Has the Covid crisis changed the dynamics of working in teams in primary care?

What are the challenges to making remote innovations sustainable as general practice moves forwards?

Appendix 6: Public-facing summaries of Chapters 5 and 7, including recommendations for practice and policy

Chapter 5 Summary

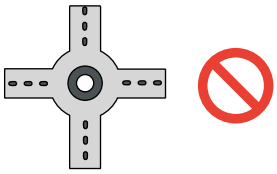
Primary care in the digital age: reducing inequalities of access

Findings from the Remote by Default 2 research study
Sub-study led by Francesca Dakin and Rybczynska-Bunt

UK general practice includes a complex network of organisations, people and technologies. Patients and staff must navigate this system to get and provide care, requiring new skills from everyone. This resource explains how technology can create and worsen inequalities in getting care.

To get care in today's GP system, patients need to:

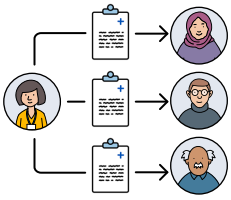
- **Find and navigate services**
- **Clearly state their needs**
- **Advocate for themselves**
- **Work with staff and technology at various stages of the process.**



These **systems assume** people have certain **skills** and **abilities**, which limits who can use them effectively.
Patients' ability to understand their health needs, access digital care, speak for themselves and navigate the system varies widely.

How well patients use these technologies affects how accurate their **digital copy*** is. People with low digital, health or system literacy are less likely to create an accurate digital copy of themselves, which may misrepresent their needs, lead to wrong care pathways or put them in 'safety-traps'.

Staff use the patient's digital copy to decide what triage or care they need but a good assessment depends on the quality of the copy!



Staff can use their knowledge of individual patients and the wider population to fill in gaps, help patients create more accurate digital copies and find those likely to have inaccurate ones.

Patients' experiences at the 'digital front door' of general practice affect how they engage with the healthcare system later. If they're told they're 'not eligible' for care once, it can affect how they assess their needs and look for help in the future.

* A **digital copy** is a representation of the patient, made up by information they provide through online forms, phone calls and their digital health record.

Learning summaries

For practice

- Digital access and triage depends on patients successfully using **technology to create a digital profile** that shows their eligibility for care.
- These **technologies assume certain abilities** which restrict who can use them and how.
- Some patients find them easy to use, which can **help staff quickly assess** simpler cases.
- However, the **assumptions these technologies make discourage some patients** from engaging with health services.
- Making access easier for some can hide the **struggles of those who find it harder**.
- **Long-term staff who know their patients** well can help overcome issues with digital access and inaccurate digital copies.
- Without careful design, **digital systems may worsen inequalities** and create new ones.
- These findings highlight the importance of **local approaches to designing and setting up multi-modal services**.

For policy

- **Avoid top-down mandates** for using specific technologies or methods. Give practices the freedom to decide what works best locally for their staff and patients.
- When investing in new technologies, **critically assess the research and development** behind the products, considering whose voices and needs might have been overlooked.
- Don't hesitate to **stop a technology or method** if it proves unsuitable for local needs.
- **Avoid measuring success** or efficiency solely on the use of these technologies.
- **Avoid making access and triage pathways too rigid**. Staff need the flexibility to creatively address issues caused by digital systems.

Other patient / practice resources

More information on this paper

Dakin F, Rybczynska-Bunt S, Rosen R et al. 'Access and triage in contemporary general practice'. *Soc Sci Med* 2024 (349): 116885.

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Technostress in general practice staff

Findings from the Remote by Default 2 research study
Sub-study led by Francesca Dakin

The expansion of remote and digital tools in UK general practice has radically changed how care is accessed, delivered, and organised. Trying to adapt to these new ways of working, in a context of under-resourcing and high workloads, has negatively affected staff wellbeing, team relations and efficiency of care.

Technologies are not inherently good or bad

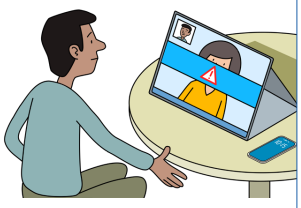
They can improve efficiency but need careful integration. If not thoughtfully embedded into our work, they can introduce new frictions like extra steps, awkward interactions and physical clunkiness.

Poor integration leads to 'technostress'

Poorly designed technologies overwhelm staff, causing cognitive overload, reducing autonomy and making tasks more complex or uncertain. Over time, these stresses can lead to burnout.

Efficiency tools can sometimes reduce efficiency

Pop-up messages and task lists can interrupt work flow and hide what needs to be done. Patient-facing tools can also create new requests and demands, leading to more technostress.



Technologies can cause distress in staff and patients

When technologies limit the kind of care that can be provided, e.g. when face-to-face options are denied, both patients and staff can experience 'technosuffering'.

Technostress and technosuffering affect team relationships

They strain staff communication, reducing teamwork and camaraderie. When this happens staff may hesitate to speak up about patient safety concerns or their own wellbeing.

Some staff have strategies to cope, but outcomes vary

They might adjust their hours, change their roles or balance digital and in-person tasks. Others, unable to find a solution, may experience burnout, choose to resign or retire.

Learning summaries

Technology-induced stress, suffering, and relational strain are under-recognised features of modern general practice.

For practice

- Give staff time and support to adapt their individual and collective work routines to new technologies (and new uses of existing technologies).
- Ensure that each staff member has an acceptable balance of digital/remote and traditional (face-to-face) work.
- Be alert to situations where technologies constrain work in ways that make staff feel uncomfortable or deprofessionalised. Surface these concerns and talk them through. Where appropriate, reconsider the benefit-harm balance of technologies.
- Be aware that efficient and safe general practice depends on good team relations, and that staff who are stressed or suffering may develop strained relationships. Maintain team cohesion through a focus on relationships and communication.

For policy

- Recognise that more technologies in general practice will not necessarily lead to greater efficiency or to 'freeing up' staff.
- Be alert to technostress, technosuffering, and strained team relations as unintended consequences of technologisation.
- When introducing new technologies or new technology-supported work routines, allocate resources not just to purchasing the technology but also to optimising its use in the practices and pathways of real-world general practice. The same technology may be embedded and used differently in different local settings.
- Without policy-level measures to protect staff from technostress, technosuffering, and relational strain, the workforce crisis in general practice will continue to worsen.

to come

More information on this paper

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