An exploration of parents' and health care providers' experiences of telehealth and health visiting services during the COVID-19 pandemic

By

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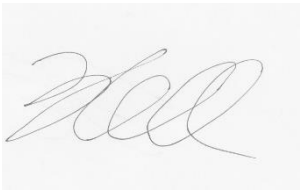

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Abstract

Health visiting services provide universal care, education, and support to families from pregnancy through to school age children. The COVID-19 pandemic changed the way health and care organisations, including health visiting, delivered services. Telehealth was a key part of this change.

This PhD adopted a pragmatist methodology and used mixed methods to explore health visiting staffs' and parents' experiences of telehealth and health visiting during COVID-19. An integrative systematic literature review explored experiences of telehealth in the first 1001 days (of life) during COVID-19. The 23 included papers provided limited data on telehealth and health visiting.

Following the review, two empirical studies were undertaken, focused on telehealth and health visiting experiences during the pandemic in the North of England: a qualitative exploration of health visiting staffs' and a mixed-methods study of parents 'experiences. Between 2023 and 2024, 15 members of staff from a health visiting service participated in interviews and 72 parents took part in a questionnaire, and 14 of whom also participated in an interview.

The results of the staff and parent experience studies were integrated using a convergence synthesis. Four key domains were noted: *health visiting should take place in the home, the importance of relationships, limited benefits of telehealth, and discrepancies in understanding of health visiting services and roles.*

Telehealth had some limited benefits for respondents, namely, maintaining contact between families and staff, specific elements of service delivery and provision of timely access to information. However, there was a misalignment between telehealth and the purpose of

health visiting, for which home visiting was seen to be fundamental. This includes, assessing and responding to individual needs, safeguarding, and providing relationship-based support.

This thesis contributes new knowledge on the nature and meaning of health visiting services for both families and staff, highlighted by experiences of telehealth during the COVID-19 pandemic. It could therefore inform the future design of a service which provides universal support to families in a critical period of development for children, and time of transition for parents, including the appropriate, limited use of telehealth.

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Chapter 1 - Introduction

Chapter Introduction

This chapter provides the background to the PhD, including the key elements which informed the choice of the topic and defined the research aim and objectives. This chapter begins with a description of the COVID-19 pandemic, the response to it and the importance of learning from this. Next, it gives a brief history of telehealth, the complexities of terminologies and the use of telehealth during the pandemic. The focus then switches to health inequalities and why this is in this thesis, then health inequalities relating to COVID-19 and telehealth. Finally, the chapter describes health visiting, the history of the service the current provision and how it was operationalised during COVID-19.

COVID-19 Context

COVID-19

In December 2019, a pneumonia of unknown cause was detected in Wuhan City, China (WHO, 2020, p. 117). In January 2020, rates had increased in China and internationally, and the World Health Organisation (WHO) declared a global health emergency (Velavan & Meyer, 2020). By the 11th of March 2020, there had been over 120,000 cases and more than 4000 deaths and the WHO declared a pandemic (Mahase, 2020) . The cause was a new coronavirus which was described as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and given the disease name COVID-19 (Landi et al., 2020).

Response to COVID-19

With no vaccines or therapeutic treatments available initially, and the awareness of the severity and fatality of previous SARS, traditional public health strategies to curb person to person spread of COVID-19 were initiated (Wilder-Smith & Freedman, 2020). These public health measures included social distancing (reducing interactions), isolation (separating people with the disease from those without) and quarantine (restricting movements of persons at the individual or group level) (Wilder-Smith & Freedman, 2020).

A common international response to COVID-19 was to have some form of lockdown which restricted the movement of populations (Koh, 2020). In the United Kingdom (UK), a lockdown was initiated on the 23rd of March 2020 (Prime Minister's Office, 2020). The UK population were only allowed to leave their homes for restricted reasons including, medical needs, shopping for necessities, exercise once per day or for necessary work.

On the 25th March 2020, the Coronavirus Act 2020 was passed into Law (legislation.gov.uk, 2020). This Act was introduced as a response to an emergency, giving the Government the power to introduce legislation as it saw fit. These extraordinary measures allowed the Government to try and respond to the situation by introducing policies to ease the burden on health services, limit the spread of COVID-19, increase the number of health and social care staff and support people. This included the power to make decisions about health and care services including, for the NHS and local authorities to make decisions around care and support and the emergency registration of health professionals. One such change was the large-scale, rapid implementation and scale-up of telehealth across health and social care (Ohannessian et al., 2020).

Future Pandemics

Although the COVID-19 pandemic is the context from which this work stems, it is not the first time the world has faced the challenges of pandemic disease (Dodds, 2019). Much like the COVID-19 pandemic, past pandemics used measures such as quarantine and isolation to try and limit the spread of disease (Huremović, 2019). Since the 16th century, there have been an average of three pandemics per century, spread between intervals of 10-50 years (World Health Organization, 2005). There is still much unknown about COVID-19, and as it has had 'waves' it is uncertain if there may be future waves (Fisayo & Tsukagoshi, 2021). The threat of future pandemics means that there is an opportunity to learn lessons from actions during the COVID-19 pandemic which may be helpful for the present, but also if similar pandemics and subsequent containment measures were ever re-introduced.

Telehealth

Defining terminology for this thesis

This thesis will use the term 'telehealth' to describe health, public health and care systems that are delivered remotely (using digital, virtual or telephone) to service users. This definition was determined after reading through relevant literature. It was influenced by the disconnect between the use of the term 'medicine' in tele-'medicine' and health visiting (which is largely a public health focused discipline), the lack of clarity in on the technique (which is variously termed, telehealth, telemedicine, virtual care, remote care) in work published during the pandemic, and input from the study Public Advisors (more detailed notes on this terminology decision are presented in Chapter 7 – Reflexivity).

For this work an adaptation of the WHO's definition of telehealth was used as an umbrella term, except when directly citing the work of other authors who use a different term. *'Telehealth involves an interaction between a health care provider and a patient when the two are separated by distance. That interaction may take place in real time (synchronously), for example by telephone or by use of a video link. But it may also take place asynchronously (store-and-forward), when a query is submitted and an answer provided later; (secure) email is an example of this technique*.' (World Health Organisation, 2017, p. 56)

The adapted definition also extended to cover some of the elements described in telemedicine that are not in the above definition. For example, the WHO's definition of telemedicine also involves using technology to communicate between professionals, or for education and research, '*The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities*' (WHO, 2010, p.9).

Therefore, throughout this thesis I have used telehealth to define '*an interaction between a health care provider and a service user when the two are separated by distance. That interaction may take place in real time (synchronously), for example by telephone or by use of a video link. But it may also take place asynchronously (store-and-forward, such as email or text). It also includes where health care professionals have used technologies to communicate with each other to support the delivery of health services.'*

Telehealth prior to COVID-19

Prior to COVID-19, telemedicine had gradually started to be implemented, yet its growth had been slow (Hincapié et al., 2020). In the UK, telehealth began to appear in the 1960s but began to generate more interest in the late 1980s and early 1990s (Koivunen & Saranto, 2018). In 2002 the 'Securing our Future Health: Taking a Long-Term View' report was published (Wanless, 2002) which advocated for prioritising investment in Information Communication Technology (ICT), to establish infrastructure and set standards.

In the years preceding the COVID-19 pandemic, the UK Government had tried to drive change for health care to embrace digital technology. The vision for improving the technology used by NHS staff and social care workforce was set out, along with plans on how to achieve this (Department of Health and Social Care, 2018). The challenges to achieving widespread use of telehealth were acknowledged including, '*complex organisational and delivery structures, a risk-averse culture, limited resources to invest, a critical need to build and maintain public trust'* (Department of Health and Social Care, 2018, p. 6).

Alongside the challenges included in government reports, research prior to the pandemic also highlighted challenges with digital transformation in the UK. For instance, challenges identified as part of case studies exploring video outpatient consultations, included a difference between national policy makers views to the organisation's reality of delivering the service (including busy and financially stretched services), technology challenges for patients, and lack of necessary skills and negative attitudes amongst staff, and perceived risk and uncertainty outweighing the benefits (Greenhalgh et al., 2017; Koivunen & Saranto, 2018). Other barriers to the uptake of telehealth and telecare in the UK have been reported from interviews with people who have declined to participate or withdrawn from a trial

(Sanders et al., 2012). Themes for not engaging included concerns about the technology, perceived difficulty engaging, the threat to self-identity (including views of ill health and dependency) and not wanting changes to their current service provision as they wanted contact to remain the providers they had relationships with (Sanders et al., 2012).

COVID-19 and the rise of telehealth

With the onset of COVID-19, the previous history of slow growth and barriers to implementation was replaced with a rapid and widespread use of telehealth. Due to public health measures, where possible, appointments for health services in the UK were made using telehealth, including telephone and virtual contacts (NHS, n.d). In March 2020, the advice for delivering care was '*By default, use digital technology to provide advice and support to patients wherever possible'* (NHS England & NHS Improvement, 2020). The theory was that using technology could facilitate care whilst minimizing direct human-to-human exposure (Chauhan et al., 2020). Telehealth also allowed for the possibility for some health care providers to work from home, which safeguarded both themselves and service users (Fisk et al., 2020).

A scoping review by Hincapié et al. (2020) looked at the implementation and use of telemedicine early into the COVID-19 pandemic. In the 45 studies included in the review, the most used technologies were video calls and telephone calls. The most common applications of these technologies were outpatient care and in-hospital care.

Rationale for the focus of this thesis

Health Inequalities

Why study health inequalities?

As I was supported by the National Institute of Health and Care Research (NIHR) Applied Research Collaboration (ARC) North West Coast (NWC), I was introduced to working in applied research with a health equity lens. Here, I describe what health inequalities are, and the relationship to this thesis. I describe in my theoretical framework and methodology chapter (Chapter 2) how I have applied an equity lens to my research.

What are health inequalities?

Health is not equitable among people and populations, and this is known as health inequality. '*Health inequalities are the systematic, avoidable and unfair differences in health outcomes that can be observed between populations, between social groups within the same population or as a gradient across a population ranked by social position*' (McCartney et al., 2019, p. 28). The gradient of health inequalities means that as socioeconomic disadvantages increase, poor health increases also (Whitehead et al., 2014).

Two key reports which have been published in recent years have been led by Sir Michael Marmot. The first published in 2010 described where health inequalities arise, how they impact the population and a proposal for action (Marmot et al., 2020; Marmot et al., 2010). The report discussed how social inequalities allow for health inequalities to rise. The report advocated six policy objectives requiring action, of which four were relevant to children and families,

- ‘*Give every child the best start in life*
- *Enable all children young people and adults to maximise their capabilities and have control over their lives*
- *Ensure healthy standard of living for all*
- *Create and develop healthy and sustainable places and communities* (Marmot et al., 2010, p. 15).

Health inequalities, parents, and children

Despite the accepted importance of child health, inequalities in children’s health can be seen in the UK and globally. Part of the constitution of the WHO is the statement *‘Healthy development of the child is of basic importance; the ability to live harmoniously in a changing total environment is essential to such development*’ (World Health Organization, 1995, p. 1). Even in rich countries, there are substantial gaps in how far children can fall behind their peers based on inequalities in income, education, health and life satisfaction (Research-Innocenti., 2016).

Early disadvantage has impact in the early years and the potential for long-term impact in adulthood as well. Potential early years impacts of social disadvantage include being born small, being bottle-fed, and performing poorly in school in childhood (Whitehead et al., 2014). Deprivation in England and its impact on children including birth weight, infant mortality, and young pregnancy (Public Health England, 2019). As an adult, early disadvantage has the potential impact on health, mortality, and challenges with employment and housing (Whitehead et al., 2014). It is important to maintain an awareness of the potential impact of early disadvantage as the number of children in relative low-income families has

increased from 15.5% in 2014-2015 and 18.4% in 2018-2019 (Public Health England, 2021c).

Studies have also shown the impact of deprivation on parent's health. Baker et al. (2011) explored immunisations and breastfeeding in children. This study highlighted indicators of social exclusion, showing that white mothers were more likely to be teenage mothers or single parents. In the UK rates of depression, anxiety and serious mental illness during and after pregnancy are all shown to be increased with socioeconomic deprivation (Ban et al., 2012). This also follows a gradient of prevalence increasing with the deprivation quintile (Ban et al., 2012).

Health inequalities and health visiting

Health visiting services aim '*to address inequalities through a preventative upstream public health approach, delivered through proportionate universalism'* (Morton & Adams, 2022, p. 824). Proportionate universalism means that to reduce the steepness of the social gradient of health inequality there must been universal action, but with intensity that is proportionate to the scale of disadvantage (Marmot et al., 2010). The structure of health visiting includes the potential to offer different service levels, designed to operate across the continuum of need and layered to match the social gradient of health inequalities (Cowley et al., 2015). The service reflects proportionate universalism by providing a free service for all, which can be chosen whether to be accepted or not, but also presents additional options according to family needs (Cowley et al., 2015).

Health inequalities in the North of England

Health inequalities are greater in the North of England compared to the South of England (Whitehead et al., 2014). The North only represents 30% of the population but has 50% of the poorest neighbourhoods. Where levels of poverty are similar in the North compared to the rest of England, health is worse in poor neighbourhoods in the North. Finally, within the North, there is a steeper social gradient, so the difference in health between those who are disadvantaged and those who are privileged is greater than in other areas. The North of England has been disproportionately impacted by austerity, experiencing the greatest declines in funding across social, economic, and cultural domains and seen poor health and poverty increase (Marmot et al., 2020). A recent report highlighted the inequalities in the lives of women who live in the North of England (Bambra C et al., 2024). This includes being in worse health, being more likely to live in poverty and working more hours for less pay.

COVID-19 exacerbating health inequalities

The COVID-19 pandemic has exposed and amplified inequalities (Marmot & Allen, 2020). There have been impacts on health equity, both directly from the virus and also from the public health measures imposed to prevent further spread of the virus(Bambra et al., 2021). Inequalities from the lockdowns have impacted unequally across, socioeconomic status, gender, and other characteristics. In the UK, the lockdown measures imposed appear to have been far more detrimental to the underprivileged compared to the privileged (Sardar et al., 2020). An increase in negative eating habits during lockdown was related to financial difficulties (Bennett et al., 2021). Regarding gender, as a result of lockdowns, there has been

a shift which has reduced the progress made on gender gaps, with mothers having been more likely to have quit their job, lost their job or been furloughed (Sevilla et al., 2020).

The effects of the COVID-19 pandemic were unequal, with disproportionate health and economic impacts in the North of England. This included higher mortality rates, greater reduction in mental wellbeing and higher likelihood of experiencing loneliness (Bambra et al., 2020). For children in the North, there are inequalities in health, greater chances of living in poverty, greater infant mortality rates, more missed schooling and a disproportionate closure of Sure Start centres (Bambra et al., 2020; Pickett et al., 2021).

Health inequalities and telehealth

The influence of telehealth on health inequalities is mixed. Some argue it has great potential (including reducing the need for transportation and reducing time needed for appointments), and others that it can widen disparities and increase inequalities, as technology based solutions appear susceptible to underlying inequalities in access and uptake (Katzow et al., 2020). Lack of access to technology and limited technology skills were identified as barriers for patients, but reductions in the cost patients spent on transport were seen as an advantage (Katzow et al., 2020). Therefore it is important to explore how telehealth can be used in a way that is acceptable to service users and providers without increasing inequalities in access or health (Eddison et al., 2022).

Health Visiting

Origins of health visiting

Public health began to develop in the 19th century amidst the urban and industrial growth, and the changes in living conditions it brought (Billingham et al., 1996). As people relocated to towns, labour surplus increased and wages were depressed, leading to rife poverty, poor living conditions, the spread of disease and high infant mortality (Billingham et al., 1996). In parallel, the government was also concerned about the health of the population and their fitness levels in relation to imperial endeavours (Peckover, 2013).

Health visiting, in the form of health visitors providing advice as opposed to just nursing care for the sick, originated in Manchester and Salford in the 19th century (Dingwall, 1977). Following cholera outbreaks, the Salford Sanitary Association was established in the 1800s to improve conditions in cities. The association sponsored the Ladies Health Society, formed as the Ladies' Sanitary Reform Association, which appointed the first paid health visitor in 1867. The work of this association involved home visiting to care for the sick, advise on childcare and homelife, and encouraging others to act where needed. In the early years of the profession, health visitors would visit all homes in their district, providing advice, and sympathy based on the provision of limited funding. Later the combination of this pre-existing group of health visitors, a struggle for occupational roles for women, and government concerns around population health, led to health visiting being an established profession sponsored by the state by 1914. The way the profession developed led to a tension, with health visors being seen as an informal 'mothers friend', whilst at the same time being involved in a state regulation of surveillance providing some confusion over the nature of the relationship (Peckover, 2013), being characterised as either 'sisterhood and social liberation', or 'social policing' (Billingham et al., 1996, p. 391).

Responsibility for health visiting

Health visiting throughout the 20th Century has evolved with the governance and policies of public health (Billingham et al., 1996). Following the Second World War infant mortality was declining, social, economic and hygiene conditions were improving and medicine was progressing (Billingham et al., 1996). As a result, health visiting shifted to be more family centred and there was an increased interest in the emotional development of children (Billingham et al., 1996). Health visiting was associated with public health until it was absorbed into the NHS in 1974 along with other professions as part of a plan to improve maternal and child health (Peckover, 2013). This shift in positioning aligned health visiting more with general practice and primary care, resulting in two different and possibly competing imperatives, individual family based care and wider community focused public health (Billingham et al., 1996).

In 2013, responsibility for public health services for children and young people (from ages 0-19) reverted back to public health within local authorities (Public Health England, 2021b). A further change came during the COVID-19 pandemic in October 2021 when Public Health England was disbanded and the structure of public health was changed, which now includes the Office for Health Improvement and Disparities (Brodie & Marron, 2021), which is where health visiting sits.

Contemporary Health Visiting

In the UK, health visitors are specialist community public health nurses (SCPHN), with a background in nursing or midwifery and have also undertaken additional training in public health nursing (Conti & Dow, 2021). Community public health works to address both

individual health related activities and to influence and change socio-cultural contexts (Whittaker & Cowley, 2020). Health visitors often work as part of a skill mix team including community staff nurses (qualified nurse registered with The Nursing and Midwifery Council) and nursery nurses to deliver services (Public Health England, 2021d).

It is perhaps unsurprising with the complicated history of health visiting, that the role and scope of the profession can be unclear to the public, other health care providers and within the profession itself (Billingham et al., 1996). A questionnaire responded to by 1459 respondents with a range of experiences of heath visiting provision (currently practising, related/unrelated roles, not working at present) found the most frequent contacts were with babies under one year old, followed by pre-school children and then for parents own needs (Cowley et al., 2007). The most frequent activity health visitors undertook was home visiting, second was telephone consultations and third was child health clinics. The universal health service had the highest frequency of new birth visits (occurs when an infant is 10-14 days old), the second most frequent was the postnatal depression screening and the third was a routine visit at 2-8 weeks. In addition, participants reported that their work 'very often' involved primary prevention for physical health in children and primary and secondary (early interventions) for child protection. Although this study provided an insight into health visiting services, it was limited by only including health visitors in the sample.

Before a reform in 2021, health visiting followed the four, five six model, which provided four levels of service, and five mandated elements across six high impact areas (Local Government Association, 2019). The four levels of service included a community level (knowledge of local resources and services), Universal (five mandated visits), Universal Plus (access to specialities within the service) and Universal Partnership Plus (working with additional services to meet complex family needs) (Local Government Association, 2019). The five mandated visits were an antenatal visit, a new baby review, a six-to-eight-week

assessment, one year assessment and a two/two-and-a-half-year review (Local Government Association, 2019). The six high impact areas were parenthood and early weeks, maternal mental health, breastfeeding, healthy weight, minor illness and accidents and health of two-year-olds and getting school ready (Local Government Association, 2019).

The guidance for delivering health visiting was updated in 2021 (Public Health England, 2021d). The guidance retained similar key elements to the previous model, with health visitors still leading the 0-5 element of the Healthy Child Programme, having the five mandated reviews for early years, but suggesting two additional review contacts at 3 months and 6 months (Figure 1). It also has six updated impact areas (*supporting the transition to parenthood, supporting maternal and family mental health, supporting breastfeeding, supporting healthy weight, healthy nutrition, improving health literacy; reducing accidents and minor illnesses, supporting health, wellbeing and development: Ready to learn, narrowing the 'word gap'*) (Public Health England, 2021d, p. 12). Levels of service are now structured to be, universal, targeted, specialist services, and community. There is also scope for additional contacts with families (Public Health England, 2021d). This remains the current guidance with the transition from Public Health England to the Office for Health Improvement and Disparities (Office for Health Improvement & Disparities, 2023). However, it is important to recognise that there is no theory or clear mechanism to explain health visiting and its model (Cowley et al., 2015).

Figure 1

The universal health and wellbeing reviews, including the five mandated contacts and additional contacts at 3 and 6 months. Adapted from Public Health England (2021d).

Why is health visiting important?

Health visiting is important for reasons in addition to addressing inequalities. For instance, parenthood and early weeks, up to the first 1001 days (conception to age two) is a crucial period for children, including its importance for brain development and attachment (Local Government Association, 2019). Health visitors can provide parenting programmes and signpost to services to support this development. Adverse maternal mental health is affecting up to 20% of women in the perinatal period, and health visitors are trained in assessing related mental health problems (Local Government Association, 2019).

Health visiting services are the only health workforce which engage with families in community settings and their own homes up until children are school aged, offering the potential for early identification and intervention (Public Health England, 2021a). Home visiting was identified as one of the mechanisms for how health visiting meets the aims of the service, and is important for relationship development, identification of needs and disclosures from parents about histories of abuse, domestic violence or mental health problems (Cowley et al., 2015).

Health visiting services are also seen as having a vital role in keeping children safe and supporting safeguarding (Public Health England, 2021d). Home based health visiting services provide a 'safety net' to children, as they can identify those who are vulnerable or who have health issues which may otherwise not be seen (Morton & Adams, 2022).

A review by Elkan et al. (2000) explored the effectiveness of home visiting by health visitors, with part of the review (34 studies) focusing on home visiting for parents and young children. The review reported evidence that home visiting was associated with positive outcomes for parents including improvement in parenting skills, improvements in the detection and management of postnatal depression and quality of social support for mothers. For children, home visiting was associated with improvements in behavioural problems, improved intellectual development, a reduction in frequency of unintentional injury and increased rates of breastfeeding. There were also positive outcomes for the home broadly including the quality of the home environment and a reduction in the prevalence of home hazards. The review also suggested a potential that home visiting for parents and young children could produce net cost-savings.

Health Visiting and COVID-19

Despite the changes in family needs over the past 100 years, the model of health visiting has remained relatively consistent – visiting the homes of families to provide information and advice (Billingham et al., 1996). In March 2020 NHS England & NHS Improvement (2020) announced the changes community services would have to implement as part of the response to COVID-19. For health visiting services, this included being categorised as 'partial stop', with all services expected to stop except for the antenatal contact, the new baby contact and in situations where there was identified to be safeguarding work, high risk families and vulnerable families. Digital signposting, including phone and

text advice, were also allowed to continue. Health visiting services had to change delivery to virtual or remote ways of working or pausing services (Public Health England, 2021d). Telephone use has previously been used by health visiting services, but this was not as frequent as home visiting (Cowley et al., 2007).

An initial search for experiences of health visiting and telehealth during the COVID-19 revealed minimal research was published. The Institute of Health Visiting's (IHV) website (ihv.org.uk) included two reports which have some information about experiences. The IHV (2020) reported the majority of health visitors disagreed that video contacts were as effective as face to face for identifying needs or disclosing risk in work with vulnerable families (89%). The majority (88%) disagreed with that videos were fit for purpose with universal partnership plus contacts (includes safeguarding, domestic violence and abuse, substance misuse and vulnerable families), and many disagreed with using video contacts for families needing additional support such as for perinatal mental health problems (65%). However, 85% felt video contacts could be effective if quick advice or information was needed between contacts. Similar findings were presented in the following annual report (IHV, 2021), with 88.6% agreeing video contacts can be used for quick advice, 93.8% disagreeing that video is as effective in identifying needs and disclosing risk compared to face to face. Additionally, only 16% believed there was enough evidence to implement video contacts in health visiting.

In addition to the pausing of some health visiting services, there was also a need to prepare for redeployment of staff away from community services (NHS England & NHS Improvement, 2020). During the first wave of COVID-19, 66% of local authorities redeployed at least one full time equivalent (FTE) member of staff from their health visiting team, 52% redeployed at least one FTE health visitor and 55% redeployed at least one FTE other staff member (clinical skill mix) (Conti & Dow, 2021). The average duration of redeployment between March 2020 and 1st September 2020 was 65.7 days (Conti & Dow,

2021). In addition to the redeployment, there was a decline in job postings for health visiting roles suggesting redeployed staff were not having their original roles filled (Conti & Dow, 2021).

At the time of the COVID-19 pandemic, it was not just a change in service as a challenge that was being faced by health visiting. Prior to the pandemic health visiting services were already overstretched, with caseloads exceeding the recommended maximum of 250 children per FTE case holding staff in 80% of local authorities, with some areas having caseloads of over 1000 (Conti & Dow, 2021) and a series of spending cuts to the national public health grant which funds health visiting service (Finch, 2021).

Summary and argument for the PhD

The COVID-19 pandemic which began in 2019 brought about monumental change and impacts, both regarding health and society more widely, which will most likely continue through society for years to come. The pandemic was a catalyst for a change in health and care service delivery, including the rapid implementation and widespread use of telehealth. This change in delivery impacted one of the UK's oldest public health services, health visiting, but the experiences of health visiting services and the families they support have remained largely unexplored. A review identified gaps for future research in the area, calling for research to inform digital change, explore the potential impact, and influence future responses (Morton & Adams, 2022).

This PhD thesis presents the results of an exploration of experiences of the use of telehealth during the COVID-19 pandemic with a focus on health care providers who deliver health visiting services and the families who had experience of the service. When looking at the origins of health visiting Billingham et al. (1996) draws attention to the ‘missing voices’

and the silence around the recipients of the service. Including these voices has been important to highlight the experiences of both families and health care providers. The findings provide an opportunity to reflect on and learn from, COVID-19, both for current and future health visiting in general, and, specifically, if the threat of future pandemics does indeed materialise.

Research Question

What were the experiences of parents and health care providers of telehealth and health visiting services during the COVID-19 pandemic?

Research Aim

The aim of this research was to explore parents and health care providers experiences of telehealth and health visiting services during the COVID-19 pandemic in the North of England.

Research Objectives

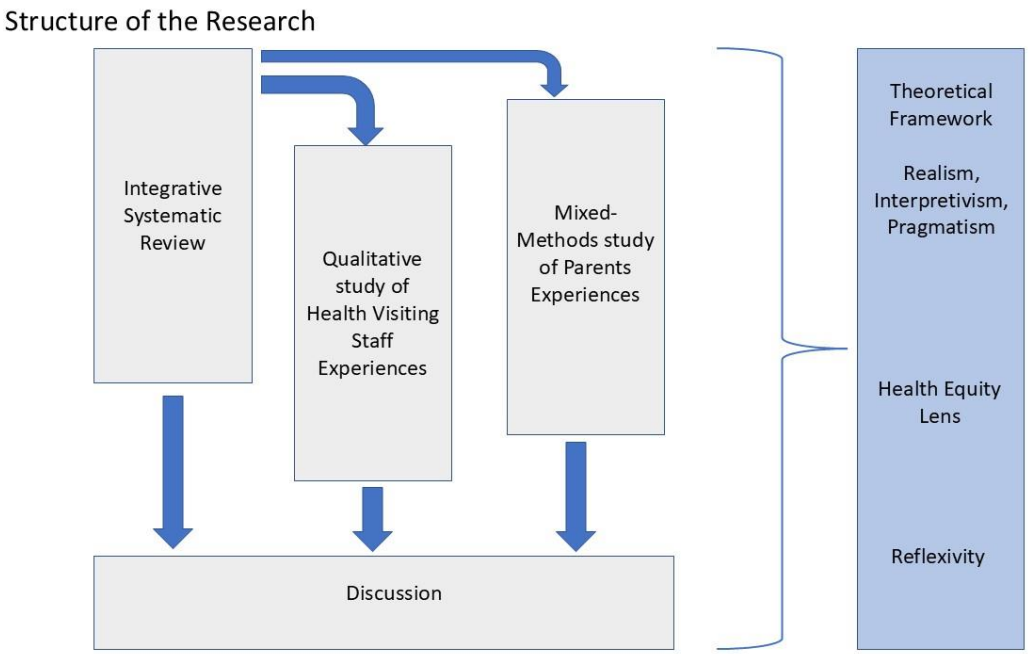
1. To create an Advisory Board involving Applied Research Collaboration (ARC) North West Coast (NWC) Public Advisors, parents, health visitors, and academics, to consult with throughout the project.
2. To undertake a systematic literature review exploring the experiences of telehealth of health care providers and parents during the first 1001 days (of life), during the COVID-19 pandemic.
3. To use qualitative methods to explore the experiences of health visiting service staff in terms of adopting and implementing telehealth.

4. To employ mixed methods to explore the experiences of parents who had contact with health visiting services via telehealth during the COVID-19 pandemic.

Chapter Summary

This chapter has introduced the development of the thesis, with the key components of health visiting, health inequalities, telehealth, and the COVID-19 pandemic. It has also provided the argument for the research and outlined the aims and objectives which will contribute to answering the research question. The next chapter will introduce and describe the theoretical framework and methodology that will guide the studies that are included in this thesis. Following this, a systematic review and two empirical studies will be described in their own chapters before a final discussion and conclusion will bring the results together. The structure of this research is shown in Figure 2.

Figure 2
Structure of the research in this thesis.



Chapter 2 - Theoretical Framework and Methodology

Chapter Introduction

This chapter describes the exploration of potential, and the chosen theoretical framework and methodology used to underpin the research throughout the PhD. Finally, the chapter discusses the framework and toolkit used to incorporate a health equity lens into the research. This chapter will describe the overall mixed-methods approach but will not describe details of the methods used in the research, as these will be presented in the following chapters (Chapter 3, Chapter 4, Chapter 5) along with the analysis and results for each study.

Theoretical Framework

The aim of this PhD (*to explore telehealth during the COVID-19 pandemic, in particular, to understand the experiences of health care providers who deliver health visiting services and parents who had experience of the service, within the context of the North of England and with consideration of health inequalities)* had several key components which the final framework needed to be able to accommodate.

- '*Explore telehealth'* – The theoretical framework had to allow for an exploration that did not require fixed hypotheses to be imposed before undertaking the research. As described in the background chapter, although telehealth has been increasing over recent years, prior to COVID-19 this was not routinely used in health visiting beyond additional support alongside the main provision of face-to-face care.

- '*Understand the experiences of*' – This research was designed to explore individual experiences of health visiting services and telehealth during a unique and challenging period (COVID-19 pandemic), not to seek an objective truth.
- '*Health care providers…and parents'*– The theoretical framework would have to be accommodating for different studies with different aims.
- '*Health inequalities'*- Exploring health inequalities and striving for health equity is a key component of this research, using the Health Inequalities Assessment Toolkit (For Equity, n.d)) to ensure this is a part of the research and so the theoretical framework had to have the flexibility to accommodate this lens throughout.

Theoretical Perspective (Ontology and Epistemology)

Ontology relates to what exists in the world that knowledge can be acquired about (Crotty, 1998). Epistemology relates to how knowledge is created (Crotty, 1998). As such, the concepts of ontology and epistemology are linked. A key debate in ontology is the location of reality. The debate is, whether reality is constructed through human consciousness and through experience (offering the potential for acknowledging the existence of multiple realities), or is it independent of human minds (and therefore it should be acknowledged that there is only a single reality) (Levers, 2013).

The ontological perspective of this study is that a world does exist independent of human consciousness, but that meanings attributed to the realities of the world are not independent of this consciousness (Crotty, 1998). In the case of the aims of this study it is relevant to believe there were changes to health services including health visiting and the use of telehealth, but this does not mean everyone experienced this in the same way. This position is linked to ontological realism, from which perspective an object exists without the

subject, therefore events in the world, exists independent of the way in which they are interpreted by individuals (Howell, 2012). This means it is only possible to understand meaning of the world through the interpretation of individuals.

From this ontological position, the way in which knowledge can be constructed epistemologically is through the meaning human beings make of the world around them (in this case specifically, how they experience and understand health visiting and telehealth). Epistemology explains '*our view of the human world and social life within that world, wherein such assumptions are grounded'* (Crotty, 1998, p. 7). Based on the criteria implicit in the components of the aims of the study set out above, the epistemological position and theoretical perspective adopted for this thesis is interpretivism. Interpretivism describes an approach where '*knowledge is relative to particular circumstances – historical, temporal, cultural, subjective- and exists in multiple forms as representations of reality*' (Benoliel, 1996, p. 407). Therefore, for this work, I accept that there is a world (of health care) which exists, but how individuals view and experience the world is different between people.

Where an interpretivist approach is adopted, the focus is understanding and describing the meaning of human experience and action (Fossey et al., 2002). This paradigm is consistent with the aims of the research and with my personal belief that the world and mind are intrinsically linked (Howell, 2012), with the world becoming meaningful through human interpretation.

Traditionally, there have been two opposing approaches to ontology and epistemology in social science which influence methodology. These approaches are, positivism, which tends to use quantitative methods and interpretivism/ constructionism, which often use qualitative methods (Crotty, 1998). Positivism approaches assume that there is a stable reality which exists in the same way whether we understand them or not, and there is a potential for

a correct explanation (Green & Thorogood, 2018). In this view the scientific method can be used to attain an objective truth and meaning by employing quantitative methods (Crotty, 1998). In contrast, interpretivist approaches differ to this in that they are not seeking to understand reality of the world, but people's interpretations of it and therefore align more with qualitative methods.

Methodology

In the following paragraphs I will explain some of the methodologies I considered (Ethnography, Realist Evaluation and Qualitative Description), then my final choice, pragmatism.

Ethnography

Ethnography seeks to uncover meaning within the context of people's culture, with the researcher trying to see the world from the perspective of participants (Crotty, 1998). It is used to '*understand how things are done in a particular setting and why they are done in this way*' (Bantjes & Swartz, 2017, p. 6). This methodology could have been employed for this PhD as it may have allowed for an exploration of the practices associated with telehealth, and the political, historical and social factors that influence this (Bantjes & Swartz, 2017).

There were practical considerations that made this methodology unsuitable. The methods that are intrinsically linked with ethnography, usually involve participating in people's lives and their cultural context for an extended period of time (Walsh, 1998). As this PhD involved exploring telehealth during the COVID-19 pandemic, and following it, there were physical barriers to undertaking this type of work. Many health visitors were home-based so it would not be possible or ethical to observe them in the same way it would have

been if they were office or community based. Additionally, due to the continued risk of COVID-19, it would not have been possible for me to 'shadow' and be 'in the field' (family homes).

Realist Evaluation

Realist evaluation is an evaluation strategy that goes beyond exploring success and failure, instead looking at the influence of context and mechanisms on outcomes (Porter, 2015). Realist evaluations ask '*what works for whom, in what contexts, in what respects and how*' (Westhorp et al., 2011, p. 1). Realist philosophy also aligns with the stance I have adopted of an external world alongside socially determined knowledge of reality (Danermark et al., 2019).

This methodology was considered for this PhD as it has some overlaps to the aims, including exploring context and implementation. However, it was not chosen for a few reasons. First, realist evaluation is not suitable for a programme where there have been no previous evaluations and that has not yet shown early-stage outcomes as the approach requires outcome data (Westhorp et al., 2011). As telehealth and health visiting during the COVID-19 pandemic was an emerging new topic, a realist evaluation was not suitable at the time of the research, but it may be suitable for future research. Second, the aims of this thesis were more aligned to understanding experience, rather than evaluating a service offer or programme and so this type of evaluation or any other method of evaluation was not suitable.

Qualitative Description

Qualitative description has received increasing attention in recent years in applied health research, particularly nursing research (Kim et al., 2017). It can be used to explore

topics that are not understood and that have the potential for change. This is particularly true of telehealth for health visiting. However, qualitative description aims to stay very close to the data, and not to provide rich detail or deep analysis (Neergaard et al., 2009). However, for this thesis, this approach was not sufficient. This is a new, largely unexplored topic that required substantial attention and detail to be devoted to the analysis to understand the impact in as much depth as possible. In addition, part of the research involved more than qualitative accounting, as one study involved wanting to gain information from a large number of people using a questionnaire. This therefore required a methodology with a quantitative element that would not have fitted with this qualitative approach.

Pragmatism

Pragmatism is a methodological approach that originated in America in the late 1800s and early 1900s, from the work of William James, John Dewey, Charles Sanders Pierce and Herbert Mead (Parvez et al., 2016). Pragmatism has a central concept of inquiry, of which a key aspect is '*to create knowledge in the interest of change and improvement'* (Goldkuhl, 2012, p. 139). It has a focus on 'why to' and 'how to' conduct research in a certain way, as dictated by the goals of the specific research question (Morgan, 2014).

The focus of pragmatism is to facilitate human problem-solving, rather than rather than to identify a specific truth or reality (Powell, 2001). Additionally, pragmatism allows for the assertion of an objective reality, whilst at the same time accepting that individuals all have a unique interpretations of that reality (Morgan, 2007). As such, it is aligned with the ontological, epistemological, and theoretical stance I have adopted.

Morgan (2014) summarises how a key component of pragmatism for John Dewy, is that experience is constrained by the nature of the world, and our interpretations and

experience limit our understanding of the world. Morgan (2007) advocates an approach which concentrates on methodology, which can then incorporate some of the discussions of abstract epistemology and practicalities of methods, to give equal attention to both epistemological and practical considerations for conducting research.

A grounding in a pragmatic methodology brings the option to use mixed methods to answer research questions while incorporating the more abstract notions of reality and knowledge to be able to interpret the outcomes. The implications of this for my thesis include being explicit in the choice of how and why different methods were chosen to undertake each study and to keep the research goal as the focus rather than adherence to specific methods.

Pragmatism provides an approach that accommodates the combination of both qualitative and quantitative methods (Morgan, 2007, 2014). Pragmatism keeps the research question at the centre of the methods selection, and methods are chosen around it to provide the most insight possible (Mackenzie & Knipe, 2006). Unlike other methodologies, pragmatism does not entail the use of particular methods or exclude others and as such, it has relevance for mixed methods research (Yvonne Feilzer, 2010). Since the advantages and disadvantages of each method are complemented by being combined (Shannon-Baker, 2016).

In addition to the choice of methods, pragmatism brings attention to the consideration of whether what we learn from the research can be transferred theoretically and practically, rather than considering outputs to be unproblematically generalisable (as in quantitative positive approaches) or context-bound (as in purely qualitative constructivist approaches) (Morgan, 2007). This was important for this research, as although the focus was on health visiting in the North of England, health visiting services are available nationally and provide care alongside and in conjunction with several other services to support families. Therefore,

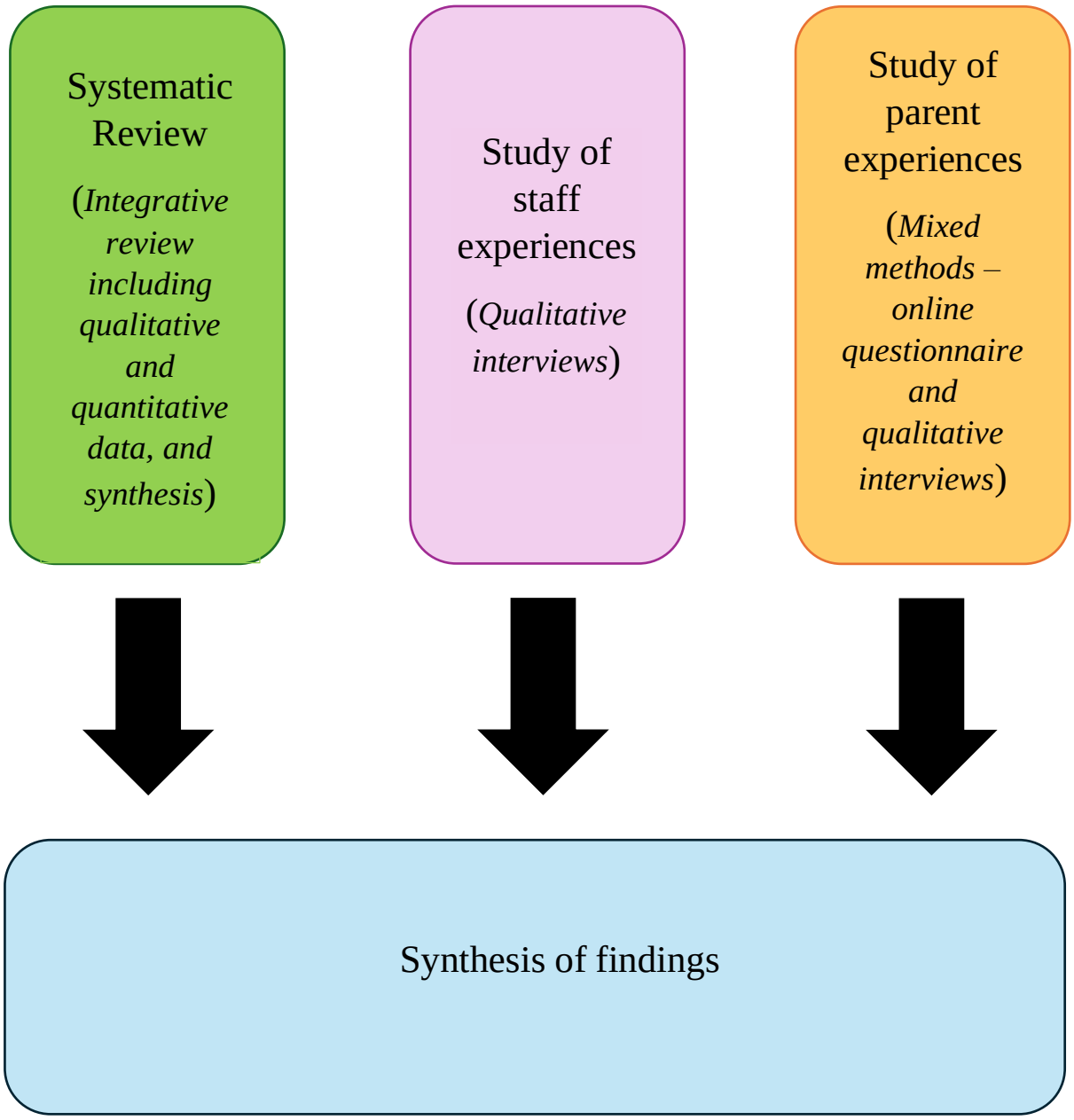
when sharing the learning from this PhD, it was important to consider what could be transferred across services and locations.

By adopting methodological pragmatism for this thesis, the methods of data collection and analysis were chosen through consideration of how best to address each specific study question. To ensure transparency in the research process it was also important to consider how my values and beliefs may have influenced the choice of methods alongside the practical considerations.

Mixed Methods

In keeping with the principles of pragmatism as the adopted methodology, the methods were chosen for each aspect of the research to best answer the study research question within the overall thesis resulting in a mixed methods approach. Both qualitative and quantitative methods have been used within the theoretical and methodological approach adopted (Morse, 2003). Each of the three studies, the systematic review, the study of staff experiences and the study of parent experiences (described in the following three chapters) were each approached as separate studies. The findings from each study were then brought together as a synthesis (see Synthesis of findings) included in the Synthesis and Discussion Chapter. This approach is illustrated in Figure 3 below.

Figure 3 *Illustration of mixed methods approach including synthesis of findings.*



Reflexivity

'*Thinking critically does not simply apply to received doctrines and systems but to one's thought and the prejudices and traditions one inherits. By taking a critical stance about one's own thought one develops the art of critical thought*' (Howell, 2012, p. 13)

Throughout the PhD I applied the principle of reflexivity, a standard of quality in qualitative research (Walsh & Downe, 2006), and in pragmatism. In regards to pragmatism methodology and choice of methods, Morgan (2007, p. 69) argued that '*research questions are not inherently "important" and methods are not automatically "appropriate". Instead, it is we ourselves who make the choices about what is important and what is appropriate, and those choices inevitably involve aspects of our personal history, social background, and cultural assumptions'*.

Key components of reflexivity that emerge from a range of definitions in the literature include an ongoing self-evaluation, which is explicit about and takes account of one's influence on the research (Olmos-Vega et al., 2022). Throughout the PhD, I kept a reflective and reflexive diary. I used this diary to reflect on the decisions made in the PhD, consider the influence I as the researcher had on the research, and how my thinking about the research developed over time. I also wrote reflexive pieces at key time points, including the start of the PhD and then annually, to document my position and attitudes towards the work, which was used to document and track change throughout the PhD process. I have also documented every supervision session, including discussions, decisions, and actions as these were the main instances where my thoughts were discussed with others and had the potential to influence the research. The conclusions of these exercises are in the Reflexivity Chapter. In addition reflexive statements related to each study are presented in the study chapters (for the

systematic review Chapter 3, the experience of health visiting staff Chapter 4 and the study of parent experiences Chapter 5).

Health Equity Lens

In addition to the theoretical perspective, I have applied an intersectional health equity lens throughout. I used the updated ForEquity Health Inequalities Assessment Toolkit (HIAT) (HIAT – FOR-EQUITY (forequity.uk)) (Appendix 1) to consider inequity, understand the impact of telehealth on equity and think about how the results can be disseminated in a way to help support equity. The HIAT is a template for integrating an equity lens and has five sections to reflect on;

- Mapping health inequalities relevant to your research
- Integrating an intersectional equity lens into research questions
- Designing and conducting research sensitive to inequalities
- Prioritising findings relevant to action on inequalities in reporting and dissemination
- Principles for research that is sensitive to intersectional inequalities.

I updated the HIAT every six months, using it to reflect on each of the elements included to ensure that equity was considered in decisions made in the PhD.

Additionally, I chose to use the Dahlgren and Whitehead (2021) model of health inequality and a version which shows digital entry points of health inequality (Jahnel et al., 2022) to design the research materials (including interview guides and questionnaire) and interpret the findings from this PhD.

These models were chosen because,

- There was alignment between health inequalities and digital inequalities and the aim of this research. This was particularly important when designing the questions for the study of health visiting staff and parent experiences, which are described in Chapter 4 and Chapter 5.
- The model considers the overarching factor of general socio-economic, cultural, and environmental conditions, which felt important to recognise in the context of the COVID-19 pandemic.
- The model includes specific reference to health care services as part of the conditions that can impact inequality, and this research focuses on experiences of health services.

Ethical Considerations

For the two empirical research studies (Study of staff experiences presented in Chapter 4, and study of parent experiences presented in Chapter 5), I applied for ethical approval from the relevant bodies (health Research Authority and University of Central Lancashire Ethics Committee), and as part of this considered some issues that may arise from the research. Although ethical boards determine whether proposals are acceptable, it is ultimately the responsibility of the researcher to protect participants (Orb et al., 2001).

Consent is a core principle and responsibility of the researcher (Green & Thorogood, 2018). Ensuring that participants understand what they are consenting to, and what they might be taking part in is not straightforward and there can be challenges relating to status differences between researcher and participant, ensuring the information is presented in language that is easily understood, and in clarifying processes, procedures and expectations of the research (Ferreira & Serpa, 2018). Informed consent was taken from every participant

before they took part in any research activity. For each study I considered and worked with the advisory group and public advisors to consider the most appropriate way to consent participants for each study.

For the study of staff experiences, I emailed a copy of the consent form and participant information sheet and offered the opportunity to discuss both documents before they decided to participate. If they were happy to proceed, I requested they returned the signed and dated form to me. At the time of the interview, before we began recording we also went through both documents to ensure they understood the research, their involvement and checked they were happy to participate. The decision to consent this way included anticipating that the staff members should have sufficient English language to understand the consent form, had access to a computer and software (Microsoft Word) to be able to access and sign the emailed documents, and keeping the research process streamlined for them, when they are busy professionals working in a stretched service.

For the study of parent experiences, consent for the online questionnaire was provided on the online platform as part of the questionnaire, following the participant information and before the first questions. This involved participants having to tick a box for their consent. This was done to allow for participants to be able to participate in the questionnaire anonymously, without having to provide a name or other details. For participants who took part in the interview stage, they were sent a participant information sheet, consent form and interview timeline document (Figure 6) either by email or post depending on participant preference. Then immediately prior to their interview, I provided a summary of the participant information sheet and consent form and asked if there were any questions. We then went through the consent form point by point, and participants gave their consent for each point. This was audio recorded. By undertaking consent this way it allowed me to check that participants fully understood what they were consenting to, and did not require them to

post anything back to myself or have access to software to complete the consent form (unlike in the study of staff experiences).

In any research where participants are asked to describe experiences, there is always the potential risk of individuals becoming distressed. It is the responsibility of researchers to weigh both the benefits and potential harms of undertaking any particular study (Orb et al., 2001). For the study of parent experiences, the self-completion nature of the questionnaire in this study may have minimised the risk, since participants could stop completing it at any time. Additionally, the questionnaire participant information sheet included signposting to charities and organisations that could offer support, as well as contact details for myself, my supervisor and the ethics officer at the university.

However, for both the study of staff experiences and the study of parent experiences, the use of qualitative interviews raised more complex issues. There is a balance with qualitative interviews, as sometimes participants can become distressed, but for some this can be cathartic while for others it can be an unpleasant experience (Orb et al., 2001). I therefore ensured I could provide supportive information and referral mechanisms during the interviews if this was required. I also relied on my own experience as a researcher in previous studies to be sensitive to the participants and present options to continue, pause or stop as needed during interviews.

For the study of staff experiences, as this was exploring their occupational experiences, I was aware that it could still create distress. Therefore, throughout the interviews I checked in with participants after they had discussed anything that prompted strong emotional response in them and checked that they were happy to continue. I also ensured on the participant information sheet that all participants received a list of options where they could seek support if needed following the interview.

For the study of parent experiences, I was aware through my work with the members of my advisory board and public advisors, and from the preliminary results of the systematic review that there was the potential for this research to raise experiences that may trigger distress in participants. I therefore created a distress protocol (see Appendix 13) for use in the interviews which I used as a guide to direct how to respond to distress in the interviews. In addition, all participants received participant information sheet had options for participants to seek support through which was available for me to signpost to. These options for additional support were also presented on the participant information sheet for the questionnaire.

The Declaration of Helsinki, which provides guidance and ethical principles for research involving humans states '*Every precaution must be taken to protect the privacy of the research participants and the confidentiality of their personal information'* (World Medical Association, 2013, p. 2). For both studies, I considered ways to ensure anonymity and confidentiality of participants. Practically, for both studies this included, not sharing information about who participated, storing personal information and data on the University's secure network drive which had restricted access, and deleting recordings following transcription.

For the study of staff experiences, one of the recruitment pathways involved a key contact sending an email out to staff. This email contained information about the research and asked those who were potentially interested to contact myself directly, therefore their involvement would not be known by any of their colleagues. In addition, when organising the interviews (which took place online via Microsoft Teams), participants were offered to have the meeting via their organisational account or a personal account if they did not want a record of it on their work account. For the study of parent experiences, the online questionnaire which was the first part of the study provided options for levels of anonymity. For instance, participants could choose to complete the questionnaire and not leave any

details or provide minimal details (name and contact preference) if they wanted to be entered into the prize draw and were informed that this would be treated confidentially. The contact details for the prize draw were stored separately from the questionnaire responses.

Another key ethical consideration was payment of participants. The payment of participants in qualitative research is not something that is new, but does raise ethical questions around participants decision to participate in research, choice and coercion (Bentley & Thacker, 2004; Head, 2009). Therefore, the decision around payment of participants was discussed with the public advisors and supervisors.

For the study of parent experiences, we agreed that we wanted to offer something that would compensate participants, but it had to be a balance between recognising the potential burden of participation and not providing an incentive solely on monetary compensation. This also had to be balanced with the limited funds available to myself as part of my PhD research budget allowance. We therefore made the decision that for the questionnaire, there would be the option to be entered into a prize draw for one of ten £20 LovetoShop Vouchers. For participants who participated in the interview portion of the study, they each received a £20 LovetoShop Voucher. By using vouchers rather than money, it was also hoped that this would not pose issues for any participants receiving welfare benefits, who may have limits on what they can earn (National Institute for Health and Care Research, 2024). For the study of staff experiences, the decision was made not to pay participants from my PhD research budget. This was decided because the organisation which was supporting the research offered that anyone who wished to participate could do so in their working hours. However, if staff preferred to participate outside of working hours this was also an option, but it did not come with any incentive or compensation.

Chapter Summary

Health visiting is a vital, universal public health service for families in the UK, which was impacted by the COVID-19 pandemic. This research will seek to explore the experiences of health care providers who delivered health visiting services via telehealth, and parents who had experience of this type of contact, during the COVID-19 pandemic using an approach underpinned by interpretivism, with a pragmatism methodology and a health equity lens. The following three chapters will describe the studies undertaken to meet the aims of this research. Each method is given consideration in the following chapters in relation to the study undertaken. The next chapter (Chapter 3) presents the methods and results of a systematic review.

Chapter 3 - Systematic Review

Chapter Introduction

In this chapter I will introduce the background to the systematic review I conducted, the methods used, the analysis plan, the findings, and a discussion. The systematic review question is '*What are parents' and health care providers' experiences, and views, of telehealth in the first 1001 days (of life) during the COVID-19 pandemic?'*.

Background

It is important to understand the view and experiences of those who delivered and received telehealth during the COVID-19 pandemic to improve the provision of acceptable, effective, and equitable services. The first 1001 days (time from conception to when a child is two years old), is recognised as a critical period for infants because how the brain develops in this period can influence the lifetime that follows (Leach, 2017). This also covers an important period for parents as for some this can be a time of great joy, but also a time of being overwhelmed and exhausted (Liston-Smith, 2012). It is also the period where the five mandated appointments from the health visiting service take place (see Introduction Chapter) (Public Health England, 2021d). Although positive reports of telehealth were arising before the pandemic, such as improved care and patient satisfaction when using telehealth to monitor blood pressure in newly developed pregnancy-induced hypertension (Fazal et al., 2020) this may not have been the case in the context of a pandemic.

Understanding the experiences of individuals who receive care is recognised as important and there has been a focus on trying to improve experiences wherever possible (NICE, 2012). Additionally, understanding the experiences and views of health care providers is important, to identify positive experiences and challenges, which can help inform future use of telehealth. A systematic review by Scott Kruse et al. (2018), identified several barriers to the implementation of telemedicine generally including staff facing challenges with the technology, resistance to change, and cost. Only once barriers are identified can solutions to overcome them be developed, therefore understanding staff views and experiences in the context of telehealth for families in the first 1001 days is important to support service development and the health care providers, and consequently parents and infants' experiences and outcomes.

The overall aim of this review was to gain an understanding of parents', and health care providers', experiences of telehealth for families in the first 1001 days during the COVID-19 pandemic. Although the main focus of the thesis is to explore experiences around telehealth and health visiting, this systematic review includes a wide range of health care providers' views. This is due to an initial search showing limited literature on health visiting and telehealth (only two reports from the Institute of Health visiting described in the introduction), unclear definitions of occupational boundaries, overlap of roles, and the similar challenges of rapid implementation of telehealth across services in child and family health, meaning broad learning can be found from wider inclusion. Partnership working has been highlighted as a key focus for improving outcomes (PHE, 2021b), and there is a drive for continuity of care between midwifery and health visiting (PHE, 2021a), and so by including both services in this review this will support this service plan.

How does this research align with other reviews?

A search of PROSPERO (February 2022) did not reveal any reviews being undertaken to explore parents' and health care providers' experiences and views of telehealth for families in the first 1001 days (of life). Three reviews that were similar and complementary to this review were identified. One focused on implementation of telehealth in relation to antenatal care only (Ramasamy, 2021). Two focused on outcomes and effectiveness which complement this review focused on understanding experiences (GÜNEŞ ÖZTÜRK, 2021; Holmes, 2021).

This gap in the literature provided justification for conducting this systematic review as a novel and original contribution to research.

Review Question and Aims

Research Question

What are parents and health care providers' experiences, and views, of telehealth for the first 1001 days (of life) during the COVID-19 pandemic?

Aims and Objectives

This integrative review will aim to answer the four lines of inquiry outlined by Russell (2005, p. 1) What is known? What is the quality of what is known? What should be known? What is the next step for research and practice?

To follow these lines of inquiry, this review aimed to understand what is known by asking:

- What are the views and experiences of parents in relation to telehealth for themselves and/or their infants in the first 1001 days during the COVID-19 pandemic?
- What are the views and experiences of health care providers in relation to using telehealth to deliver services in the first 1001 days during the COVID-19 pandemic?

Additionally, this systematic review looked to explore

- How many studies explored health visiting services, including the perspective of providers and parents they support?

Review Methods and Methodology Rationale

A systematic integrative review was conducted. This methodology has become increasingly popular in health sciences due to its relevance to public health, and complex interventions (such as telehealth) (Noyes et al., 2019), and its ability to synthesise results from studies which vary in design and methodology (Pluye & Hong, 2014). Integrative reviews are conducted in a way that allows new perspectives on topics to be generated (Torraco, 2005). The rapid expansion of telehealth due to the COVID-19 pandemic means it would benefit from a review and synthesis of contemporary views and experiences.

The approach to this review was in keeping with the theoretical framework of this PhD. The ontological stance (Chapter 2, Theoretical Framework), is that there is a world that exists independently of our consciousness, but meanings of the world are not independent (Crotty, 1998). From this perspective, synthesising different understandings of the same phenomenon allows for a deeper understanding of its meaning. This mixed-methods review also fits with the concepts of inquiry within pragmatism, the exploration of beliefs alongside the practical and material characteristics of the world (Goldkuhl, 2012).

Public involvement was a key component of the PhD, including this systematic review. The review question and methods were discussed and agreed upon with the two Public Advisors who work on the project. They were also involved in the refinement of search terms and development of themes.

Framework

The Population, Exposure, Outcome (PEO) Framework (Bettany-Saltikov, 2012) was used throughout the review process. As this was a mixed-methods, integrative review that used narrative methods to report the data, it aligned most closely with this framework, compared to others such as the Patient, Intervention, Comparison, Outcome (PICO) framework. The PEO framework was used to refine the research question, develop the search terms and criteria for inclusion and exclusion.

Population	Parents (including birthing parents, second parents, foster parents, and adoptive parents) and/or health care providers who have received/delivered care for the first 1001 days (of life) via telehealth.
Exposure	Telehealth for families during the first 1001 days (of life).
Outcomes	Experiences and views of telehealth for families and health care providers in the first 1001 days (of life).

Inclusion and Exclusion Criteria

The PEO framework was used to section the inclusion and exclusion criteria (Table 1).

Table 1

Inclusion and Exclusion criteria for systematic review (PEO Framework)

	Inclusion	Exclusion
Population	To be inclusive and consider the experiences and views parents including birthing parents, second parents, adoptive parents, and foster parents were included. In the UK, there are several groups of health care professionals that play a vital role in supporting women, parents, and infants, monitoring their well-being and development including midwives, health visitors, obstetricians, nurses, and health visitors, and General Practitioners (GPs) (NHS, nd). With different systems of health care providers globally, it will be important to look at health care providers generally as there may be idiosyncrasies in the titles of the roles of health care providers who provide this type of care. The time period will cover the first 1001 days, from conception to when a child is two years old (Leach, 2017).	• Individuals who may have provided support via telehealth to women and parents but who are not registered health providers (including doulas, social workers, volunteers, and peer support) (NHS, nd). (Unless they are included in papers alongside registered professionals) • Others who work in health provision but do not provide any direct service user care (including, managers, commissioners, and administrators).
Exposure	Receiving or delivering telehealth for the first 1001 days (of life) during the COVID-19 pandemic. Telehealth will include variances including telemedicine, remote health care, virtual care, and others that have a description in keeping with the WHO's definition, in addition to contact between health care providers. *'.. an interaction between a health care provider and a patient when the two are separated by distance. That interaction may take place in real-time (synchronously), for example by telephone or by use of a video link. But it may also take place asynchronously (store-and-forward), when a query is submitted and an answer provided later; (secure) email is an example of this technique.*'(World Health Organisation, 2017, p. 56) COVID-19 pandemic includes from March 2020 when it was declared a pandemic by WHO (Cucinotta & Vanelli, 2020).	• Telehealth for families only beyond the first 1001 days (of life). • E-learning, health, or m-health where there is no interaction with a clinician. • Studies that explore experiences of views of face-to-face care.
Outcome	The outcomes are views and experiences which will be the main outcomes. Experiences will relate to the process of doing seeing or feeling and/or something that happens/the way something that happens that affects how one feels (Cambridge Dictionary, 2025). Additional outcomes will include anything related to implementation of, or uptake of telehealth including limitations, barriers, and facilitators.	Studies reporting outcomes not associated with views or experience (e.g. efficacy).

Additional Criteria

Date

Searches for studies were limited from 2019 (to ensure papers from the early stages when COVID-19 was declared a pandemic by WHO are captured (Cucinotta & Vanelli, 2020)) to when the final search was run (5th April 2022 CINAHL,MEDLINE, PsycINFO, PsycARTICLES and 6th April 2022 MIDIRS).

Study type

Qualitative, quantitative, or mixed methods studies were included.

Language

Studies were limited to those published in English, or a language that could be translated by the supervisory team (French) or translated using Google translate. Studies that could not be translated were not included in the analysis.

Search Strategy

A key paper was identified prior to undertaking the searches (Gemperle et al., 2022) as a reference paper to check the search strategy.

The search strategy included a detailed, systematic search of databases, Cumulative Index of Nursing and Allied Health Literature (CINAHL), MEDLINE, PsycINFO, PsycARTICLES, and Maternity and Infant Care (MIDIRS), using a combination of Medical Subject Headings (MeSH)/Subject Terms and free text/keywords Table 2 (full search available in (Appendix 3). The search terms were developed with input from lecturers from Dalarna University (where I undertook training in systematic review methods), supervisors, Public Advisors, and a subject librarian at UCLan. These knowledgeable stakeholders were also asked about their knowledge of any studies that should be included in the review.

Table 2
Search terms used to search CINAHL, MEDLINE, PsycINFO, PsycARTICLES

PEO	MeSH terms	Keywords	Limiters
Population	Parents Caregivers Mothers Fathers Nurses Health personnel Midwifery Physicians	Women* or famil* or staff* or "health care provider*" or midwi* or "health visitor*" or "home visitor*" or doctor* or obstetric* or GP* or "General Practi*"	Limit to year="2019 -Current
Exposure	Telemedicine Remote Consultation and Pregnancy Prenatal Care Postnatal Care	Tele* or "remote care" or "remote health*" "remote monitoring" or "virtual health*" or "virtual care" and antenatal* or matern* or childbirth or birth or "infant care" or "infant health" or famil* or babies or "child* care" or "child* health" or parent*	
Outcome	Attitude	Experience* or view* or belie* or perspective* or opinion*	

Note: MeSH terms are not available in MIDRIS, so these terms were made into key words for that search (Appendix 4).

Data Management and Study Selection

A PRISMA flow diagram (Figure 5) has been used to illustrate study selection including identification, screening, eligibility, and included studies checklist (Liberati et al., 2009).

Endnote (https://endnote.com/) was used to capture returned searches and remove duplications. Rayyan (https://www.rayyan.ai/), was used to review the returned searches and to select which papers were reviewed at each stage which allowed for the review to be undertaken in collaboration with the supervisors of the PhD.

For the study selection, myself, and a supervisor (SD) independently reviewed 10 titles and abstracts. As we had over 80% agreement at this stage, I then went on to review all the remaining titles and abstracts. The same process was repeated for the screening of full texts, with myself and SD independently reviewing 10 papers, reaching over 80% agreement and then I continued to screen the remaining full texts.

Quality Assessment

Quality assessment of studies was undertaken according to the methods used for each paper. Quality assessment is an important process as the quality of the included studies impacts the internal validity of systematic reviews (Carroll, Booth & Lloyd-Jones). Consideration was given to different quality assessment tools, and without clear guidance and variation between systematic reviews the options that were chosen were based on those which could provide a distinction on quality enough to the extent they could be considered suitable to include or not.

A review of the methodology of integrative reviews found a disparate account of what was used to assess quality, how it was used, and whether used at all (Hopia et al., 2016). Therefore, I selected three different tools to capture the different methodologies involved in each to give a sensitive methodological appraisal which were then used to rate against Downe et al. (2009) A- D system. This system uses a template to guide through assessing articles, to answer yes, no or unclear to questions about the appropriateness and clarity of the aims,

participants, design, methods, sampling, analysis, reflexivity, ethicality, data, context, and rigour. After these have been answered, then the A-D (which can also use + and – for each grade) grading system is then applied, which grades the study across four characteristics credibility, transferability, dependability, and confirmability. For a grade of A, these are all high and the article has very minor flaws or none at all, for a grading of B there are some flaws, for a grading of C there are flaws which impact the four characteristics, and D is the lowest score which highlights that the article has significant flaws which impact the four characteristics.

Once the final papers had been selected a selection of papers underwent an independent blind assessment by both BG and the supervisors (SD and VA). Where both the supervisor and I completed the template assessment and assigned an A-D score. After the blind assessment, a discussion was held and where there were discrepancies agreements of the A-D score were reached.

Only papers which were of very low quality (scored 'D'), were excluded from the review to increase the internal validity of the findings whilst being as inclusive as possible. However, none of the papers scored this low and so none were excluded on this basis.

Assessment of Qualitative Studies

For qualitative studies, quality was assessed using Walsh and Downe (2006), including the A-D grading system (Downe et al., 2009). The framework includes criteria present in pre-existing tools, and that met the ontological underpinnings of qualitative research and added in a check for the presence of reflexivity (which is central to qualitative research). This was chosen as it was developed as a summary framework which eliminated non-essential criteria, producing a framework that could be used flexibly and accepting of

different approaches to qualitative research (Walsh & Downe, 2006). It provided a structured template which created clear guidance on how to assess qualitative studies. It also provided an overall grading system that could be applied to the other methods included in the review.

Assessment of Mixed Methods studies

For mixed methods studies, the updated Quality Assessment with Diverse Studies (QuADS) tool was used to assess quality, a recently revised version of the QuAD tool to make it more relevant for health sciences (Harrison et al., 2021) . The QUADS tool asks for a numerical score for several quality factors but does not give guidance on how to accumulate the scores to have a final mark of quality. Therefore, as with the qualitative appraisal, a judgement of the researcher (either BG or supervisor) was made to rate the overall quality with the overall judgement of quality and then assign a number between 0 and 3. The numerical scores (0,1,2 or 3) assigned to studies assessed using the QuADS could then be converted into an alphabetic scoring reflective of Downe et al. (2009) so that all studies could be compared for quality.

Assessment of questionnaire/survey studies

Questionnaires were appraised using a critical checklist (BMJ, 2025). This was chosen because it was more in-depth than alternatives designed for cross-sectional studies such as the JBI (2020). The outcome of Quality Assessment was an assigned score of A-D to be consistent with the other quality appraisal tools used. Again, the assigned score would be based on the researchers (BG or supervisors) judgement of the overall quality.

Data Extraction

A data extraction form was created in excel to capture the characteristics of the included studies (Table 4).

Data synthesis

As the review included quantitative, qualitative, and mixed-methods research, a results-based convergent synthesis was undertaken (Hong, Pluye, Bujold & Wassef, 2017). The qualitative and quantitative data were analysed in parallel, before being integrated as part of a final synthesis to address the review questions.

Qualitative Synthesis

The qualitative data analysis was guided by the principles of thematic synthesis (Thomas & Harden, 2008). The papers were read in detail, then the author-generated themes and associated quotes were extracted and coded. These were then developed into themes, before being synthesised into review findings. The aim was to preserve meaning from the original papers, and to combine the different understandings to make a new perspective '*making the whole greater than the sum of its parts'* (Walsh & Downe, 2005, p. 208).

Following the synthesis of the data, time was dedicated to searching for discordance and dissonance (Walsh & Downe, 2005). This contributed to my understanding of the topic of interest and the credibility of the final account (Booth et al., 2013) since similarities may be identified before differences, disconfirming data may be overlooked (Booth et al., 2013). I

undertook this as a separate task to actively seek out the dissonant case(s). These were then included as part of the synthesis.

Quantitative Synthesis

The topic areas and associated questions in the quantitative and mixed methods papers were extracted, clustered into broadly similar topics and described narratively. This was due to the heterogeneity of the data meaning it was not suitable for statistical analysis. The narrative synthesis followed the principles of thematic synthesis (Thomas & Harden, 2008) like the qualitative synthesis.

Assessing Confidence in findings (CERQual)

To assess the confidence that could be placed in the results from both the qualitative and quantitative synthesis the GRADE-CERQual (Confidence in Evidence from Reviews of Qualitative Research by the Grading of Recommendations Assessment, Development, and Evaluation) tool was used (Lewin et al., 2018). GRADE-CERQual is an approach which provides guidance on how to assess the level of confidence that can be placed in findings from a systematic review (Lewin et al., 2018). The underlying assumptions of this tool are salient with the methods used in this systematic review, as it has been developed and tested for reviews which seek to aggregate understanding and experiences (Lewin et al., 2018) making it suitable for this review. GRADE-CERQual was also used to assess confidence in the quantitative findings as there was not a suitable option for assessing confidence in findings for quantitative data that is synthesised using narrative techniques, with GRADE approach being suitable for interventions and outcomes data (Guyatt et al., 2011).

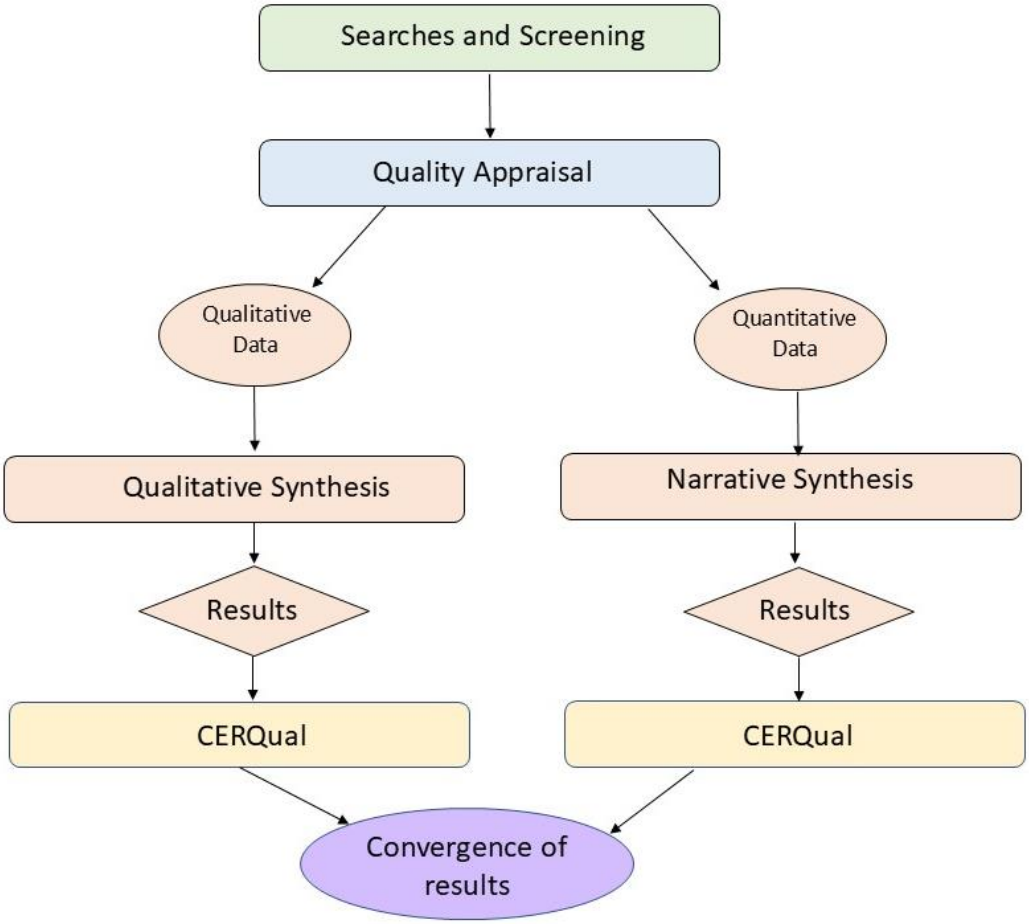
For each review finding (sub theme generated by myself as part of the synthesis), I followed the CERQual guidance and made judgements about the methodological limitations, coherence, adequacy of data and relevance (Colvin et al., 2018; Glenton et al., 2018; Munthe-Kaas et al., 2018; Noyes et al., 2018). This meant making decisions on the strength of concern of each of the four factors and deciding if there were; No or very minor concerns / minor concerns / moderate concerns/ serious concerns.

Following this assessment of the four components of each subtheme, an overall decision was made about the confidence that could be attributed to each subtheme (Lewin et al., 2018). Confidence was rated as high, moderate, low, or very low. These assessments are summarised in Table 5 for the qualitative findings and Table 6 for the narrative synthesis of quantitative findings.

Final Synthesis

In the final phase, the review findings were mapped, to establish similarities and differences between the qualitative and quantitative synthesis. This included using a 'convergence coding matrix' to show the findings from the two separate syntheses together, and showing where there was agreement, partial agreement, silence or dissonance between the findings (Crossland et al., 2020; O'Cathain et al., 2010).

Figure 4
Systematic review process.



Reflexivity

As a narrative synthesis was undertaken, principles of quality standards (Walsh & Downe, 2006) were adhered to throughout the review process. This included ensuring those involved in the research activity considered and reflected on their individual views and opinions, and how these could have influenced the decisions made including the synthesising and reporting of the results. I have presented a specific reflexive piece here and my supervisors have completed reflexive pieces in relation to the entire PhD which are presented in the reflexivity chapter.

I (BG) came to this review without any prior personal or professional experiences of services that surrounds the first 1001 days (of life), including health visiting services. I am not a parent or health care provider. I have experiences of working in and conducting research in other health settings and have an ambition to find out what works and what does not work for services with the hope that improvements can be made for all who provide and use services. I did not know or anticipate any direction of experiences of telehealth in COVID-19 for the first 1001 days or health visiting specifically. However, I had a personal view on that telehealth was acceptable for certain aspects of care due to my own perceived risk of COVID-19. I was however concerned about the potential equity of telehealth, wondering if it made present challenges to individuals who find communication face-to-face easier, such as those with limited digital literacy and those not used not using the telephone to speak with health care providers.

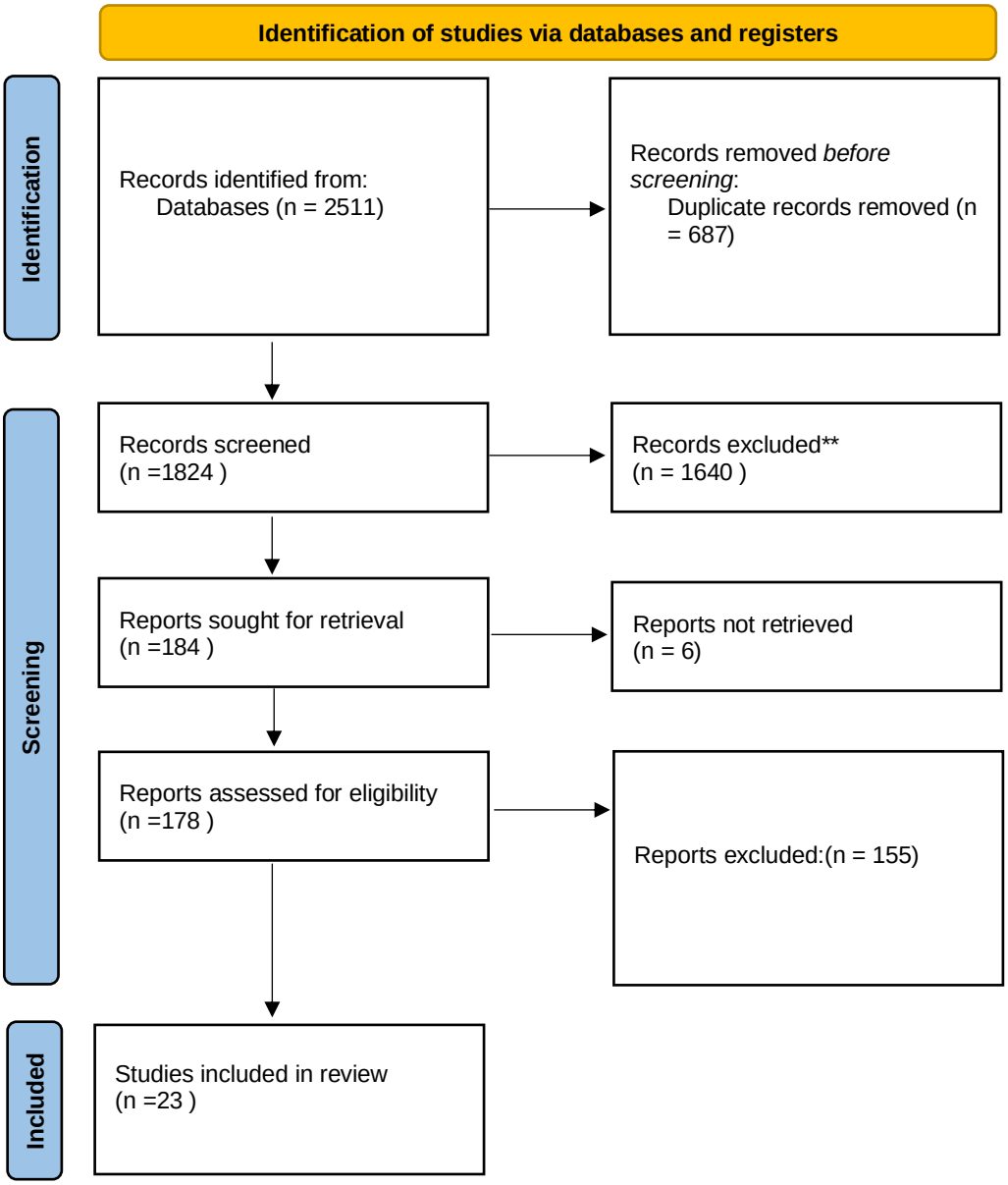
Results

From the searches of the databases, 2511 studies were identified. Following the removal of 687 duplicates, 1640 were excluded based on the title and abstract. Of the remaining 184 included studies, six full texts could not be retrieved and therefore 178 full texts were screened. Of these, 23 studies met the inclusion criteria. This process is illustrated by the PRISMA diagram, Figure 5.

Description of included studies

A total of 23 studies were included in in the review (Table 4). Eight papers were from the USA (one included Ghana), five were from the UK, six were from countries in Europe (Belgium, Denmark, Ireland, Poland, Switzerland) and five were from other countries (Australia, Canada, Iran, Japan, Pakistan). The majority were survey studies (13), eight were qualitative (including interview and focus group studies) and three used mixed methods. Four of the studies included both parents and health care providers, nine included just health care providers and 11 included parents. Numbers of participants in the studies varied, with the smallest including qualitative interviews with 11 parents (Jensen et al., 2022) and the largest sample being 1060 health care providers who participated in a survey (Galle et al., 2021).

Figure 5
PRISMA diagram of papers found, screened, and included.



Quality of Included papers

All papers were screened for quality. As there were 23 papers, there was a blind scoring between BG and the supervisors for five papers (SD two and VA three). For all papers, there was a blind agreement of scores. Following this BG then queried two papers and SD also scored these, and agreements over discrepancies were reached though discussion. For appraisal with the QUADS tool, scoring was based on overall quality as opposed to cumulation of scores in individual sections.

The overall quality of the papers was reasonably high, with two papers being scored as an A, 18 being scored as B and four being scored as C. No papers scored low enough to be excluded based on quality. Outcome of the quality appraisal is present in Table 3.

Table 3
Outcomes of the quality appraisal.

Paper	Methods	Quality Appraisal Tool	Quality Appraisal Score[1]
Delioğlu et al. (2022)	Questionnaire	BMJ Questionnaire Appraisal	*C
Ennis et al. (2021)	Mixed methods	QUADS	*B.
Ferrara et al. (2022)	Qualitative	Walsh & Downe	*B
Fogarty et al. (2022)	Mixed Methods	QUADS	*B
Gadsby et al. (2022)	Qualitative	Walsh & Downe	B
Galle et al. (2021)	Mixed Methods	QUADS	B
Gemperle et al. (2022)	Survey	BMJ Questionnaire Appraisal	**B-
Hantoushzadeh et al. (2021)	Qualitative - Interviews	Walsh & Downe	B+
Holcomb et al. (2020)	Survey	BMJ Questionnaire Appraisal	C
Jackson et al. (2022)	Qualitative - Interviews	Walsh & Downe	*B
	Survey	BMJ Questionnaire Appraisal	B
Jeganathan et al. (2020)	Survey	BMJ Questionnaire Appraisal	B-
Jensen et al. (2022)	Qualitative - Interviews	Walsh & Downe	B
Kloze and Wojtal (2021)	Survey	BMJ Questionnaire Appraisal	C+
Liu et al. (2021)	Survey	BMJ Questionnaire Appraisal	B+
Madden et al. (2020)	Mixed Methods	QUADS	B-
Nakagawa et al. (2021)	Survey	BMJ Questionnaire Appraisal	** B-
Norris et al. (2021)	Qualitative - Interviews	Walsh & Downe	B+
Panda et al. (2021)	Qualitative - Interviews	Walsh & Downe	A-
Quinn et al. (2021)	Survey	BMJ Questionnaire Appraisal	B+
Silverio et al. (2021)	Qualitative - Interviews	Walsh & Downe	A-
Sulaman et al. (2022)	Survey	BMJ Questionnaire Appraisal	C+
Talmont and Vitale (2022)	Survey	BMJ Questionnaire Appraisal	B
Tozour et al. (2021)	Survey	BMJ Questionnaire Appraisal	B+

[1] * Shows initial five double blind screening, ** shows two additional queries that were double blind screened.

Table 4

Overview of papers.

Paper Authors and Title	Date	Country	Study Aim(S)	Study Design, and methods	Study Population	Profession	Study Context	Sample size	Ethical Concerns	Health Inequalities
Delioğlu, K., Ozal, C., Bıyık, K. S., Unes, S., Tuncdemir, M., Uzumcugil, A., & Gunel, M. K. (2022). Requirements for tele-health in children with obstetric brachial plexus palsy during Covid-19-like situations. *Hand Surgery and Rehabilitation*, *41*(1), 78-84	2022	Turkey	Primary aim was to explore families' anxieties and requirements of the service and children's functional changes of those without face-to-face physiotherapy. The secondary aim was to investigate effects of teleconsultation.	Questionnaire	Parents of children with obstetric brachial plexus palsy	NA	Post COVD-19 lockdown investigation of experience of service	67	NA	NA
Ennis, M., Wahl, K., Jeong, D., Knight, K., Renner, R., Munro, S., ... & Norman, W. V. (2021). The perspective of Canadian health care professionals on abortion service during the COVID-19 pandemic. *Family practice*, *38*(Supplement_1), i30-i36.	2021	Canada	Explore experiences of abortion health care professionals in impact of COVID-19 response on abortion services. (Focus on access, telemedicine, and early medical abortion provision)	Mixed methods - Survey	Canadian Health Care Practitioners	Physicians, nurse practitioners, administrators,	Sequential study, first survey completed 2020 then used to develop the second survey. Second survey conducted 2020- 2021 about the impact of COVID-19 on service provision	Survey 1, 307. Survey 2, 78. (385 total)	NA	Considered in discussion regarding equitable access.
Ferrara, A. M., Kaye, M. P., Abram-Erby, G., Gernon, S., & Perkins, D. F. (2021).	2021	USA	Explore the impact of telehealth on the Army New Parent Support Programme	Qualitative - Focus Groups	US Army New Parent Support	Nurses, licenced social workers,	US ARMY NPSP programme delivered by home visitors had to change to	30	NA	No

Army home visitors' implementation of military family violence prevention programming in the context of the COVID-19 pandemic. *Couple and Family Psychology: Research and Practice*			(Army NPSP) services, practices, and professional role.		Programme (NPSP) Home Visitors	marriage, and family life therapists	telemedicine due to COVID-19 pandemic response.			
Fogarty, A., Jones, A., Seymour, M., Savopoulos, P., Evans, K., O'Brien, J., ... & Giallo, R. (2021). The parenting skill development and education service: Telehealth support for families at risk of child maltreatment during the COV ID-19 Pandemic	2021	Australia	Review of the Parenting Skill Development and Education (PDE) telehealth intervention including description of those accessing the service, service satisfaction and experiences of service delivery.	Mixed-methods	Families and clinicians	Parenting skill development and education clinicians	'The Parenting Skill Development and Education (PSDE) Service is a 6-week telehealth intervention designed and implemented during the COVID-19 pandemic to support families with young children in Australia at risk of child maltreatment.' (P1)	22 (11 families data sets and 11 clinicians notes and interviews)	NA	Yes
Gadsby, E. W., Christie-de Jong, F., Bhopal, S., Corlett, H., & Turner, S. (2022). Qualitative analysis of the impact of the SARS-CoV-2 pandemic response on paediatric health services in North of Scotland and North of England. *BMJ open*, *12*(2), e056628.	2022	UK	Impact of COVID-19 on changes in delivery of services in the UK.	Qualitative - Interviews	Health Care providers	Paediatricians, community nurses, specialist nurses, allied health providers, mental health providers	NHS healthcare services in North of Scotland (NOS) and North East and North Cumbria (NENC) in England.	39 healthcare providers	NA	No
Galle, A., Semaan, A., Huysmans, E., Audet, C., Asefa, A., Delvaux,	2021	Belgium	To capture experiences globally from healthcare	Survey - quantitative and	Healthcare Providers	Maternal and New-	Global survey to gauge experiences	1060 Health care	NA	Yes

T., ... & Benova, L. (2021). A double-edged sword—telemedicine for maternal care during COVID-19: findings from a global mixed-methods study of healthcare providers. *BMJ global health, 6*(2), e004575.			professionals of providing telemedicine for maternal and new-born healthcare.	qualitative analysis		born health providers	responding to COVID-19 and telemedicine	providers		
Gemperle, M., Grylka-Baeschlin, S., Klamroth-Marganska, V., Ballmer, T., Gantschnig, B. E., & Pehlke-Milde, J. (2022). Midwives' perception of advantages of health care at a distance during the COVID-19 pandemic in Switzerland. *Midwifery, 105*, 103201.	2022	Switzerland	To explore advantages of telemedicine by midwives in Switzerland.	Survey	Healthcare providers	Midwives	Surveys of Midwives perceptions of telemedicine during COVID-19 in Switzerland	630 midwives	No ethics for the study	No
Hantoushzadeh, S., Bagheri, M., Amjadi, M. A., Farahani, M. F., & Haghollahi, F. (2021). Experiences of health care providers on pregnancy and childbirth care during the COVID-19 pandemic in Iran: a phenomenological study. *BMC*	2021	Iran	To discover experiences of health care providers around pregnancy and childbirth during COVID-19.	Qualitative	Healthcare providers	Midwives and Gynaecologists	Experiences of maternity care providers in Iran during COVID-19.	12 Healthcare providers	Na	No

***Pregnancy and Childbirth*, *21*(1), 1-9**										
Holcomb, D., Faucher, M. A., Bouzid, J., Quint-Bouzid, M., Nelson, D. B., & Duryea, E. (2020). Patient perspectives on audio-only virtual prenatal visits amidst the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic. *Obstetrics & Gynecology*, *136*(2), 317-322	2020	USA	To evaluate patient satisfaction with audio virtual visits in pre-natal care during COVID-19.	Questionnaires - Quantitative	Patients (Parents)	NA	Patient perspectives of audio only visit for prenatal care in USA.	283 patient responses	Na - No ethics but justification	No
Jackson, L., De Pascalis, L., Harrold, J. A., Fallon, V., & Silverio, S. A. (2021). Postpartum women's experiences of social and healthcare professional support during the COVID-19 pandemic: A recurrent cross-sectional thematic analysis. *Women and Birth*.	2021	UK	Explore UK women's postnatal experiences of support during COVID-19	Qualitative	Parents	NA	Wones postnatal care experiences in UK during Covid	24 parents	Na	No
Jeganathan, S., Prasannan, L., Blitz, M. J., Vohra, N., Rochelson, B., & Meirowitz, N. (2020). Adherence and acceptability of	2020	USA	To describe attitudes towards telehealth for high-risk obstetric care	Surveys - Quantitative	Parents and Healthcare providers		Perceptions of telehealth for high-risk group of patients and their care providers in the USA	91 patients, 33 providers (doctors, nurses,	Na	No

telehealth appointments for high-risk obstetrical patients during the coronavirus disease 2019 pandemic. American journal of obstetrics & gynecology MFM, 2(4), 100233.							midwives, dietians, genetic counsellors)		
Jensen, N. H., Nielsen, K. K., Dahl-Petersen, I. K., & Maindal, H. T. (2022). The experience of women with recent gestational diabetes during the COVID-19 lockdown: a qualitative study from Denmark. *BMC Pregnancy and Childbirth*, *22*(1), 1-10.	2022	Denmark	The aims included, investigating experiences of lockdown, risk perception and health literacy with interacting with the health care system of women with gestational diabetes.	Qualitative Interviews	Parents	Experiences of high-risk patients with infants in Denmark	11 parents with gestational diabetes	Na	No
Kloze, A., & Wojtal, Z. (2021). Assessment of online physiotherapy consultation for children–parents' opinions. Postepy Rehabilitacji, 35(2), 32.	2021	Poland	To evaluate parents' perceptions of an online form of paediatric physiotherapy consultations.	Surveys - Quantitative	Parents	Experiences of virtual physiotherapy in Poland	151 parents	Not clear but looks like no ethical approval	No
Liu, C. H., Goyal, D., Mittal, L., & Erdei, C. (2021). Patient satisfaction with virtual-based prenatal care: implications after the COVID-19	2021	USA	To find factors relevant to satisfaction with virtual visits during pregnancy	Surveys - Quantitative	Parents	Satisfaction of virtual visits for prenatal care in USA	416	Na	No

Pandemic. *Maternal and child health journal*, *25*(11), 1735-1743										
Madden, N., Emeruwa, U. N., Friedman, A. M., Aubey, J. J., Aziz, A., Baptiste, C. D., ... & Ona, S. (2020). Telehealth uptake into prenatal care and provider attitudes during the COVID-19 pandemic in New York City: a quantitative and qualitative analysis. *American journal of perinatology*, *37*(10), 1005-1014.	2020	USA	To determine extent of transition to telehealth for prenatal care, and providers experience of this.	Mixed methods - data, survey, interviews	Healthcare Providers	Doctors, Nurses, and Others	Multiple methods to explore multiple facets of transition to telehealth care in a US city.	36 surveys, 11 interview	NA	No
Nakagawa, K., Umazume, T., Mayama, M., Chiba, K., Saito, Y., Noshiro, K., ... & Watari, H. (2021). Survey of attitudes of individuals who underwent remote prenatal check-ups and consultations in response to the COVID-19 pandemic. Journal of Obstetrics and Gynaecology Research, 47(7), 2380-2386	2021	Japan	Explore attitudes towards remote prenatal care	Survey - Quantitative	Patients (Parents)		Questionnaire to explore attitudes of virtual prenatal care in Japan.	77 women	NA	No

Norris, K. G., Huang, P. A., Glantz, J. C., Kodam, R. S., & Anto-Ocrah, M. (2021). A Cross-Cultural Analysis of the COVID-19 Pandemic's Impact on Antenatal Healthcare-Seeking Behaviors in Ghana and the United States. *Journal of Patient Experience*, *8*, 23743735211062392.	2021	USA and Ghana	A cross-cultural comparison of women's antenatal care including concerns, preferences, and adaptions.	Qualitative - interviews	Women (Parents)		Interviews across two countries to explore experiences of antenatal care and differences across cultures	32	NA	Yes - Ghana is a LMIC
Panda, S., O'Malley, D., Barry, P., Vallejo, N., & Smith, V. (2021). Women's views and experiences of maternity care during COVID-19 in Ireland: A qualitative descriptive study. Midwifery, 103, 103092	2021	Ireland	Explore women's views and experiences of maternity care	Qualitative - interviews	Women (parents)		Interviews in Ireland to understand experiences of maternity care during COVID-19	19	NA	No
Quinn, L. M., Olajide, O., Green, M., Sayed, H., & Ansar, H. (2021). Patient and Professional Experiences with Virtual Antenatal Clinics During the COVID-19 Pandemic in a UK Tertiary Obstetric Hospital: Questionnaire Study. *Journal of medical Internet*	2021	UK	To evaluate experiences with virtual antenatal clinic appointments	Questionnaire - Quantitative	Patients (Parents) and Healthcare providers	Doctors, midwives, administrators	Questionnaires to explore patient and provider attitudes to virtual antenatal clinics during COVID-19	92 patients, 37 HCPs	NA	No

***research, 23*(8), e25549**										
Silverio, S. A., De Backer, K., Easter, A., von Dadelszen, P., Magee, L. A., & Sandall, J. (2021). Women's experiences of maternity service reconfiguration during the COVID-19 pandemic: A qualitative investigation. *Midwifery, 102*, 103116	2021	UK	To explore experiences of maternity service changes	Qualitative - interviews	Women (parents)		Interviews to understand women's experiences of south London change in maternity services	23	NA	Yes. Setting is considered regarding deprivation and specific recruitment of BAME background
Sulaman, H., Akhtar, T., Naeem, H., Saeed, G. A., & Fazal, S. (2022). Beyond COVID-19: Prospect of telemedicine for obstetrics patients in Pakistan. International journal of medical informatics, 158, 104653.	2022	Pakistan	To explore experiences with telemedicine for obstetrics.	Questionnaire - Quantitative	Patients (parents)		Questionnaires to explore experiences of telemedicine of obstetric patients in Pakistan	132	NA	No
Talmont, E., & Vitale, T. R. (2022). Telehealth Readiness Assessment of Perinatal Nurses. Nursing for Women's Health, 26(2), 86-94.	2022	USA	To investigate perinatal nurses' readiness for telehealth.	Questions – Quantitative	Health Care Providers	Perinatal nurses	Explore how ready perinatal nurses were for the implementation of telehealth in COVID-19	52	NA	Yes, specific questions on health equity
Tozour, J. N. et al.,. (2021). Application of telemedicine video visits in a maternal-	2021	USA	To evaluate satisfaction with telemedicine for maternal-foetal	Questionnaires - Quantitative	Patients and Healthcar		Experiences of telemedicine form patient and provider	165 patients, 12	NA	No

foetal medicine practice at the epicentre of the COVID-19 pandemic. American journal of obstetrics & gynecology MFM, 3(6), 100469.	medicine services and to identify the factors for future services	e providers	perspective during COVID-19	provider s

Synthesis of qualitative data

The table below (Table 5) shows the themes and subthemes I developed from the synthesis of the qualitative data, the papers which contributed to each theme and the confidence in the findings following a CERQual Assessment (assessment table Appendix 5).

Table 5
Synthesis of qualitative data and CERQual assessment

Theme	Sub Themes	Studies included	CERQual Assessment
1 Impact on Families	1.1 Gains and losses	Ferrara et al. (2022); Gadsby et al. (2022); Jackson et al. (2022); Jensen et al. (2022)	Low confidence Loses more focused from parent perspective, health care provider data more balanced so concerns arising from adequacy and coherence.
	1.2 Developing and maintaining relationships	Ferrara et al. (2022); Galle et al. (2021); Jackson et al. (2022)	Moderate confidence All papers have only minor methodological limitations. There is a good adequacy of data from staff, but less from parents.
	1.3 Preference for Face-to-Face	Norris et al. (2021); Panda et al. (2021)	Low confidence Due to limited data and concerns with relevance of papers, despite high methodological quality of papers.

2 Challenges of the evolving system	2.1 Barriers to access	Fogarty et al. (2022); Gadsby et al. (2022); Galle et al. (2021); Madden et al. (2020)	Moderate confidence Although papers were methodologically strong and there were moderate concerns across all elements of CERQual assessment.
	2.2 Navigating the system	Ferrara et al. (2022); Jackson et al. (2022); Jensen et al. (2022); Panda et al. (2021)	Moderate confidence Although all only a limited amount of data across the four papers, the papers were all methodologically strong with good coherence within the theme and data adequacy.
	2.3 Shortcomings of telehealth	Ferrara et al. (2022); Galle et al. (2021)	Moderate confidence Minimal methodological limitations, high coherence and both papers are relevant. Main concerns arise from the adequacy of the data.
	2.4 Rapidly adapting to new ways of working	Ennis et al. (2021); Ferrara et al. (2022); Gadsby et al. (2022); Madden et al. (2020)	Moderate confidence Minor methodological and coherence concerns. Main reason this was scored down is adequacy and relevance of the data.
3 Impact on services	3.1 Doing the best under the circumstances	Ferrara et al. (2022); Jackson et al. (2022)	Low confidence There is not a lot of data to support this theme, with only one paper from each perspective creating

			major concerns with data adequacy.
	3.2 Disruption, change, and replacements	Ennis et al. (2021); Ferrara et al. (2022); Gadsby et al. (2022); Galle et al. (2021); Silverio et al. (2021)	Moderate confidence This is a coherent theme with adequate data so support it. Its main limitation is the lack of balance between data from health care providers and parents.
	3.3 Services continue but look different	Ferrara et al. (2022); Fogarty et al. (2022); Gadsby et al. (2022); Galle et al. (2021)	Moderate confidence Minor concerns across domains. This theme was downgraded because of adequacy of data (only one paper included parent perspective).
	3.4 Potential for online groups	Ferrara et al. (2022); Galle et al. (2021); Hantoushzadeh et al. (2021); Jackson et al. (2022)	Low confidence In all sections there were minor to moderate concerns. Main concerns focussed on limited data from parents perspective.
4 New benefits for health care providers	4.1 Increased professional communication and collaboration	Ferrara et al. (2022); Gadsby et al. (2022); Galle et al. (2021)	Moderate confidence This theme is overall strong with only minor concerns in each section.
	4.2 Opportunity to develop staff and services	Ferrara et al. (2022); Fogarty et al. (2022); Gadsby et al. (2022)	Moderate confidence This theme is overall strong with only minor concerns in each section.

Theme 1 – The Impact on families

The first theme is the impact on families. This theme encapsulated the largely negative experiences of families that were often discussed along with the wider negative impact of the pandemic. They were reported by both parents and health care providers. This theme has three subthemes 1.1 Gains and losses, 1.2 Developing and maintaining relationships, 1.3 Preference for face-to-face.

1.1 Gains and losses

The 'gains and losses' sub theme incorporates both parents and health care providers' experiences of the advantages and gains, or the disadvantages and losses to families who received care via telehealth during COVID-19.

For some women, telehealth rather than face-to-face care created a loss for them. Women stated that the change to telephone/online setups meant that informal interactions with health visitors were no longer available, but informal talks were often where women wished to discuss worries and insecurities (Jensen et al., 2022).

Two author themes in Jackson et al. (2022) demonstrated the losses women experienced due to telehealth care including 'disrupted health care professional support' and 'diminished care, distress, and desertion'. The themes described how women felt that virtual healthcare was insufficient and did not meet the needs of mothers or infants and they were concerned about potential consequences on wellbeing. Virtual healthcare was seen as an obligation, without benefit, and prompted worries about the impact of virtual care compared to face-to-face.

> *'I know you've gotta tick a box, but that is really pointless. Wasting my time and yours.'* (Respondent 19, T2). (Jackson et al., 2022)

‘*We had no home visits at all from any health professionals which [sigh] is okay, but you do worry about the fact that the baby’s environments aren’t being checked…obviously we know it’s okay but [laughter] they [health visitors] don’t*. ‘ (Respondent 20, T2) (Jackson et al., 2022)

Disadvantages for families were also identified by healthcare providers, including challenges of working together without being able to explain things face to face.

‘*I suppose from my perspective, a lot of what I end up doing relies on having collaborative therapeutic relationships with children and parents who are in dire circumstance and doing things and asking the families counter intuitive things to treat their children and get them better. That is really hard to do on a video call*. (NOS011) (Gadsby et al., 2022)

Some parents did not give any clear indication of advantages or gains from telehealth during COVID-19, but health care providers did report some they experienced for themselves and that they perceived for families including: reduced need for travel, the opportunity to increase self-care and management at home, and parents and children being more relaxed in their own homes rather than hospital (Gadsby et al., 2022).

Increased communication was outlined as a gain by Ferrara et al. (2022) with home visitors having more contacts, longer discussions and increased requests for resources. However, it was discussed that this may have been a result of loneliness and isolation and increased frequency of home visitors initiating contacts and their accessibility.

1.2 Developing and maintaining relationships

This sub theme captured the impact that telehealth had on parents and health care providers developing and maintaining relationships with each other. There were some

instances of positives, including increased communication frequency, but the studies reviewed mainly reported both parents and health care providers expressing reduced ability to develop rapport and relationships.

Jackson et al. (2022) described how women had felt dissatisfied with their care, with telehealth feeling distant and women describing that they felt unable to build a rapport, felt abandoned and not able to ask questions.

> *'You have phone calls and that, but no one actually comes out, like, I felt a bit neurotic being a first-time mum anyway. But when [baby's] got like spots on her face and stuff like that, there's no-one there to like look at it… I found that quite hard.'(Respondent 11, T1)*(Jackson et al., 2022)

Different healthcare providers reported contrasting opinions on how telehealth impacted relationships. Midwives felt telemedicine did not allow for personal interaction, negatively impacting relationships whereas home visitors reported both positive and negative impacts.

> *'Technology is a good tool, but does not replace face-to- face conversations, palpating a mom's abdomen, and listening to the baby's heart rate in order to form warm, trusting bonds between a patient and the midwife.'* (Galle et al., 2021)

> '*I feel the families are more open to—especially the moms—to communicating, but I think dads even : : : that's a big success that we're engaging more dads in the home visits.*' (Ferrara et al., 2022)

> '*If they can't have face-to-face, they don't want visits.'* (Ferrara et al., 2022)

Some health care providers believed that patients had a distrust for telehealth, especially those who were already in vulnerable situations.

'Many of my patients are not documented or are in the U.S. temporarily, and are thus reluctant to participate in video and telephone visits due to well-grounded fears of information being recorded or listened to by government agencies.' (Galle et al., 2021)

1.3 Preference for face-to-face

Two papers highlighted that women would have preferred face-to-face care for themselves and their babies, despite the risk of COVID-19 transmission (Norris et al., 2021; Panda et al., 2021). Women who had received telehealth and those who were asked about its potential discussed limitations including, feeling non-assured, reduced quality of care and difficulties articulating their situation and asking questions.

'And over the phone just doesn't do it like. You don't get the same, to look into somebody's eyes and to trust them and for them to say, you're okay.' (ID 08) (Panda et al., 2021)

'*You just can't describe everything perfectly to your doctor on the phone.'* - Ghana, 3rd trimester (Norris et al., 2021)

'I think it's hard for me to get all my questions over video. And it's just not the same because they're supposed to be measuring your belly and you know, tracking the heartbeat, your weight gain, your blood pressure, getting a urine sample. I'm not getting any of that. '- US, 2nd trimester (Norris et al., 2021)

Theme 2 – Challenges of the evolving system

This theme encompasses the change from face-to-face care to telehealth, and mainly discusses the challenges and limitations experienced when delivering and receiving telehealth. This theme has four sub themes – 2.1 Barriers to access, 2.2 Navigating the system, 2.3 Shortcomings of telehealth, 2.4 Rapidly adapting to new ways of working.

2.1 Barriers to access

Galle et al. (2021) identified three challenges to telehealth, affecting both health care providers and parents, lack of infrastructure, technology illiteracy and financial barriers. Infrastructure challenges included staff having to use their own smartphones, and poor internet connections.

> *'Trying to connect with women from rural areas with poor wi-fi service was a challenge.'* (Galle et al., 2021)

For parents, devices and data were not affordable. Health care providers also reported not being able to afford equipment and not being reimbursed and having to pay for costs themselves (Gadsby et al., 2022; Galle et al., 2021).

Navigating the technology needed for telehealth was also identified as a challenge for parents and health care providers (Fogarty et al., 2022).

> *I know how to operate a computer for what I need to know, and once they started talking about terms I didn't understand my anxiety levels went through the roof. I thought, "I can't do this. I don't know how to do this. I won't be able to do this."…….It did become better for me, and I now can come into my office and just do what I have to do and not be panicking. (Clinician 03*)(Fogarty et al., 2022)

2.2 Navigating the system

The ‘Navigating the system’ subtheme captures parents and health care providers’ experiences of trying to find their way in a new, evolving system which was suddenly dominated by telephone and virtual interactions.

For parents, changing policies and a reliance on virtual healthcare were confusing and alienating (Jackson et al., 2022). Women found it difficult to articulate worries, and believed their worries were not significant enough to reach out to services
Others discussed how they had chosen to try and find help by private consultations but the virtual nature of this was insufficient.

> *“The lactation consultant…is more important with COVID. Because you don’t have your mum or your granny…around you…to…help and correct you, you’re on your own. It’s hard to…zoom…with private lactation consultants.* ”(ID 03) (Panda et al., 2021)

Providers described trying to use different media to match clients preferences, working with families with the different resources available to stay connected (Ferrara et al., 2022).

2.3 Shortcomings of telehealth

Health care providers reported shortcomings of telehealth, compared to face-to-face care, including language barriers, lack of non-verbal feedback, and being unable to perform physical examinations (Galle et al., 2021) and challenges in providing education over the phone (Ferrara et al., 2022).

'Using medical interpreters over the video is a real challenge. Furthermore, our most disadvantaged patients also have limited access to telephone or video.' (Galle et al., 2021)

For home visiting services that moved to telehealth, challenges included not being able to assess 'home safety, child maltreatment, domestic violence, and relationships at home' (Ferrara et al., 2022).

'You're seeing what they want you to see : : : yes, some of the houses are not the best, but of course, they're not going to pan in on that. It's like Facebook, you're only putting your best side forward.' (Ferrara et al., 2022)

Challenges in providing virtual education were mentioned in Ferrara et al. (2022), but only by a small number, with a large consensus that there were benefits to providing education remotely.

2.4 Rapidly adapting to new ways of working

This sub theme captures the experiences of health care providers trying to adjust their working practices to accommodate some telehealth, or to only offering telehealth services. The adaption to virtual care included both providing care to patients and also using it as a method of communication between providers (Gadsby et al., 2022).

Ennis et al. (2021) reported *'We have moved quite seamlessly to no-touch medical abortion services and this has been quite successful and rewarding'* (nurse practitioner, Ontario, ID 498).

For some adaptions were positive, but others faced challenges of finances, staffing and infection control measures (Ennis et al., 2021). Technology challenges included, equipment, privacy, security, and internet connection (Ferrara et al., 2022).

Theme 3 – Impact on services

This theme captures the views of parents and health care providers on how a change in service delivery impacted the service. This theme included four subthemes 3.1 Doing the best under the circumstances, 3.2 Disruption, change and replacements, 3.3 Services continue but look different, 3.4 Potential for online groups.

3.1 Doing the best under the circumstances

Both health care providers and parents recognised that they were doing the best they could in the context of the pandemic and the changes to ways of working.

For health care providers challenges included getting the right technology and then learning how to use it, alongside the frustrations of not being able to deliver the extent of services that would normally be delivered. Parents commented on how empathetic care was delivered virtually.

> *'When the GP prescribed me the surgery, she spent half an hour on the phone to me. She went above and beyond, really, and spoke about her own experiences as a mother. Said she'd been through similar, gave me some websites to look at. So, it's people really acting on their own volition*.' (Respondent14, T2) (Jackson et al., 2022)

3.2 Disruption, change and replacements

The change to telehealth coincided with other changes to services due to COVID-19 which meant for many parents their care felt disrupted. This included cancelled and rescheduled appointments which were then sometimes virtual and did not have the same value to women as face-to-face appointments.

> *'These are all the weeks you should be having these appointment and this is how it should all work', then it was the polar opposite to that because pretty much every single one of those was cancelled or turned into a telephone call.' (Participant-021)* (Silverio et al., 2021)

It appears that where possible and practical, appointments that could be done remotely were, such as, birth preparedness classes, antenatal consultations, postnatal consultations and abortion care (Galle et al., 2021). For some services, all care was replaced by telehealth (Ferrara et al., 2022).

The increased use of telehealth also brought disruption to health care providers, with reports of decreased work satisfaction, team cohesion and decreased enjoyment (Gadsby et al., 2022).

> *'And it is really, really tiring and quite mentally draining having to concentrate for so long on a screen.'* (NOS018) (Gadsby et al., 2022)

> *'I guess what has happened is that they [parents] think nothing of messaging me at a weekend. That is the downside.'* (NOS003) (Gadsby et al., 2022)

3.3 Services continue but look different

This theme captures how services did not stop but transitioned to a different delivery. Health care providers expressed how they still continued to provide structured services to maintain normality, but just now using telehealth instead (Ferrara et al., 2022).

> *'It's the communication and the availability and them knowing, that even though all this that, yes, we're still here.'* (Ferrara et al., 2022)

During this time of implementing telehealth, services were also having to restructure other elements to provide care while health care providers were aiming to provide services throughout COVID-19. These restructurings included changes in staffing rotas to accommodate wider service changes and some health care providers being redeployed to deliver acute care (Fogarty et al., 2022; Gadsby et al., 2022; Galle et al., 2021).

3.4 Potential for online groups

The shift to groups taking place online was positive for health care providers, but not parents. Health care providers discussed widespread access to smartphones for parents to access the classes (Galle et al., 2021). Additionally, the benefit of the online groups was seen as a way to provide care whilst reducing the risk of COVID-19 transmission. However, virtual groups were less positively received by parents, whose reasons for attending groups (e.g. social interaction) may have differed from the stated aim of the class (e.g. education).

> *'I set up a virtual channel with midwives to follow up those pregnant mothers who came to my office. With the help of virtual facilities, we provided training classes for mothers for one hour a day and then guide them. In this way, we were able to reduce the stress and depression of pregnant mothers in the epidemic of COVID-19.'*
> (Hantoushzadeh et al., 2021)

'They've [parenting groups] all been trying to do things on-line, but it just isn't the same. You've gotta be there. It's about the social interaction… and to be honest, I don't really think baby groups are for babies, they're for the mums.' (Respondent 21, T2) (Jackson et al., 2022)

Theme 4 – New benefits for health care providers

This theme includes two sub themes which cover some benefits for health care providers brought about by the change in working patterns, including telehealth, introduced as part of COVID-19. This theme has two Subthemes – 4.1 Increased professional communication and collaboration, 4.2 Opportunity to develop staff and services.

4.1 Increased professional communication and collaboration

In three studies, health care providers discussed beneficial changes in working patterns from the use of telehealth, including different specialities working more closely and benefiting from better communication.

'One of the successes during COVID in my organization were the more frequent team meetings, partially done online, which enabled uniform action against the spread of the virus.' (Galle et al., 2021)

4.2 Opportunity to develop staff and services

Increased use of telehealth provided the benefit to staff of the opportunity to reflect on and develop themselves and the services they deliver.

'You know what I think has been really good. It has allowed people to be creative.' (NOS009)(Gadsby et al., 2022)

The move to delivering telehealth from their own homes was also discussed, this was a new way of working, that was embraced but a request for navigating this development was also present.

'We're going to have to adjust to a new normal. We have some of the tools right now, but we need training to be able to, like I said before about innovation, you have to be ready to change and willing to change.'(Ferrara et al., 2022)

Studies reported that remote ways of working introduced flexibilities benefitting both families and providers, such as flexibility over how people engaged with services and how services were allowed to operate including a reduction in rigidity and bureaucracy.

'This generated a significant learning about what was and was not possible. We have learned through these eight weeks that certain things that can easily be done online.' (NOS009) (Gadsby et al., 2022)

Telehealth allowed for health care providers to stay connected and reach out to each other for support and navigate challenges.

"I think it's just important to stay connected with our teams and with our management and with our coworkers, so that we've been able to talk and reflect and say, "I'm having issues with this. How did you manage that?" The stuff that we would still do

every day all day we're not doing as frequently, but we can still do it." (Clinician 03) (Fogarty et al., 2022)

Synthesis of quantitative data

As the analysis was a narrative synthesis of the data, the papers which have included open-ended questions or the opportunity for free text as part of the surveys were included in the quantitative narrative analysis. This is with the exceptions of Ennis et al. (2021) and Galle et al. (2021) as they undertook a thematic analysis of the open-ended data and as such these were included in the qualitative analysis above.

Description of studies

Thirteen studies were included in this synthesis, nine of these studies included the experiences of parents. Of these, six studies focused on parents before the birth of the child (Holcomb et al., 2020; Jeganathan et al., 2020; Liu et al., 2021; Nakagawa et al., 2021; Quinn et al., 2021; Sulaman et al., 2022) and three at experiences after birth (Delioğlu et al., 2022; Fogarty et al., 2022; Kloze & Wojtal, 2021). Ten studies included the experiences of health care providers (four of the 13 studies included the experiences of parents and health care providers). These studies explored the experiences and views of different professionals who provide care to families in the first 1001 days including: Midwives (3) (Gemperle et al., 2022; Jeganathan et al., 2020; Quinn et al., 2021), Nurses (3) (Fogarty et al., 2022; Jeganathan et al., 2020; Talmont & Vitale, 2022; Tozour et al., 2021), Physicians (5) (Jeganathan et al., 2020; Madden et al., 2020; Quinn et al., 2021; Tozour et al., 2021) and other providers of care (2) (Fogarty et al., 2022; Madden et al., 2020).

Experience of telehealth

From the 15 studies that included quantitative data, 13 included data about experiences of parents and health care providers and were included in this synthesis (two were mixed methods studies where only the qualitative data was relevant). Six studies focused on parents or patients, three on health care providers and four on both groups. The findings from these studies were sorted by participants and experiences and then organised into four themes, synthesized based on commonalities, using principles from Thomas and Harden (2008). Four themes were developed, presented in Table 8 along with the results of the CERQual assessment (Full CERQual Assessment in Appendix 5). These themes are named 'Quantitative 1' – 'Quantitative 4' to differentiate from the themes developed from the qualitative synthesis.

Table 6
Themes from narrative synthesis of quantitative data and CerQual Score

Theme	Studies Included	CERQual Score
Quantitative 1 Positive and negative experiences of telehealth	Delioğlu et al. (2022); Gemperle et al. (2022); Holcomb et al. (2020); Jeganathan et al. (2020); Kloze and Wojtal (2021); Liu et al. (2021); Madden et al. (2020); Nakagawa et al. (2021); Quinn et al. (2021); Sulaman et al. (2022); Talmont and Vitale (2022)	Moderate confidence This is a comprehensive, theme. The overall score was lowered by the methodological quality of the studies and difference in experiences between parents and providers.
Quantitative 2 Extent telehealth can meet needs and deliver care	Fogarty et al. (2022); Gemperle et al. (2022); Holcomb et al. (2020); Jeganathan et al. (2020); Madden et al. (2020); Nakagawa et al. (2021); Quinn et al. (2021); Sulaman et al. (2022); Talmont and Vitale (2022); Tozour et al. (2021)	Low confidence Theme is heavily weighted on health care provider experiences and there are only small amounts of data from each paper. Some concerns about methodological limitations.
Quantitative 3 Ease of using the technology	Fogarty et al. (2022); Holcomb et al. (2020); Jeganathan et al. (2020); Kloze and Wojtal (2021); Madden et al. (2020); Nakagawa et al. (2021); Quinn et al. (2021); Sulaman et al. (2022); Tozour et al. (2021)	Moderate confidence This theme has balance of data for parents and health care providers, but lower coherence with a mix of

		difficulty and ease for parents but all ease for health care providers.
Quantitative 4 Preference for visit type and future use	Holcomb et al. (2020); Jeganathan et al. (2020); Kloze and Wojtal (2021); Liu et al. (2021); Madden et al. (2020); Nakagawa et al. (2021); Quinn et al. (2021); Sulaman et al. (2022); Tozour et al. (2021)	Low confidence This theme presents experiences from both populations but there is low coherence and not much data for health care provider experiences.

Quantitative Theme 1 – Positive and negative experiences of telehealth.

For both health care providers and parents, there were a mixture of positive and negative experiences of telehealth during COVID-19. Across and within studies and settings there were some aspects of telehealth that were reported to be more positive than others.

Two studies explored parents' experiences of virtual physiotherapy for children (Delioğlu et al., 2022; Kloze & Wojtal, 2021). For virtual physiotherapy, Kloze and Wojtal (2021) reported that the majority of parents found it difficult to do the exercises with their child themselves, but a majority also reporting increased confidence for correct treatment management at home. There were positive responses around alleviating worries and managing in lockdown, but some children were reluctant to adhere to home rehabilitation, especially those aged 1-2 years (63.6%).

Six studies focused on prenatal care. Four reported positive experiences by parents (Holcomb et al., 2020; Jeganathan et al., 2020; Liu et al., 2021; Quinn et al., 2021), with the majority rating virtual visits to be either good or very good (Holcomb et al., 2020) or the majority finding care to be satisfactory (Jeganathan et al., 2020; Liu et al., 2021; Quinn et al., 2021).

Two studies (Nakagawa et al., 2021; Sulaman et al., 2022) reported less positive findings, with 57% of parents not satisfied with telemedicine compared to face-to-face care (Sulaman et al., 2022) and telemedicine satisfaction being lower than that of face-to-face care (Nakagawa et al., 2021).

Health care providers also reported varied experiences of telehealth. Positive experiences included, the majority reporting positives of telehealth (Talmont & Vitale, 2022), (including 67% (Quinn et al., 2021)) liking using telehealth (Jeganathan et al., 2020), confidence that telehealth improves care (Talmont & Vitale, 2022) or access to care (Jeganathan et al., 2020) and finding the experience to be the same as, or better than, face-to-face (78%) (Quinn et al., 2021).

There were mixed reports regarding visit times and efficiency, 50% believed visit time decreased and 19.4% believed it increased visit time and 42% believed efficacy increased while 31% thought it decreased (Madden et al., 2020). Video visits did not change preparation time (50%), documentation time (56%), ease of results at follow up (69%), patient rapport (59%), billing difficulties (39%) or patient safety (47%) (Madden et al., 2020). In one study more health care providers reported having negative experiences (59.3%, n=288), than positive experiences (40.7%, n=198) (Gemperle et al., 2022).

Quantitative Theme 2 – Extent telehealth can meet needs and deliver care.

For health care providers, there seemed to be a positive experience of telehealth being able to meet their needs and enable them to deliver care. However, there was limited data on parent's experiences of the extent telehealth met their needs. Holcomb et al. (2020) reported that only 1% (n=3) felt their needs were not met, but Sulaman et al. (2022) found that of those with no intention of using telemedicine in the future, 30% reported reasons related to how well telehealth could meet their needs, including needing a physical assessment, technology issues, longer waits, billing issues and unhelpfulness in emergency situations. Participants in Nakagawa et al. (2021)'s study, had to purchase their own foetal heart rate monitoring equipment at a cost of $26, of which 53% (n=34) felt was expensive.

For health care providers, five studies reported positive experiences (Gemperle et al., 2022; Madden et al., 2020; Quinn et al., 2021; Talmont & Vitale, 2022; Tozour et al., 2021). For meeting needs and delivering care, some of the benefits reported included,

- Madden et al. (2020) 97% believe telehealth increases access. 92% believe it can provide adequate care when appropriately scheduled.
- Tozour et al. (2021) 75% of respondents felt that lack of physical examination was not a problem, 67% that telemedicine was adequate to replace face-to-face and 83% believing it to be an acceptable and convenient way to provide care and increase access.
- Quinn et al. (2021) virtual clinics to be safe (82%, n=22), effective at delivering high quality care (100%, n=27), better or comparable to face-to-face (89%, n=24), easy or just as easy to get advice or a second opinion (56%, n=15), felt virtual clinics took longer than face to face appointments 74% (n=20) and 63% (n=17) believe virtual clinics were more or as efficient than face-to-face clinics

- Gemperle et al. (2022) 55.3% believed there to be advantages beyond the pandemic, of these 31.5% said telemedicine reduces workload, 18.9% said it improved provision of health care, and 4.8% noted an increase in self-care amongst clients.
- Talmont and Vitale (2022) helpfulness to reduce disparities and improve health equity (43% (n=15) somewhat helpful, 14% (n=5) extremely helpful and 31% (n=11) very helpful)

Two of the studies also reported negative aspects of telehealth for delivering care and meeting needs. Gemperle et al. (2022) reported 44.7% believed there to be no general advantages or pandemic only related advantages of whom, 15.9% expressed a preference for maintaining telehealth in an exceptional situation, and 8.2% said as protection from COVID-19. In this study there was an age-related difference. Midwives under the age of 39 were more likely to indicate telehealth advantages beyond the pandemic than those older than 50. Talmont and Vitale (2022) reported that 60% (n=20) reported negative aspects including misdiagnosis concerns, relationship building, risk and inability to fully assess.

Quantitative Theme 3 – Ease of using the technology.

Most studies including parents' experiences reported that parents did not experience challenges with the actual technology being used for telehealth. This included <1% (n=2) of parents reporting difficulties or technical issues (Holcomb et al., 2020), 84.7 % reporting connecting to appointments was easy (Jeganathan et al., 2020) and video calls being convenient for 72% (n=46) (Nakagawa et al., 2021). However, Kloze and Wojtal (2021) found that nearly half of their sample reported technical difficulties (48%, n=74), with some of these problems impeding consultations (8%, n=12) and over half needing assistance for the consultation (58%, n=87). Additionally noteworthy is that Madden et al. (2020) reports that

78% of health care providers identified patient difficulty using and accessing the technology as a barrier. Privacy concerns were rare with 93-98% reporting no privacy concerns (Jeganathan et al., 2020; Quinn et al., 2021; Sulaman et al., 2022).

Most health care providers did not report that they faced technological challenges (Fogarty et al., 2022; Madden et al., 2020; Quinn et al., 2021; Tozour et al., 2021). This included, 80% finding the technology easy to set up (Madden et al., 2020), 78% reporting connection to be good (Quinn et al., 2021), 100% feeling the technology was secure and 83% being able to see and hear patients without difficulty (Tozour et al., 2021). Although a minority, routine data in Fogarty et al. (2022) showed technical difficulties in 10% of sessions (problems with internet connection, lagging and the platform used).

Quantitative Theme 4 – Preference for visit type and future use.

Health care providers appeared willing to continue using telehealth whereas, for parents, preference, and willingness to use telehealth in the future was quite mixed. In one study 56% (n=83) preferred face-to-face, a quarter preferred virtual 25% (n=37), and 10% (=15) had no preference, and a final group stated their preference depended on factors such as the pandemic 9% (n=13) (Quinn et al., 2021).

Under non-pandemic circumstances, there was a low preference amongst parents for virtual/online care (between 1- 10%) (Kloze & Wojtal, 2021; Liu et al., 2021; Nakagawa et al., 2021). If there was a pandemic, parent preferences for virtual care were higher (41%) (Nakagawa et al., 2021).

Three studies looked at parent perspectives of prenatal care, but did not specify if there were any context (such as COVID-19) when considering preference for future use (Holcomb et al., 2020; Jeganathan et al., 2020; Tozour et al., 2021). Tozour et al. (2021)

showed a majority preference for telehealth to be a future option (Desires 73% (n=120), Neutral or Disagree 27% (n=45)). Two studies, Jeganathan et al. (2020) and Holcomb et al. (2020), showed the majority wanting a combination of in person and virtual care.

In addition to preferences, Sulaman et al. (2022) showed a mix of confidence and no confidence in future use (Confident in future use of telemedicine, Yes 46% (n=61), No 54% (n=71)).

For health care providers, three studies reported a desire to continue using telehealth in the future (Madden et al., 2020; Quinn et al., 2021; Tozour et al., 2021). However, Jeganathan et al. (2020) found a significantly greater number of health care providers who preferred in person visits (56%) than a combination of in person and telehealth (23%) for high-risk obstetric patients.

Identified gaps in the findings

Health inequalities

Most studies did not consider health inequalities, but some consider inequalities in relation to access, in terms of reduced travel with the potential to reduce geographic inequity (Gadsby et al., 2022), but also the possibility of it excluding migrants (Galle et al., 2021).

> '*Many of my patients are not documented or are in the U.S. temporarily, and are thus reluctant to participate in video and telephone visits due to well-grounded fears of information being recorded or listened to by government agencies.*' (Galle et al., 2021)

Two studies specifically considered geographies of populations. One compared experiences of Ghanaian women to women in the USA, finding that Ghanaian women had a greater fear of COVID-19 but were also more negative about telehealth believing that high quality prenatal care can only be achieved face-to-face (Norris et al., 2021).

The other focused on a part of London with areas of high deprivation and had a targeted recruitment strategy of people with Black, Asian and Minority Ethnic backgrounds (Silverio et al., 2021). This study reported a greater acceptance of virtual care for antenatal compared to postnatal care, but virtual care was seen as better than no care.

Health Visiting

There were no papers that focused solely on health visiting and telehealth experiences, from a parent or health care provider perspective. Papers that did mention experiences of health visiting and telehealth (in studies exploring care systems more broadly) were; Jensen et al. (2022), Jackson et al. (2022) and Silverio et al. (2021).

Jensen et al. (2022) explored women's experiences during COVID-19 in Denmark and as part of this women discussed the impact of the absence of home visits from health visitors, including the lost opportunity to have informal talks and share worries. These opportunities were still not felt to be available when health visitors made contact via the telephone or online.

> *'So it's such a strange feeling that now I think there are many things that I have confidence in. But I still cannot help but think if there is something I have overlooked or something I have done wrong…. For now it's so long ago that a health visitor has seen X [Infant's name] and it's so long since I've seen my mothers' group and it's*

been a long time since we've received any guidance' [Woman no.3](Jensen et al., 2022)

Jackson et al. (2022) included some parents' experiences of health visiting, including feeling like the contact was a waste of time, concerns that the home environments of babies are not checked, concerns that vulnerable families will be missed, not having a place to seek support, and feeling distant.

'[Health visitor] phoned me a couple of times since but you can't- when you're on the phone as well, you feel distant. You do definitely feel distant.' (Respondent 6, T1).

'When people feel like they can't go [to the doctors]… [that's] why I feel a bit sad about the six-weeks check and the health visitor's check not being physical, because I think that vulnerable people are going to be slipping through the cracks.' (Respondent 9, T1)

Silverio et al. (2021) also explored women from the United Kingdom's views of the reconfiguration of maternity services which incorporated some experience of health visiting. This included using an advice telephone line to contact health visitors, only having phone call appointments with health visitors, and having unsuitable virtual feeding support.

'I was also referred by my health visitor for a breastfeeding Zoom call. That was ridiculous. I needed to see someone face-to-face because they have to check your position, your latch and whether your baby has tongue tie. Feeding support has to be there face-to-face and it needs to be avail- able.' (Participant-005)

Final Synthesis

Synthesis of qualitative and quantitative synthesis

Table 7 below shows the agreement, silence, and dissonance between findings from the themes developed from the qualitative synthesis and the themes from the synthesis of quantitative data.

Table 7
Convergence Coding Matrix of results from synthesis

Qualitative Synthesis		Convergence Coding Matrix				Quantitative Narrative Synthesis	
Summary of findings	Studies	Agreement	Partial Agreement	Silence	Dissonance	Summary of Findings	Studies
1 Impact on Families – 1.1 Gains and losses. *There were both things gained and lost to parents and health care providers due to telehealth, included increased communication and loss of support.*	Ferrara et al. (2022); Gadsby et al. (2022); Jackson et al. (2022); Jensen et al. (2022)	X				**Quantitative 1 Positive and negative experiences of telehealth** *As with qualitative data findings, there was a mixture of positive and negative experiences of telehealth reported.*	Delioğlu et al. (2022); Gemperle et al. (2022); Holcomb et al. (2020); Jeganathan et al. (2020); Kloze and Wojtal (2021); Liu et al. (2021); Madden et al. (2020); Nakagawa et al. (2021); Quinn et al. (2021); Sulaman et al. (2022); Talmont and Vitale (2022)
1 Impact on Families – 1.2 Developing and Maintaining Relationships *Reduced ability to develop relationships for both parents and health care providers.*	Ferrara et al. (2022); Galle et al. (2021); Jackson et al. (2022)			X			0 Studies

1 Impact on families – 1.3 Preference for face to face *Parents would have preferred face to face care.*	Norris et al. (2021); Panda et al. (2021)	X		**Quantitative 4 Preference for visit type and future use** *Health care providers being positive about future use generally and parents future use depending on factors such as pandemics.*	Holcomb et al. (2020); Jeganathan et al. (2020); Kloze and Wojtal (2021); Liu et al. (2021); Madden et al. (2020); Nakagawa et al. (2021); Quinn et al. (2021); Sulaman et al. (2022); Tozour et al. (2021)
2 Challenges of the evolving system -2.1 Barriers to access *Challenges with the technology and finical barriers impacted the experience of telehealth for both parents and health care providers.*	Fogarty et al. (2022); Gadsby et al. (2022); Galle et al. (2021); Madden et al. (2020)	X		**Quantitative 3 Ease of using the technology** *There was a mixture of challenges with technology and ease of use for both parents and health care providers.*	Fogarty et al. (2022); Holcomb et al. (2020); Jeganathan et al. (2020); Kloze and Wojtal (2021); Madden et al. (2020); Nakagawa et al. (2021); Quinn et al. (2021); Sulaman et al. (2022); Tozour et al. (2021)
2 Challenges of the evolving system – 2.2 Navigating the system *Parents found navigating the changing system challenging, and*	Ferrara et al. (2022); Jackson et al. (2022); Jensen et al. (2022); Panda et al. (2021)		X		0 Studies

some health care providers tried to use different methods to stay connected through this.				
2 Challenges of the evolving system – 2.3 Shortcomings of telehealth *Healthcare providers reported the shortcomings of telehealth regarding limiting what would normally be available to them face to face such as non-verbal cues and the option to perform examinations.*	Ferrara et al. (2022); Galle et al. (2021)	X	**Quantitative 2 Extent telehealth can be used to meet needs and deliver care** *Health care providers reported positive experiences about delivering care and then a mixture of needs met and challenges for parents.*	Fogarty et al. (2022); Gemperle et al. (2022); Holcomb et al. (2020); Jeganathan et al. (2020); Madden et al. (2020); Nakagawa et al. (2021); Quinn et al. (2021); Sulaman et al. (2022); Talmont and Vitale (2022); Tozour et al. (2021)
2 Challenges of the evolving system -2.4 Rapidly adapting to new ways of working *Health care providers had to adjust working patterns to maintain patient facing role and communication with colleagues.*	Ennis et al. (2021); Ferrara et al. (2022); Gadsby et al. (2022); Madden et al. (2020)	X	**Quantitative 1 Positive and negative experiences of telehealth** *Limited data available on change to work experiences.*	Madden et al. (2020)

3 Impact on services – 3.1 Doing the best under the circumstances *Both parents and health care providers recognised the context of the pandemic and the influence of this on what they were able to offer from services.*	Ferrara et al. (2022); Jackson et al. (2022)	X	0 studies
3 Impact on services – 3.2 Disruption, change, and replacements *Parents felt a disruption to their care and health care providers felt disruption to their work life.*	Ennis et al. (2021); Ferrara et al. (2022); Gadsby et al. (2022); Galle et al. (2021); Silverio et al. (2021)	X	0 studies
3 Impact on services – 3.3 Services continue but look different *Health care providers discussed how services were still available just not in the traditional form.*	Ferrara et al. (2022); Fogarty et al. (2022); Gadsby et al. (2022); Galle et al. (2021)	X	0 Studies

3 Impact on services – 3.4 Potential for online groups *Disparity in potential for online groups with parents not gaining from them, but health care providers reporting increased access and communication.*	Ferrara et al. (2022); Galle et al. (2021); Hantoushzadeh et al. (2021); Jackson et al. (2022)	X	0 studies
4 New benefits for health care providers – 4.1 Increased professional communication and collaboration *For health care providers benefits included better communication with colleagues*	Ferrara et al. (2022); Gadsby et al. (2022); Galle et al. (2021)	X	0 studies
4 New benefits for health care providers – 4.2 Opportunity to develop staff and services *New ways of working and staff development became available*	Ferrara et al. (2022); Fogarty et al. (2022); Gadsby et al. (2022)	X	0 studies

The two parallel synthesises, and final convergence collectively showed the combination of experiences of telehealth, show both positives and negatives or gains and losses from the use of telehealth in the first 1001 days during the COVID-19 pandemic.

Discussion

This review sought to answer the question '*What are parents' and health care providers' experiences, and views, of telehealth in the first 1001 days (of a child's life) during the COVID-19 pandemic?'.*

This review identified shortcomings associated with telehealth and the extent to which in can be used to deliver care in the first 1001 days. Challenges for health care providers with the use of telehealth included, not being able to perform physical examinations themselves, having access to non-verbal cues or being able to develop relationships in the same way possible as delivering face-to-face care. There were, however, benefits including the capacity to maintain services and contact in the COVID-19 pandemic, increased communication with colleagues, and the spread of online groups. However, there were differences between health care provider and parent opinions on the usefulness of online groups that may reflect differences in perceived purpose, where parents put the emphasis on social interaction elements of groups and health care providers described them as education.

For parents, experiences were predominately negative with the introduction of telehealth impacting their care, including receiving insufficient care and experiencing challenges around knowing where to access help. Additionally for parents, there was a loss of relationship-based benefits, such as feeling unable to build rapport over telehealth and losing informal interactions which were often where they would want to ask questions or seek

support. Positives for parents included telehealth feeling private, it helping to alleviate worries and being easy to access.

A finding that was not consistent across studies, but there was partial agreement for was the ease of accessing, or the barriers to accessing technology to engage with telehealth. Some reported both technical and accessible challenges limiting contact, whereas others reporting increased ease of contact.

Beliefs about the use of telehealth in future care was also inconsistent across health care providers and parents. This finding is limited by the inclusion of different services and providers during the COVID-19 pandemic and not focussing on a specific element of care. There would need to be future work done to explore this at a more specific level of service and to understand the extent to which preference for mode of care is influenced by the context of the pandemic.

Much of the evidence was for the antenatal and early postnatal periods. This was expected as often this is when there is more universal input into services, with then more specialist services being accessed if needed following this period (such as the studies about telehealth in physiotherapy). Forms of universal care for families and children following the early postnatal period, such as health visiting, are not available globally and therefore it is understandable that there were fewer studies.

The findings also show that, while all the themes identified across the quantitative studies are captured in the qualitative analysis, many of the themes and subthemes in the qualitative analysis were not assessed in the quantitative data. This shows the benefit of adopting an integrative approach to the systematic review to include both qualitative and quantitative findings. This also shows the value of the qualitative work with findings being presented that are not directly related to the set structure of questionnaire formats.

A rapid review exploring early years home visiting programmes during and prior to COVID-19 has been published following this review being conducted (Morrison et al., 2022). This rapid review included reviews and research which related to telehealth service delivery in early parenthood programmes, both prior to and during the pandemic. The review identified both improved accessibility, and barriers to accessibility of telehealth. The authors highlighted the importance of the design and implementation of the telehealth intervention, and acceptance for clients being enhanced through tailored interventions, and enhanced for practitioners when they are user friendly and accompanied by training. There are complementary findings from the systematic review undertaken in this thesis and the results from this rapid review.

Updated Search on health visiting only, August 2024

On the 9th of August 2024 a search was run across Cumulative Index of Nursing and Allied Health Literature (CINAHL), MEDLINE, PsycINFO, PsycARTICLES, and Maternity and Infant Care (MIDIRS) using updated search terms displayed in Table 8.

Table 8
Search terms for updated search run on 09/08/2024.

PEO	MeSH terms	Keywords	Limiters
Population	Parents Caregivers Mothers Fathers	Women* or famil* or "health visitor*"	Limit to year="2019 -Current
Exposure	Health Visiting		
Outcome	Attitude	Experience* or view* or belie* or perspective* or opinion*	

Note: The same search terms were used to search MIDRIS. MeSH terms are not available in MIDRIS, so these were made into key words.

This was done to explore if any further research had been published regarding telehealth and health visiting experiences during COVID-19 to inform the thesis. The searches returned a total of 257 articles, which I screened to see if they contained any articles relating to parent or health visitor experiences of telehealth during the COVID-19 pandemic. Of the 257 results, 12 were duplicates, and 245 were excluded as they did not refer to experiences of telehealth and health visiting during the COVID-19 pandemic. This means no studies related to health visiting and telehealth during COVID-19 have been published since my original search.

Chapter Summary

The evidence from this review suggests that there were both benefits and challenges relating to telehealth in the first 1001 days (of life) from both parent and health care provider perspectives. These were often compounded by other factors that were initiated because of COVID-19 such as wider societal changes and disruptions to services.

The review and updated search showed how little has been done to explore the experiences of telehealth and health visiting in the COVID-19 pandemic specifically. Considering the importance of health visiting in the UK it is crucial to recognise the limited data around this service and telehealth from both the perspective of both health care providers and parents. There was only limited data available on health visiting, which was snippets from parents as part of studies exploring maternity services more broadly in the UK. This evidence gap confirmed the benefit of focussing the empirical work for this PhD on health visiting and telehealth specifically.

An additional search showed that by August 2024 there was still no published work in the databases searched specific to parent or health visitor experiences of telehealth and health visiting during the COVID-19 pandemic.

The findings from this systematic review were used to develop the research plans for the empirical studies presented in this thesis, included using the themes to develop the interview guide and questionnaire for the study of parent experiences and synthesising findings across the studies in this thesis.

The following chapters will present the two empirical studies undertaken for the PhD. They will explore the experiences of telehealth and health visiting from health care provider perspectives (Chapter 4) and parent perspectives (Chapter 5).

Chapter 4 – Study of health visiting staffs' experiences of telehealth and health visiting

Chapter Introduction

This chapter describes the aim, methods, and results of a qualitative exploration of health visiting staff experiences of the implementation of telehealth during the COVID-19 pandemic. This study was undertaken following the finding of only limited research and reports of experiences of telehealth and health visiting in the COVID-19 pandemic (see Institute of Health Visiting Report findings in the Introduction Chapter, and results from the systematic review). It also includes a brief overview of a relevant placement that I undertook as part of my PhD.

Aim

The aim of this research was to explore health visiting staffs' experiences of the implementation of telehealth in one service in the North of England.

Methods

In keeping with the pragmatism methodological approach, the methods for this study were chosen on how best they could meet the aim of the research, which involved exploring experiences of a largely unexplored topic. A qualitative approach was chosen, as this approach is useful when wanting to ask about what has happened, why it has happened and what has it effected, with the aim being about understanding rather than measuring (Green & Thorogood, 2018).

As the research was exploring experiences of implementation, a theoretical implementation framework was needed. However, there are a vast array of implementation theories and frameworks (over 100 different theories in use by implementation scientists internationally) and a lack of guidance on how best to select a theory to use (Birken et al., 2017). The recommendation from Birken et al. (2017) was to encourage transparent reporting to show how consideration was given to choosing a theory to use from those available.

In line with this recommendation, I chose to use the Non-Adoption, Abandonment, Spread, Scale-Up and Sustainability (NASSS) Framework (Greenhalgh et al., 2017). The NASSS Framework is an 'evidence-based, theory-informed, and pragmatic framework to help predict and evaluate the success of a technology- supported health or social care programme' (Greenhalgh et al., 2017, p. 1). It moves beyond a descriptive list of facilitators and barriers to implementation of technology in health care, and instead looks to understand why interventions may not be adopted or are abandoned, or why they failed to sustain spread and scale-up (Greenhalgh et al., 2017). The framework encourages the exploration of multiple influences on the success of technology, and is based on seven interacting domains to identify where complexity lies and therefore potential challenges (Greenhalgh, 2018). The seven domains of the NASSS Framework (Greenhalgh, 2018; Greenhalgh et al., 2017) are

- The Condition (clinical condition, comorbidities, and sociocultural aspects)
- The Technology (features of technology, what the technology generates, what is needed to use the technology and sustainability)
- The Value Proposition (Supply and demand side value)
- The Intended Adopters (Adoption by staff and patients and assumptions built into the technology)
- The Organisation (Capacity to innovate and readiness for implementation)
- The Wider System (Wider institution and sociocultural context)

- Embedding and Adaption Over Time (Includes all domains, policy context, evolution of technology)

The NASSS Framework has been used in other areas of health research to explore implementation of technology (Dyb et al., 2021; Greenhalgh et al., 2017; Kadesjö Banck & Bernhardsson, 2020).

I chose the NASSS framework to assist with the development of the interview guide, and inform the analysis framework as it can be used to explain retrospective implementation and to inform and support the scale-up or sustainability of technology in health care settings (Greenhalgh et al., 2017). As at the time of the research study, telehealth had been implemented due to COVID-19, but it was unclear where or if there was a place for this in health visiting beyond the context of the COVID-19 pandemic. Additionally, the NASSS framework is also designed to be accessible (Greenhalgh et al., 2017), I found it a helpful introduction to implementation as a student researcher. I also found this to be helpful when communicating the research to advisory board members and public advisors.

National Institute of Health and Care Research (NIHR) Local Authority Short Placement Award for Research Collaboration (LA SPARC)

As I am not a health visitor, I looked for opportunities to understand more about health visiting services. I successfully applied for funding (£3100) from the NIHR Local Authority Short Placement Award for Research Collaboration (LASPARC) scheme. LASPARC Placements are individual awards to be used to strengthen collaborations between universities and local authorities and their commissioned services. My aim in undertaking the placement was to develop an understanding of how health visiting services are commissioned and delivered.

The placement took ran from April 2022 to February 2023. Over this period, I spent the equivalent of two weeks meeting and shadowing staff in a local authority team that commissions the health visiting service and other services for children and families with a public health focus. I spent the equivalent of an additional two weeks of my placement were spent meeting and shadowing staff based in the commissioned health visiting service.

My placement ran parallel to developing the plans for this research study and completing the ethics application. This placement provided the opportunity to understand more about the health visiting service, gauge interest, share plans and receive feedback on this planned research study. This allowed me to make myself visible , meaning my name and research were familiar when I began recruitment. This helped me plan who I would want to speak to, and how I would need to recruit and sample.

Through relationships established in this placement I have been able to support both the local authority and the health visiting service with their own research plans and have made plans to continue collaborating beyond the scope of the work presented in this thesis.

Data Collection

Interviews

In keeping with the aims and qualitative approach, I conducted individual semi-structured interviews[2]. Individual interviews often allow a more comfortable environment for having conversations about private and personal issues (Knott et al., 2022). This was important due to the sensitive nature of asking about experiences of working within a service participants were still employed within. Using an interview approach was discussed with a member of the advisory board who agreed that this would be a suitable approach for speaking to practitioners about their experiences.

Due to the risk of COVID-19 transmission at the time the study took place, the University (University of Central Lancashire) advice was to undertake interviews remotely. The interviews took place over Microsoft Teams[3], and participants could choose to have their camera on. The remote interviews also allowed greater flexibility for when the participants could schedule their interviews.

[2] There was one variation to the method. For two of the participants their interview took place at the same time, with one being consented retrospectively. This was done at the request of the participants. This was reflected on and taken to supervision for discussion and although was a deviation to the protocol, a decision was made that it was important to respect participant wishes and keep the data, on the basis informed consent had been taken. The participants were aware that they would not have anonymity from each other.

[3] All interviews took place over Microsoft Teams, which for this research I believe participants were very familiar with working remotely and attending virtual meetings and as such the interviews were not de-valued in anyway by taking place this way. Whereas previously they may have when this was more unfamiliar concept.

Developing and testing the interview guide

I used the knowledge acquired from my placement alongside the NASSS-CAT framework (Greenhalgh et al., 2020) to develop the interview guide to support the interviews. I also had input from members of my advisory board, including the two Public Advisors.

Pilot studies can refer to a small version of a full-scale study, or the specific testing of a research instrument (for instance an interview guide or questionnaire) (Van Teijlingen & Hundley, 2001). There is limited discussion and publication about pilot studies, meaning there is also limited guidance on how to conduct pilot studies (Malmqvist et al., 2019). A methodological review into developing qualitative semi-structured interview guides identified pilot testing of the interview guide as important for trustworthiness (Kallio et al., 2016). Testing the interview guide was identified as important for confirming it has appropriate coverage and relevance, and to explore if any questions need to be deleted, added or reformulated. The review identified three different techniques for this, internal testing (testing with the research team), expert assessment (seeking assessment by specialists outside the team) and field-testing (testing the guide with potential study participants). All three were used for this study.

The first two tests (research team and specialists) were carried out by my supervisory team and the members of the advisory board, respectively. The final test (field testing) involved a session with an individual who had experiences that aligned with the study inclusion and exclusion criteria. I have documented the process and the learning from the testing of the interview guide in response to Van Teijlingen and Hundley (2001) criticism that authors often make generic comments about learning from interview guide testing, without details of what was learnt and how changes were then made

I tested the interview guide by interviewing a health visitor from my advisory board face-to-face. Although I planned to undertake the interviews remotely, I thought for the test it would be better face-to-face to explore any issues with the interview guide that may emerge.

I asked the second question in the draft interview guide (*What are the relevant sociocultural factors*?) and was met with a bewildered expression from the participant who asked, 'What do you mean?'. I immediately realised that I had used academic terms in the interview guide that were more suitable for an academic write up or conversation with an implementation expert, than for trying to unpick the experience of a health visitor who had worked remotely during the COVID-19 pandemic. I replied that even I was not sure exactly what I meant, we laughed and then changed the structure of how we were going to test the interview.

We began going through the questions individually, I read each question aloud and then the test participant asked me what I was trying to ask/get out of the question and helped me translate it into plain English. Once we had re-worded the question, I then asked it again and the participant responded. This combination of piloting, talking aloud, co-production, reciprocal interviewing felt immensely helpful for bringing the interview guide to life and increasing my confidence going forward. This would have been an uncomfortable experience to have had with a participant in the main study and reinforced the importance of testing interview guides prior to using them.

Although not intentional, the process was similar to that of cognitive testing. Cognitive testing is mainly associated with survey design, where methods are used to capture individual's understanding of, and thought processes around, responding to questions (Campbell, 2009). One common problem respondents can have with answering questions is comprehension, where terms are unknown, ambiguous or the questions are too long and

complex, which is what became evident in my experience with my interview guide testing. Cognitive testing uses cognitive interviewing either concurrently or retrospectively following a participant's undertaking of a research instrument (usually a survey). In this instance I used concurrent verbal probing to understand the problems with the interview guide from the participant, and then we collaboratively worked to re-phrase the questions.

The final version of the interview guide is available in the appendices (Appendix 6).

Recruitment and Sampling

Potential participants were approached through two avenues,

1. The key contact within the service for the study emailed recruitment email invitations to staff.
2. I sent invitations to staff who had previously expressed interest in the research (see placement details).

The recruitment email included information about the study and asked individuals who were interested to contact myself (BG) directly to allow for confidentiality.

Eligibility

Individuals who responded to the recruitment email and expressed interest in participating were asked some demographic questions to assess their eligibility against the study eligibility criteria and to assist with the sampling. Purposive sampling was undertaken

to ensure that individuals from a range of roles, with different years of experience and who have used telehealth to be included.

Inclusion Criteria

- Staff member involved in delivering Health Visiting
- Have been involved in the implementation of telehealth during the Covid-19 pandemic (2020-2022) (this includes leadership and management who supported the introduction of telehealth).
- Have used telehealth to deliver services to families during the Covid-19 pandemic (2020 –2022)
- Have sufficient English to be able to understand the research documents and participate in interviews

Exclusion Criteria

- Not been involved in implementation or delivery of telehealth
- Under the age of 18
- Not able to understand the consent form

While the COVID-19 pandemic was still ongoing beyond 2022, the inclusion criteria focused on experiences of implementation and delivery of telehealth between 2020 and 2022. As UK lock down restrictions had ended, and the service had returned to face-to-face as the primary mode of visits by 2022 (as ascertained in the LA SPARC placement).

Ethics

This study received ethical approval from the Health Research Authority and UCLan (Appendix 7).

Analysis

I used a framework method of analysis, using a combination of deductive and inductive coding (Gale et al., 2013; Ritchie & Spencer, 1994). The method was used flexibly as recommended and the analysis process of analysis closely followed the procedure outlined by Gale et al. (2013). The process included;

1. *Transcription*. Interviews were recorded using Microsoft Teams, which generated a transcript. The quality of this was poor though so I transcribed most of the interviews verbatim.
2. *Familiarisation of the interview*. Following the interview and whilst transcribing, I made notes of any insights that felt important to the research. After transcribing I then re-read the transcripts to cement my knowledge of, and familiarity with the interview.
3. *Coding.* I used a combination of deductive and inductive coding supported by using MaxQDA (VERBI Software, 2021). An initial deductive coding framework was developed a proiri using the seven domains of the NASSS Framework (and the key elements in each domain). In addition, I used inductive coding to capture any relevant data that did not align with the deductive codes, or that were linked to these but were more interpretive or very specific to the research topic. Throughout the process of coding I made notes on insights or impressions of the data.

4. Working with the analytical framework. The initial coding framework continued to be developed as I coded the interviews and additional inductive themes emerged. As I continued coding, I applied the existing codes to the transcript where relevant or created new inductive codes and added to the framework. By the final transcript coding new codes did emerge but were closely linked to existing codes.
5. Interpreting the data. Once the data had been coded, I then gathered the notes that I had made throughout the interviews, familiarisation and coding processes and printed the coding framework. I then worked through my notes and paper versions of the codes to map data characteristics and connections and began to unite codes and map out themes. I developed initial themes relating to the NASSS Framework and additional themes that were beyond the scope of the framework. Following the initial interpretation and development of themes, these were then refined through discussion with my supervisors and members of the advisory board who had a background in health visiting. When interpreting and developing the themes and writing, this was an iterative process where I found myself moving backwards and forwards as my understanding of the data developed. Once the themes had been refined these were written up alongside examples from the interview data.

Determining themes

As part of the final stage of analysis described above (Interpreting the data), I moved back and forth between my codes (developed from my a priori framework and additional inductive codes that I developed), proposed themes and the data to develop the themes. This involved re-reading the data in the interviews that had been coded under the themes to check they were relevant, and that there was sufficient data to support the proposed theme (Gale et

al., 2013). What I regarded as sufficient was that if the coded data seem to be reflective of the interpretation and meaning I had assigned the code to, and if there was recurrence (but not necessarily a specific frequency) of similar data across participants.

Although there was engagement with the supervisory team and advisors, they were not involved in the coding process, nor did I undertake any coding-reliability tests. This did not take place as it is something that is more closely associated with positivist paradigms, and therefore did not align with my interpretivist approach (Braun & Clarke, 2021). Instead, where I believed that I reached the point where appropriate codes and themes had been identified, without any new ones needing to be added and no new relationships emerging I finalised my interpretations (Rahimi & khatooni, 2024).

Determining Quality and Rigour

The issue of determining quality in qualitative research is not straightforward, and there is debate about how it can be legitimately judged (Mays & Pope, 2000). Due to the nature of the interpretivist approach of this research it is not possible to determine quality using methods of generalisability and reliability in the same way other approaches may be able to (Mays & Pope, 2000). Instead, there are other markers of quality in qualitative research including '*rigour (thoroughness and appropriateness of the use of research methods), credibility (meaningful, well-presented findings) and relevance (utility of findings)*'(Kitto et al., 2008, p. 243).

To demonstrate these attributes in my work, I have written about my choice of method and why I believed it to be appropriate within my chosen methodology and to answer this research question. I have been transparent in the analytical procedures I have undertaken and explained the steps I have taken to produce the findings. By using software (MAXQDA)

to organise the data and support the analysis, I have also been able to identify relevant data extracts to ensure sufficient evidence for the results. I have presented findings which are extensive, but relevant, using quotes where appropriate to support the themes that I developed.

Reflexivity is used as criteria for assessing qualitative research (Kitto et al., 2008). I engaged in reflexive activities throughout the analytic process, considering how I as a researcher had changing attitudes and beliefs which had the potential to influence the choices I was making. I have documented these reflective practices related to each of the studies and the thesis overall to be transparent in how I have influenced the findings.

Reflexive Statement

Prior to undertaking this study I undertook the LASPARC placement. Prior to undertaking this placement I had little insight into the workings of the health visiting service, or the practitioners that delivered the service. By working alongside these individuals and gaining more of an insight into themselves and their roles and saw the importance of the role for supporting families and felt inspired by the universal service they offered. By undertaking this placement, I believe it increased my understanding of the service, and seeing the pressures they were under made me feel compassion for the stresses those providing the service were experiencing. However, after learning from the placement more about the role involved, I was unsure how this translated to using telehealth instead of physically seeing families. I approached the data cautiously to ensure that I still accurately captured both the positive and negative aspects of experiences with telehealth.

Results

In all, 15 participants took part in interviews between January and July 2023. Participants had different roles including health visitor, specialist health visitor, practitioner, and leadership roles. All participants were female. Due to the small sample size from a single service there is the potential to identify participants and as such only broad demographics are presented below in Table 9 for anonymity.

Table 9

Participant demographics.

Participant Code	Role/ Professional Background	Length of time in role (or similar role)	Age	Gender	Length of interview
P1	Leadership /health visitor	10 -19 years	40-49	Female	1:05:08
P2	Leadership/health visitor	9 years or less	50 +	Female	54:37
P3	Practitioner[4]	10 -19 years	40-49	Female	1:13:00
P4	Health visitor/Specialist Role	10 -19 years	50+	Female	1:12:44
P5	Health visitor/Specialist role	9 years or less	40-49	Female	1:7:06 (Two parts – 32:26 and 34:50)
P6	Leadership/ Specialist role	9 years or less	30-39	Female	51:40
P7	Leadership/Specialist role/Health Visitor	10 -19 years	40-49	Female	58:42
P8	Leadership/ Health Visitor	9 years or less	40-49	Female	48:20
P9	Health visitor/specialist role	9 years or less	40-49	Female	48:16
P10	Leadership/health visitor	Over 20 years	50+	Female	54:37
P11	Practitioner	10 -19 years	40-49	Female	49:22
P12	Health visitor/Specialist Role	9 years or less	30-39	Female	1:06:33
P13	Health Visitor	10 -19 years	40-49	Female	1:04:07
P14	Practitioner	Over 20 years	50+	Female	1:18:49
P15	Practitioner	9 years or less	18-29	Female	47:25

[4] This service uses a skill-mix team to deliver services. Practitioner role is similar to a nursery nurse.

The analysis resulted in the development of nine themes each with subthemes. These are present in Table 10 to show the structure and then are described in full.

Table 10
Themes and subthemes.

Theme	Subtheme
1 Health visiting – Descriptions and Actions	1.1 The health visiting service and population needs
	1.2 Distinction between service offer and role of practitioner
2 Context of telehealth implementation	2.1 The context and impact of the COVID-19 pandemic
	2.2 The decision to adopt telehealth
	2.3 Challenges with staffing
3 The organisations culture and capacity for implementing telehealth	3.1 Capacity to implement telehealth
	3.2 Accommodating a new way of working
	3.3 Culture within the organisation
4 Decisions for using telehealth	4.1 Thresholds for telehealth suitability
	4.2 Specific suitability and appropriateness of telehealth
5 Practicalities of telehealth	5.1 Working with new technology
	5.2 Challenges faced when using telehealth
	5.3 Supporting future telehealth
6 Where telehealth brought value	6.1 Facilitating contact with families during, and beyond the COVID-19 pandemic
	6.2 Benefits of telehealth
	6.3 Adapting to increase options and opportunities
7 Working with families at a distance	7.1 Families' engagement with telehealth
	7.2 Implementation of virtual groups
	7.3 Supporting organisational challenges
	7.4 Reservations about telehealth
8 The loss of home visiting in health visiting	8.1 The constraints of telehealth (compared to home visiting)
	8.2 Core belief in home visiting
	8.3 Using the senses in observation and assessment
9 Relationships and camaraderie	9.1 Relationships (and the influence of a changing system)
	9.2 The office as an anchor

Theme 1 Health Visiting – Descriptions and Actions

This theme describes participants views of the work that the service offers, but also the addition of what they themselves offer to families as practitioners. The theme has two subthemes, '*The health visiting services and population needs'*, and '*Distinction between service offer and role of practitione*r'.

1.1 The health visiting service and population needs

Participants described the scope of the health visiting offer in relation to key performance indicators and other activities. This included mandated contacts, running clinics, groups, behavioural support, safeguarding, asking about and responding to domestic violence and abuse, and working with and creating referrals to, other services. Participants described how their work involved supporting the whole family and identifying and responding to needs.

> '*there's a heck of a lot that we do do, we're sort of we are the go-to in terms of preschool children'* (P4)

> '*It's quite difficult to describe everything that we do because we just do a little bit of everything*.' (P9)

Participants perceived varied needs of the population and explained that they had to be responsive to these. Participants described perceiving changing needs in recent years, such as increasing referrals for children who may be on the autistic spectrum, low mood in parents, an increase in isolation and safeguarding due to the COVID-19 pandemic and concerns about the potential impact of the cost-of-living crisis. Participants also described an increase in the

population, due to in area births and, for those working in certain areas an increase in migration.

Participants identified some groups who may need additional support from health visiting, to meet specific needs. Participants described working with families who, are refugees, do not have English as a first language and need interpreters, have low incomes, have additional needs, or are geographically rural and potentially isolated. Participants felt the potential impact of the cost-of-living crisis on low-income families may mean they need to offer more support.

> '*... where there are more deprivation I think their needs could become worse because of, you know, the cost-of-living crisis and the situation that the country's in. You know, I think they're, there could be an effect on them. Sometimes families are asking for referrals to food banks and things like that, and I could probably see that increasing. And maybe families who have just managed previously. You know, there might be more and more, that need extra support.*' (P11)

1.2 Distinction between service offer and role of practitioner

When participants were asked to describe how the service supports families, they often gave an account of what the service provided in relation to the different elements of its service provision, most often referencing the visits associated with the healthy child programme or key performance indicators (KPI). This was often described in quite a regimented, list like fashion which made the provision appear to be quite uniform.

> '*So it is we offer the universal health visiting program, which is a number of KPI or key performance indicators visits that we offer absolutely everybody on our caseload and then we offer supportive visits for a number of different, um, issues. Or we*

signpost or refer to other services in aiming to support that family. It's not just the child that we support, it's the whole family really. We also work in safeguarding across all the levels of the continuum of need. Offering, being part of the core groups, if it's safeguarding or um part TAFs [Team Around Family] *or sometimes leading on that depends on what the needs are within the family*.' (P4)

This contrasted with when participants talked about their actions as examples of how they supported families. The examples given did not necessarily align with the key performance indicators they discussed, but instead were focussed on a person-centred and responsive support to parents in a way that went beyond what was listed (such as mandated visits) previously. This included, being a support for families, complimenting and providing positive feedback on parenting and providing emotional support that was responsive to the needs of that parent at that time. Their actions aligned closely with the value placed on developing relationships, and how this element of the role was constrained by working with families via telehealth rather than in their homes.

'*like this morning for instance I went round of that mum cried on my shoulder, can't do that on a virtual call, you know. And I said, I just wanna give you a hug, and she said please do. And then she just burst into tears and she needed that release. And you can't do that, can you sometimes on a virtual call*.' (P13)

'*the role is vast in terms of you will look after families for. So, you know, you'll visit them regularly you get to know them so well that you suddenly become their relationship counsellor, their go to for that containment and discussion and you know, phone calls and whatever. And often you'd be like privileged to be the first ones. So know if they're even expecting if it's a second or third baby before the dad. So. And so you really get to know these families*.' (P12)

Theme 2 Context of telehealth implementation

This theme includes subthemes related to the context of COVID-19 and a key challenge for health visiting (staffing) at the time telehealth was implemented. It also includes a subtheme about how it was decided to implement telehealth in this service. There are three subthemes, '*The context and impact of the COVID-19 pandemic', 'The decision to adopt telehealth'* and *'Challenges with staffing'*.

2.1 The context and impact of the COVID-19 pandemic

The context of the COVID-19 pandemic created challenges around working with families in addition to the implementation of telehealth. The reduction in face-to-face visits meant there were challenges to service delivery and provision including, not being able to fill out the 'Red Books' (personal child health record), pausing training of new health visitors, being able to obtain consent from parents to visit, and not being able to make unscheduled visits to families where there were concerns. Participants did also describe some positive changes that were created by the COVID-19 pandemic; however these were discussed to a lesser extent than the challenges. Participants noted that some partners were able to have greater involvement as a consequence of the pandemic, due to working from home or being on furlough compared to the standard two weeks paternity leave.

> '*Well, because when you working with families and you're worried about the home circumstances, you will just quite often turn up, you know, or pop in on the way past, but you just couldn't do that in the pandemic. So that felt strange because. You'd lost that ability to do that, you know. Which you just wondered what was going, you know, what was happening? Really. For those families that you were supporting. But I think*

it was different, wasn't it? Wasn't like it was. So it was the risks were the. The thought was that the risk to life was so much that you shouldn't be just popping in on people anymore. So. It felt a bit strange.' (P5)

In addition to challenges facing providing a health visiting service to families, participants discussed difficulties that they themselves were facing living through the COVID-19 pandemic. These included, working while their families were at home, maintaining their own and their family's privacy, and having to support their own children with homeschooling. Participants also described the negative impacts on their health the move to working from home had on them, with many developing problems from not being as mobile as usual and having to work where they could within the house, such as sitting on their sofa to get the best wi-fi signal. Participants described challenges with not having dedicated space in their home to work from or having to reorganise or create space to work from home.

'It was more about space in the house, really. With us all trying to work, we've had to reorganize the house as we all had our own different workspaces' (P4)

'*And unfortunately, some of our houses aren't geared up to, we've not all got facilities to have an office at home. And you know, I found barriers was, you know, you, you're in your own home and it was an intrusion for my family or my partner. That you know, it felt that you know because we haven't got a space. So I mean….then you sort of expecting them to be quiet.'* (P10)

Participants explained that the COVID-19 created immediate impacts, but also longstanding challenges that have influenced the needs of the population. This included increases in safeguarding, impact on children's speech and language development, delays in children's development and concerns around oral health due to limited capacity of dentists.

‘*There was no baby groups running. Families weren't allowed to go and visit other families with other children. That level of interaction just wasn't there, and for babies and toddlers, that is key absolute, absolute key. So when all that got taken away that's had a massive impac*t.’ (P3)

2.2 The decision to adopt telehealth

Participants explained the decision to implement telehealth to replace face-to-face visits was made at a government level (Public Health England) and this was the guidance that facilitated the implementation of telehealth in health visiting. Where visits did go ahead face-to-face, these were done within the guidance that was current at the time, and with staff wearing personal protective equipment. Participants discussed how this alongside the level of restriction for the general public in place, directed how visits were delivered.

‘*we had agreement, it was part of a national agreement for Public Health England that we could withdraw some of our face-to-face contacts, especially in the early days. So that our development checks could be done virtually. And our antenatal contacts. And six-to-eight-week contacts‘* (P1)

‘*As the lockdowns sort of decrease, waned, and then increase and then more home visits would be done. And then we'd pull back again from those other visits if they weren't deemed as essential as that new birth* [Visit].’ (P4)

There was limited discussion in the interviews on the influence of regulatory bodies, but some respondents noted that the Nursing and Midwifery Council guidelines still had to be adhered to regardless of the mode of the visit, which concerned some participants around their ability to properly assess families and children virtually.

There was limited data in the interviews relating to the decisions made at the organisation level to implement telehealth. Information on decision making was cascaded down through management structures and shared with staff members as guidance changed.

> **'***The managing director of the company would come on and let you know what you know what we were doing because it was changing so frequently and then and that would get filtered down to the different areas and they would sort of say, you know, you can visit for new birth visits and child protection visits and things like that*.' (P5)

Participants described the transition from telephone calls to the use of first one specific video software, and then to another that was then sustained, due to its compliance with Information Governance.

2.3 Challenges with staffing

Staffing was a recurring concern discussed by participants at both an organisation level and wider national level was the challenges with staffing, with a shortage of health visitors described as impacting workloads and leading to issues with staff retention. Additional staffing challenges related to the COVID-19 pandemic, including staff having to shield, being redeployed and being absent due to sickness, which all compounded the existing staff shortages. Staffing issues were discussed alongside the benefit of telehealth, allowing an increase in the number of visits it was possible to undertake in a day (compared to the time needed to commute between face-to-face visits).

> *'But then I think the main difficulty then is that a lot of the staff left and then we've been sort of understaffed for quite a long time. So then that just makes work harder because you, you know, if you're a health visitor, you're always covering like extra work. So that's quite difficult.'* (P5)

‘*time is a massive issue at the moment because we are so short staffed. And it's a way of communicating with families and having those, giving that information, collecting information from our clients’* (P9)

Theme 3 The organisations culture and capacity for implementing telehealth

This theme encompasses participants experiences of the organisations capacity to implement telehealth and how it accommodated and adapted to employ a new way of working (predominantly telephone and virtual meetings rather than face-to-face working). The theme also captures the broader culture of the organisation, including learning and development. There are three subthemes, ‘*Capacity to implement telehealth’*, *‘Accommodating a new way of working’* and *‘Culture within the organisation’*.

3.1 Capacity to implement telehealth

Participants described that the organisation had already established itself in a way that lent itself to the implementation of telehealth during COVID-19. They said they were already agile working, working from homes and hubs rather than office-based working, and had their own mobile phones and laptops. This meant for some when they were restricted to working from home this was already a familiar style of working for them. They were then provided with access to the video software which they could use on their existing laptops or could make telephone calls from their work mobiles if they chose to do so.

‘*Before lock down we had the laptops and phones anyway, and then that …were what we had, you know, to start with starting to work from home.’* (P11)

Participants were positive about the organisation's capacity to innovate. They described how given the situation of the pandemic and the timescales in which changes and restrictions came into place, the organisation was able to implement telehealth quickly.

'*Given the situation that we were all just the country was just thrown into it, I think they were. I think they were as quick as what they could have been in my eyes*.' (P3)

There was also support to for wider members of the service delivery team, such as administrative staff, to work from home.

There were different opinions between participants about the extent to which training and support was available, with some stating a lot of help was available if needed, and others saying they believe more could have been offered. Participants also compared the speed of which the organisation was able to implement change, contrasting it with other services they have previously worked for.

'when we went into obviously the lock down the COVID obviously you know, nobody was prepared for that. But I think they adapted really well and they provided obviously all our admin workers …….with the equipment to work from home……. They did the best they could with, obviously the worst situation.' (P2)

Participants reported that this capacity to innovate extended beyond telehealth, with the organisation undertaking work to further expand digital offers such the website, apps, and social media.

3.2 Accommodating a new way of working

Participants discuss how the changes in working were implemented quickly and dramatically meaning that there was a period of adjustment and learning to accommodate a new way of working and to orientate their roles to suit this. They described they had used the

telephone previously, but their roles had predominately been meeting families face-to-face in homes or clinic settings which is what their skills were most suited to. Familiarity with telephone consultations meant some participants felt more comfortable with this way of working compared to using the video software. Participants described their digital and technology skills, with some feeling more comfortable adapting to the new way of working than others who struggled with the transition.

> '*It was challenging I would, and I wouldn't say I was the best with technology, but I'm, you know, I'm not the worst and I think once you've, you've mastered one computer system, the other one that it just takes time to negotiate your way around a system, but I've got there. It was just that everything was new at the same time, so that that's what was stressful about it.*' (P9)

Participants also noted that the change in service delivery was also happening within the context of the COVID-19 pandemic.

> '*But people you know, I feel like it was hard, really. And I'm, I'm so proud of our workforce because at the start of the pandemic, your brain was fried, wasn't it? It was so full of learning, new things and new ways of doing things*.' (P7)

For some participants, the change in their roles were dictated by government guidance on shielding (they were considered high risk and therefore not able to undertake home visits). For some of the health visitors, their role and that of their colleagues roles had to be adapted to this, with some staff having to do more new birth home visits, and those that were shielding doing more telehealth visits.

> '*I did all my visits with telehealth or as virtual because I was considered an at-risk group. So the face-to-face contacts that my families needed were done by my*

colleagues and I would do something that we categorized our visits as to whether we can do them face-to-face.' (P4)

Some participants explained that they had wanted to have some element of virtual working prior to the pandemic but had not been able to, so for them the implementation of telehealth was welcomed.

3.3 Culture within the organisation

Participants described a positive leaning culture within the organisation, including providing face-to-face and online training for staff, and supporting staff in their own development such as pursuing additional qualifications. Participants describe being more involved than in previous years with the key performance indicators and targets and were now part of the discussion and feedback about these. The challenge with this was the increase in administrative tasks and pressures to achieve targets of completing the required number of visits.

'*They offer a lot of supervision. They offer a lot of training, but there's a lot more meetings and I feel there's a lot more admin side of things'* (P14)

'I think you're encouraged to learn..... I think if you if you're looking to learn and improve, then they're pretty good.' (P5)

Theme 4 Decisions for using telehealth

This theme captures how decisions were made for deciding when and where telehealth was suitable in the COVID-19 pandemic, and how consideration has been given for where telehealth has the potential for continued use in health visiting. This theme has two

subthemes, *'Thresholds for telehealth suitability'* and *'Specific suitability and appropriateness of telehealth'*.

4.1 Thresholds of telehealth suitability

Telehealth was not implemented across all parts of the health visiting service as some aspects of family needs and parts of some assessment processes were not seen as suitable for a telephone or video call. The new birth visit which occurs within 10-14 days of a child being born was seen as not suitable for telehealth, as a physical examination of the baby is required, so the visit continued face-to-face through the COVID-19 pandemic.

'*Yeah, it was done. Obviously still face to face because you it was obviously a little babies are vulnerable. You still needed to be going out and giving them all that information looking at where they were sleeping……. we do the obviously new birth head to toe check as well, we weigh them*.' (P2)

Participants described perceived honesty of the family would influence their decision to use telehealth. Concerns that families who may not be truthful about their situation prompted face-to-face home contact for all visits, not just the new birth visit.

Elements of the service where telehealth instead of face-to-face contact was viewed as a suitable way to contact families and complete visits within the context of trying to prevent the spread of COVID-19 and keep families safe. This included universal[5] families, families

[5] Universal refers to one of the four levels of service that health visiting offers as part of the Healthy Child programme. These families do not require additional specialist input from within the health visiting service or from additional partner organisations.

where they were no additional needs or safeguarding concerns and for the antenatal contact, the six-to-eight-week postnatal contact, and the development checks at 9-12 months and 2-2 and a half years.

> '*Only if it was universal, so that means if it's there's no issues, no concerns, just straightforward. We'd do that by telephone. If there was highlighted concerns, then we'd go and do a face to face*.' (P2)

These visits were seen as suitable for telehealth, and so this influenced decision making. The antenatal visit was seen as suitable as the only aspect the health visitors needed to view was where the baby would sleep, which could be done via the video software. The other aspects of the service could take place via the telephone (such as information sharing).

> *'Yes, so antenatals were delivered face to face, since COVID they have gone virtual. And the reason for that was from safety point of view, because of COVID. So we didn't want mums to miss out on the contact, but it was a contact that we felt as long as we saw where baby were gonna sleep, that we could still capture everything*.' (P8)

The six-to-eight-week postnatal visit was described to focus on mum's maternal mental health and babies' feeding, without necessarily weighing or measuring baby. It was therefore seen as suitable to take place via telehealth. Telehealth was also an option for maintaining contact with parents who declined face-to-face visits because of concerns about COVID-19, even for the visits that should have taken place face-to-face.

> '*so yeah, but also part of our new birth visits, that's why one of the visits that we're saying that all, all families were offered this face to face although some did decline it because of the obviously the anxiety relating to the COVID-19 pandemic aspect , particularly prior to the vaccination being available and some parents declined that visit as face to face and had it virtually instead'* (P4)

4.2 Specific suitability and appropriateness of telehealth

The sustained use of telehealth was viewed as not universally appropriate across the service, with certain elements of the service, and certain families being more suitable for use than others. Infant feeding support was seen as an arm of the service where telehealth could continue to be used after the pandemic, and has been expanded on, with the addition of an app to support feeding being implemented. Virtual groups for infant feeding were also established during COVID-19 and have also continued to be offered.

The use of virtual software for private consultations and as part of virtual clinics (where one family is seen at a time virtually) were seen as beneficial due to reducing travel for infant feeding practitioners, who in the case of the site for this study, are a small team and cover a large area. They also found that a lot of their work could be done virtually and supplemented with a face-to-face visit(s) if needed. Participants also felt infant feeding visits were appropriate virtually as they were an addition to the standard face-to-face visits performed by the other members of the team who carried out the mandated contacts. As although they would explore interactions and safety with families, this will have also been done in the home with another member of the team as part of the universally offered visits.

> *'..... the virtual clinic will definitely stay. That's been really beneficial. They're even thinking about putting more slots in it, you know, making it a longer clinic. So that has been really, really beneficial. And something that never ever happened before pre COVID so I think the found that really, really useful. And so there's definitely still scope for it.'* (P12)

> '*And we still use teams for our virtual groups that we set up in the pandemic. So we run an antenatal group in the infant feeding team and we run the moving on to solids*

food group that we wrote in the pandemic still continues and still quite well attended and we run an understanding colic and reflux group as well, which we actually sort of built from like looking at need….' P5

In addition to infant feeding, participants felt that other specific circumstances could benefit from telehealth visits, such as, if there was sickness in the family and a face-to-face visit was not appropriate, where a visit was an additional check-in, and for antenatal contacts. Reasons for continuing the antenatal visit virtually included that families should still be supported by the midwife at that time, the flexibility of having a virtual visit if parents are still working, and the fact that there was not yet a baby to assess. Telehealth was also seen as something that could help with the ongoing staff shortages, by facilitating more visits (through reduced travel time), or as interim contact until staff off sick have returned.

'*when there's times when you know we're shortest, or somebody goes off sick and you've got, you know, you can at least touch base with people, can't you? And say, Ohh. I'm sorry I can't come out, but I'm actually can speak to you now and I'll. I will follow up another day*.' (P10)

In contrast, the six-to-eight-week postnatal visit and two child developmental checks (at 1 year and then 2-2.5 years) which were being conducted by the telephone or video were seen as not suitable for continued use of telehealth post-pandemic and had now returned to face-to-face visits.

Theme 5 Practicalities of telehealth

This theme encompasses the practical aspects of adapting to a new way of working for participants, with their experiences of using new software to work with families. It also includes their beliefs about how and what technology could be continued to be used to facilitate continued use of telehealth and technology more widely. This theme has three subthemes, '*Woking with new technology', 'Challenges faced when using telehealth'* and *'Supporting future telehealth'*.

5.1 Working with new technology

Participants described how due to the sudden change in working, the first technology the used to maintain contact with family was the telephone. They then describe initially using Webex to contact families, but this was soon replaced with a different video software, along with Microsoft Teams for internal meetings and virtual groups.

There were differences among participants in how easy they found the use of the video software, as some staff faced more challenges with using the video software, and other participants reported assisting their colleagues with using the software. Participants described that they were comfortable with digital systems used in the service, and it was a case of learning a new system. Training on how to use the new software was available, but participants suggested that some people needed more help. Participants also described being able to easily use Microsoft Teams, with the learning curve being learning new etiquettes of virtual meetings.

Participants described the benefit of the scope of the software, having gone beyond its core function to further communicate with families, as it also allowed for sending text

messages and emailing information. Participants reported that families seemed to be able to access the video from their side, but there was a concern for families who may not have English as their first language or who may not be digitally-literate being able to access as easily.

> *'It worked really well I think for the White British, you know, people who enjoyed virtual means and things like that. You know if you, as seen as you get anybody who's, you know maybe, not used to a lot of computer type things and not.'* (P12)

> '*It was easy for me to do, once that once we've had the training show once we were shown how to do it, I found it relatively easy*.' (P3)

5.2 Challenges faced when using telehealth.

Participants described some technical and practical challenges with the video software. Technical challenges related to both their experiences and this perceptions of the experiences of families accessing it. The software was reliant on the use of wi-fi or data on both sides, which meant that if there was poor signal then people had to move to their workspace in their home to accommodate a better signal, or often the signal would be disrupted, and they got disconnected from the video call.

> *'a lot of the times we found that when parents were moving to a different room to show us on video, the video call would cut-off as well because they were moving rooms so that were difficult*.' (P11)

The technical challenges with the video software meant that sometime this had to be abandoned in favour of the telephone which they found to be more dependable and reliable.

‘*But I think over time, everyone got more used to using video platforms. And we always had the backup of making a phone call*.’ (P6)

‘And I have to say, if it didn't work easily, I just gave up and did it over the phone and I know a lot of people did the same.’ (P12)

Participants recalled that there were practical challenges of using telehealth to contact families. For instance, some had difficulty maintaining the video call on their phone whilst trying to hold their baby. One participant recalled the challenges faced by a parent in an infant feeding consultation who had to try and hold their phone, hold the baby, and feed the baby at the same time. There was also a concern amongst participants about the cost to families having to use their own data to access the video call, either through lack of access to this or those who had limited data.

‘there's been issues with signal or data, you know not being able to afford data or that type of thing. That's where the issues of tended to come from and. I don't think I've come across one person who said that they don't know how.’ (P9)

5.3 Supporting future telehealth

In addition to the broader scope for telehealth, participants described some specific technology and actions that would support sustained use of telehealth and digital more broadly within the service after the pandemic. This included the use of iPads instead of laptops for note-taking and using WhatsApp for families to share pictures as part of virtual consultations. There was also a suggestion that as telehealth is now part of the role within the service, this is something that should be standardised and part of the skill set required for new members of staff.

‘*I don't feel providing virtual support now should be if you like doing it and you know how to do it, do it. I think this is part of…. your role now. And I think you know, I'm always saying to my colleagues who are recruiting, you know, are you asking them questions around, you know, virtual support delivering virtual, you know, care and everything*?‘ (P7)

Theme 6 Where telehealth brought value

This theme describes the value and benefit the implementation of telehealth brought to the service during COVID-19, including the benefits that will extend beyond the pandemic. It includes the value for both service provision for families, and service operations including working with other services. This theme has three subthemes, *‘Facilitating contact with families during and beyond the COVID-19 pandemic’, ‘Benefits of telehealth’* and *‘Adapting to increase options and opportunities’.*

6.1 Facilitating contact with families during and beyond the COVID-19 pandemic

A value of telehealth, and in particular video contacts, was that throughout the COVID-19 pandemic this facilitated contact with families when restrictions prevent home visits. As guidelines dictated that health visitors could only routinely attend family homes for new birth visits (where these were classed as universal with no additional needs), the offer of telephone or video contact for the other contacts allowed a way to stay connected with families. The value of video, as opposed to audio only, was that they were able to have

insight into the home environment without physically entering the house. Participants also described value for the families, such as more engagement with the wider family as more people were at home, engagement with those who did not want a health visitor physically in their home, and parents being able to feel more comfortable as they did not have to prepare the house for a face-to-face visit.

> '*So I just feel sorry for them, cause they must be exhausted that morning, you know, waiting for me to come. Just hoovering. So anyway, yeah. So. You know, bless them…….No hoovering required. It's always a good thing and they could stay in the pyjamas maybe, and feel a bit more comfortable'* (P12)

The introduction of telehealth in the COVID-19 pandemic has had continued value beyond the peak of the pandemic. By continuing the offer of video or telephone antenatal appointments, participants described that they could offer antenatal appointments to parents who may still be working.

> '*thinking about the antenatal contact was a lot of them, them visits are difficult to pin down because the mums are always working and so mum could access the visit from her work, she'd just go into another room or she might slip into the car or you know and we could still have them that contact and give the information out that we needed to. Whereas, you know, if we if we didn't have that facility then, that that visit was a … missed in the past*.' (P9)

6.2 Benefits of telehealth

Video software was seen as beneficial for working with families. Through video contact, participants were able to engage with children, view infant feeding as part of assessments, have calls with multiple parties present (such as themselves, families, and

interpreters) and collect routine data from families. The telephone was seen as limited compared to video software in assessing baby safe sleep arrangements in particular. Participants described that if appointments were taking place by telephone, they would also want some part of the appointment to take place over video to see the area where the child would be sleeping. This meant that a visit may take place partly over a telephone call, and through the video call software. The video software could also be accessed by phone or laptop so was not reliant on parents accessing through a computer.

> '*where you talk to each other and virtually at the other end of a screen they can access that via their mobile phone or a laptop. So it kind of opens up the, the opportunities for people to access.*' (P8)

> '*like today, I saw someone and actually she's been seen by the breastfeeding peer supporters as well. I was able to watch the feed. I was able to look for a tongue tie so it worked out quite well.*' (P5)

Using Microsoft Teams was seen as advantageous for working as a team or wider colleagues for being able to attend meetings, having facilities to support meetings and being able to screen share to demonstrate actions, such as how to use a system.

6.3 Adapting to increase options and opportunities

For some aspects of service delivery there was scope for meetings being held via telehealth, face-to-face or a combination. This included internal events, e.g. staff team meetings (online and face-to-face), and wider professional meetings and as well as working with families. Participants were able to have greater presence at multi-agency or partner meetings and networking. Participants described how online versions of such as Team

Around the Family (TAF)[6], allowed them to overcome the challenges of there being a suitable physical space to host the meeting and to co-ordinate the availability of all the partner organisations and family to attend. This was similar for other meetings where participants were attending from the health visiting service alongside other organisations. There were also benefits for training and networking, with participants finding it easier and quicker to connect with others and also be able to work with a broader range of individuals that was not previously possible when events were held face-to-face.

> **'***there is a huge geographical distance from one end to the other. So you could be doing one face-to-face meeting that could take hours out of your day or take, you know, half a day to do just because of the travel time. So having multi agency meetings done virtually gave us a lot more capacity to attend. Because obviously we may have time for the one-hour meeting but not have time for the hours travel either side'* (P6)

> '*And so, yeah, so the networking is much improved. You know, we can quickly pull a meeting together for everybody……anybody in the organization that you know you need to meet with. You can pull a meeting together really simply now.*' (P1)

Continuing to use telehealth after the end of the pandemic was also described as providing families with choice on how they engage with services, creating flexibility of provision and a more specialised service offer. This included the continuation of some of the virtual groups that were established during the COVID-19 pandemic.

> '*I feel like it would be really nice on our initial meeting with the family to take some time to explore. How do you enjoy getting information. As a service we have a*

[6] Meeting involving the family, staff from the health visiting team and practitioners from other organisations to support the needs of the family.

smorgasbord of ways to, you know, provide information to you. What, what, what do you enjoy, what works well for you?' (P7)

Theme 7 Working with families at a distance

This theme brings together participant experiences of how they worked with families using telehealth, where there were differences in experiences, how it benefited current organisational challenges and participant reservations about telehealth for working with families. The theme has four subthemes, *'Families engagement with telehealth', 'Implementation of virtual groups', 'Supporting organisational challenges'* and *'Reservations about telehealth'*.

7.1 Families' engagement with telehealth

Participants described how some parents were happy to engage with telehealth, and some were less likely to decline video as opposed to face-to-face for certain aspects such as showing where the child sleeps. Participants felt that parent's acceptance of the change in service delivery was facilitated by the broader context of COVID-19 and their understanding of the restrictions in place.

'*I thought there'd be more negative comments that we weren't coming out, but there didn't seem to be. But I think that was just because the world had gone a little bit upside down, hadn't it at the time and people were just a bit more accepting of doing things differently. So I didn't personally get any negative comments at all*.' (P9)

However, some participants described a more challenging experience when working with families virtually, as some parents were reluctant to be seen on a video call, declining

the video offer and choosing to speak over the telephone instead. Participants described trying to encourage the use of video but also trying to balance this with the wishes of the parents. They felt that sometimes this choice was due to parents feeling that they did not look their best, or their low confidence with technology, or maybe fears about the cost of data usage.

> ‘*So we tend to find the parents, the ones that declined the video they either, ohh no, I'm not dressed. I'll look a state, a lot was personal appearance. They didn't wanna appear on video’* (P15)

7.2 Implementation of virtual groups

Participants described that virtual groups were developed by the organisation to offer additional support to families (beyond what they were specifically commissioned to do). Some participants were positive about the virtual groups, describing the value of flexibility and reduced effort for parents to attend (compared to face-to-face appointments) and another option of contact during the pandemic. These have been continued after the pandemic due to the uptake.

> ‘*A lot of your families who didn't really like going out to groups love the virtual groups because they don't have to travel out, they can just get onto the link and get on to the virtual group. They can show their faces if they want to do. They don't have to show their faces so they love that*.’ (P8)

In contrast to those who were positive about the virtual groups, other participants had some reservations about the virtual groups. They explained how there were some people who would book on and not attend (*there's about 15 booked on, I’ll be surprised if I get 5*, P13), or who would attend but not engage by not talking or not putting their cameras on. Participants

recounted how when the groups were first established, they were well attended but as the pandemic restrictions changed and more face-to-face options became available attendance at the virtual groups declined. Participants were also concerned that the virtual element detracted from the previous social aspect of the groups where parents could meet.

> *'Well, for example, we run birth bump and beyond* [group] *virtually and I don't think the uptake is that good and that's in in place of pre COVID we were doing face-to-face sessions……. So that's completely gone. And that was an opportunity for families to meet, each other, to see people face-to-face, you know? So that's a worry for me unfortunately'* (P5)

7.3 Supporting organisational challenges

Another value for participants was that telehealth allowed staff to offer a contact to families in a quicker timeframe than they could offer a face-to-face visit due to the limited flexible capacity of their diaries or the small team numbers. For instance, the infant feeding team cover the whole geography and had limited capacity to visit on the day but could offer support via the telephone or video and arrange a future face-to-face visit.

> *'Well, yes, because we could do a lot more when in COVID we managed to fit in lots more visits because we didn't have the traveling……So the travelling for us well certainly in my area is massive, so I could literally come off one call and document it and then go on to another, whereas I might have to drive 40 minutes to a visit*.' (P14)

7.4 Reservations about telehealth

As intended adopters of the technology, concerns included the use of technology itself and the challenges of using it to provide the service. Some participants described an initial reluctance to use the video software, instead preferring to use the phone until they were encouraged to use the video software.

> '*And then it was a case of know you have to use it. So we did. So that's what the kick start was really. I think they realised that the service was there, but nobody was really using it, because we're all a bit set in our ways. And then when we did start using it. Yeah, I mean, it was fine. It was fine*.' (P12)

> '*And then you did get a handful of staff who didn't like the virtual way of working, still don't like the virtual way of working.*' (P8)

There was a difference in views between the extent to which having visits face-to-face or not facilitated a more focused conversation. Some participants described how when speaking to families via telephone or video distractions were limited which allowed for greater focus in the conversation and an opportunity to share more information. However, for others having conversations was more challenging for several reasons including children being disengaged, babies trying to grab phones, children thinking that it was a family member on the video call, and when interpreters were used, not being able to track tangents or pick up on non-verbal cues.

> '*……the children were viewing it as a bit of a fun thing, and it was 'It's grandma's grandma. No, it's not. I don't wanna speak to you.' So they just the immediately they weren't interested with your kind of thing, or they just want to kind of….they just wanted to press buttons like children want to do'* (P3)

Participants also had concerns about how using telehealth would negatively impact the service they provided. This included concerns about telehealth not being an adequate way to ensure that families with additional needs were able to understand what services were telling them. There were concerns that things that could be picked up in a home environment could be missed online, which lead to feelings of guilt and stress and for an early abandonment and return to face-to-face visiting for some, which was supported on an individual basis.

> '*So I think as well it's down to my own guilt. I think on my own anxieties, as well as my own professional conduct. ……we're there to support that we're there to care. And it's really hard when you can't do that hands on, I found that quite difficult and I think a lot of my colleagues did and I think we're more stressed, even though we weren't going out on visits*.' (P13)

Additional concerns included the potential of an increasing diverse population, implying that some people from more marginalised communities might be less experienced with technology or not speak English. There were also concerns of increasing health needs for children, with participants describing increasing numbers of concerns around of cost of living leading to reduced access to food and potential bed sharing. This reinforced a necessity to be in homes to search for, and identify, these potential needs.

> *'And how babies sleep. Yeah. And, you know, doesn't the there is the knock-on effect now of obviously, people haven't got the income and we know that there's issues. People will not be able to have heating. So you'll find that there's a lot of bed sharing going to be happening. That is something that we won't be able to prevent unless we* [are] *getting in to see these houses……..and that it'll have a massive impact you know on the likelihood of sudden infant death*.' (P10)

Theme 8 The loss of home visiting in health visiting

This theme encompasses participants attitudes about the importance of home visiting and how meeting families via the telephone or video constrained what they were able to achieve through these visits. It also captures participants core belief of home visiting as their role and how they use their sense when undertaking home visits to complete a holistic assessment. This theme has three subthemes, *'The constraints of telehealth (compared to home visiting)', 'Core belief of home visiting'* and *'Using the senses in observation and assessment'*.

8.1 The constraints of telehealth (compared to home visiting)

Participants felt limited in what they could observe and assess by conducting visits this way as opposed to their traditional home visiting. Participants discussed several limitations related to only having a restricted view of the home environment rather than being present in it, which impacted on their ability to perform a holistic assessment. They felt that they could not view interactions between parents and babies as well, meaning observing attachment between parents and their babies was more difficult. Safety was a concern for participants, as when contacts took place by telephone or video they were not able to assess who else was in the house or assess if the home environment was safe.

> *'No, no, because it's like, you know, when you're doing the assessment a lot of it is observing the child and the family. Can't really observe. You know, because you're looking that there's a good bond between the parents and child. It's not easy to gauge that over, even on video.'* (P11)

This meant they were reliant on parents answers when questioning about safety. Participants also had to make judgements about when or if it felt safe to enquire with parents about their safety.

'*Yes, so you can only see part of the screen. So your first question is who's on the call with you. So it's one of the very very first questions you ask. And sometimes say nobody, just me. And then sometimes you'll see somebody move in the background or you'll see somebody walk past. If you're in the house, you're there and you, you can see it all. If you're on a virtual contact, what you don't want to do is put that lady in danger. So if she said and then you've got to take their word. If she says she's by herself and there's nobody else there I would ask that question around domestic violence. I wouldn't ask if the partner's there, because if there is, domestic violence you're possibly putting them at risk..*' (P8)

Participants also had to rely on what parents were happy to discuss or show, with them being in control of what surroundings the practitioner would be able to view. This meant there were challenges if parents did not want to be seen on video, or if they only showed themselves and not their child. Participant's views of the family home were further restricted if parents added a blur effect to their screen. There was also a concern that parents were not being truthful about their own wellbeing, or who was present in the house with them which made it difficult for practitioners to know whether they could ask sensitive questions. Participants were concerned that parents could conceal things such as struggles with mental health over the phone or video more so than they could in a face-to-face appointment.

> *'So obviously we're getting a lot of mums coming through, obviously with post-natal depression, which we couldn't pick up because obviously it were via telephone call and we're all being told what they wanted us to hear'* (P2)

There was a similar concern for the child development checks, with participants feeling that sometimes there may be differences between a parent's perception of what their child can do and what a practitioner may see. By not being to see the child and relying on what parents were saying, this is what their judgements had to be made from whereas in the home they would be able to see the child themselves.

> *'So you ask the question and they answered, yes my child does that, mm they sometimes do it or no they are not doing that at all. So it's easy to go yeah they're doing that, yeah they're doing that, when actually, when we're asking the questions on a face-to-face you're kind of look for mum, families answers but then you're watching what the child is doing as well.'* (P3)

Participants described not being able to use their own body language and other non-verbal cues to put parents at ease and build rapport and relationships with families. This was concerning as they felt this could make them sound judgemental rather than curious when asking certain questions.

> '*If you don't…… build, rapport and rapport doesn't happen. You know you've got to look at body language. You've got to look at… eye contact. You've got to look at everything that you see within demeanours of people, you know, you go in a home, you sit next to people or you sit certain position, you know, we have these skills to know how to build rapport and in order to do that, you can't do that*.' (P10)

> *'you would be able to see you know, how they're making up the bottle and things like that and be able to ask them questions very subtly rather than, sometimes over video you, it can feel like an accusation. Whereas in in the home you could just say, Oh yeah, you know, how can I just see how you making that up or and it would seem a lot more supportive than on the video*.' (P9)

8.2 Core belief in home visiting

A predominant and recurring discussion throughout the interviews, was the shared core belief amongst participants in the value of health visiting services taking place in family' homes. There was a tension between this belief and having to provide the service at a distance due to the COVID-19 guidance and restrictions.

> *'it takes away the ethos of home visiting, doesn't it? And the health visitor's job or health visiting service, home visits. So it takes away that basic sort of job that we do*.' (P14)

Home visits were seen as fundamental for searching for health needs, observing interactions and potential safeguarding, sharing public health information, and communicating with families. Not having access to observe body language and other non-verbal cues through telehealth was a challenge for participants.

> '*Part of our big role is search for health needs. And when you're not seeing, you can't search. So you know. We don't know what's out there and that is what scares us. We don't know. We don't know these families. So it's very scary because we don't know what's happening with children and unless we go out there knocking on doors, seeing them people, then you're not gonna get that knowledge and information. And so it is paramount*' (P10)

Being in the home also allows for participants to look at the wider environment and family interactions as part of the developmental checks. Participants explained telehealth reduces visits to just asking the questions, but in the home there is the opportunity for a broader assessment and the ability to use their own judgement.

> *'So I'd go through both questionnaires first……. Like I said, because I don't think some families were honest when they were asking, answering the questions on the on*

the questionnaires and then I just feel as well you couldn't get a. You just can't see people's faces, can you? You can't read, you know, like when you're asking about emotional health and things like that. You just can't…. Some people will be honest and say that you know that they were feeling low in mood and things like that, but you just can't get a picture from somebody's voice' P11

Privacy was one aspect of this for both families and staff themselves. Participants were concerned about parent's being able to have a private space to be able to discuss anything with a practitioner which may be sensitive and not wanting to be shared with other members of the household.

'*Particularly, I think with young children or when you know the kids were at home, you know, if Mum had had a traumatic delivery or her mental health wasn't good, you know, she was suffering from a lot of pain from the birth. You know, things that she wouldn't. You wouldn't talk necessarily in front of your children about that, I think that was difficult, that was challenging.*' (P7)

The ability to be present in families' homes was seen as a privilege which is not common to most other professions that work with families.

'*But I think again, in our role, we're blessed, aren't we, that we can go into people's houses, a lot of roles don't go into people's houses……. I think we're really, really honoured that we can go into the homes and therefore we have that opportunity to do that full assessment*.' (P12)

8.3 Using the senses in observation and assessment

Throughout the interviews participants explained how they perform holistic assessments to identify needs of the family, including assessing the home environment. Participants provided examples of undertaking their assessments, both using the telephone or virtual means, and describing how this would otherwise be done in the home environment. There was a clear distinction in what was available to them to be able to make judgements when in the home compared to remotely. For home visits, participants describe how they were able to begin their assessment of family needs, even prior to entering the home. This involved viewing the wider surroundings of the environment which are not available via telehealth.

> '*So some things that you observe on your way to the address on the way out of the address, you're not going to pick up on video call. You know that as you enter. There's an unknown female leave. There's an unknown male leave. There's two cars on the drive. Mum doesn't drive. So I think it's part of your assessment of safeguarding concerns. That, I think is what is missed when you can only see what somebody wants you to see on a video platform*.' (P6)

> '*face-to-face, you start that holistic assessment as you hit that doorstep*' (P13)

Participants reference the use of more than just sight and observation when completing visits in family homes, with the senses being used to create an overall feeling to gauge the environment. Some participants alluded to the difference between seeing in a video, and then seeing when in the home as two different actions. For instance, not being able to observe interactions in the same way that is possible when in the home.

However, the judgements that the participants reported having to make as part of their assessment went beyond what they could see. They described having a reliance on their other

senses, including having to listen, to smell to use tactile senses all in combination to support their work.

> ‘*Because we always say you get that feeling as soon as you walk into a house. You get a bit of a feeling and you, you know, something's not right. Something's a bit off. You get time spent in that house seeing what the scenarios like. So with a video you can't. You can't see the environment they're in. Child might be fine, but the environment could have been, you know, you didn't know really what it was like. You weren't seeing it*.’ (P15)

> ‘*there are things that you can pick up in that home environment that you just can’t via telephone or video. Even smells, sounds and where you look in the room sometimes, you know, they are in complete control of the frame that you can see. And so you just don't get that rich assessment of the situation that you do in home visits’* (P9)

> ‘*I do feel when you are in the home you get more of a feel for how mum and husband, wife and husband are interacting with each other, interacting with other family members. You can also get a feel for the environment within the house. So is there damp in the house is the, I think got enough furniture, they got enough equipment. So you can get that feel for it. And that all adds to your assessment at the time*.’ (P8)

> *‘.....if you were sat here now with one of the safeguarding practitioners, they’d be so nervous about not being in the home, not smelling the home, not seeing the child. Not understanding that hidden male in the house who the mum's not saying. Well, actually, the guy from two doors down has come round*’ (P7)

> ‘*….we would mainly be there and so you'd see, you'd see whether the children were dressed appropriately for the weather. You know what the state of the house was like, what the interaction was like between the parents and children. Did mum or dad feel*

really stressed and. You know, and did they seem intoxicated. So one of these families that I'm thinking of there was a issue with cannabis and you know, you'd be able to smell it in the house. And so all of these things were lost when you were doing over the phone call group' (P5)

In addition to use of specific senses there was also an additional sense that was articulated by one participant as 'gut feeling'.

'*It can affect gut feeling a little bit, that sometimes you just pick up on the environment as a whole when you're in it'* (P6)

The use of senses was described alongside trying to identify possible concerns around wellbeing or to ensure that it is possible to enquire about potential harm such as domestic violence or domestic abuse. Concern around the limitations of telehealth, and restriction on what senses they could use for safeguarding assessment was a recurrent discussion point.

'*And then there's also things you know to pick up on the, you know, the difference between the house on the first and second visit, if there's the if you know, if the house is a little bit more unkempt, that can be a sign that mum may be struggling. It's not always the case, but you know, you can tell the differences between your home visits and if there's anything that's changed in that time*.' (P9)

'*Sometimes when you're in a visit and there's issues that you're worried about. You may may hear a noise upstairs, or you could say who else is in the property and what you know what are they doing upstairs and things and that you wouldn't pick up on over video. You just wouldn't know there was anybody else in the home.*' (P9)

Participants explained that through their role they developed skills in being able to notice certain nuances when visiting family homes. There skills have been developed through

home visiting which meant that telehealth would always be seen as a lesser preference for working with families.

> '*what I think health visitors are skilled at, they're very good at intuitively reading the room, so to speak, and understanding, you know, and how to have the conversations or anything'* (P7)

> '*But a lot of it is, getting a sense of, the parents behaviour, the children's behaviour, all those interactions that they have so. That I think from those visits side of things, the virtual contact will always be seen as the poor relation*.' (P12)

Theme 9 Relationships and camaraderie

The final theme relates to two core values of participants, both relating to the ability to form relationships with the families they work with, and their colleagues to support each other personally and professionally. This theme captures how both these opportunities have been impacted by factors beyond the COVID-19 pandemic. This theme has two subthemes, *'Relationships (and the influence of a changing system)'* and *'The office as an anchor'*.

9.1 Relationships (And the influence of a changing system)

Beyond whether they were able to establish or maintain relationships with families through technology, participants described the importance of relationships to their practice and the wider ethos of health visiting. This was seen as a central component of health visiting, which their other work, such as safeguarding was dependent upon.

> '*Yeah, I think it's the most important part, to be honest, because if you don't have that, you know, initial relationship trust with somebody who's coming into your home. It's talking about your child and if they are, they don't trust you. They don't have that*

relationship. They're not going to open up to you and….. if they do have any concerns, they're not going to open up to you. Or if there, is domestic abuse going on in the relationship and you're asking them about it, they're not gonna want to, you know, they think who are you? You, you're nobody really. Um so. Yeah, I think it's… the most important part, really.' (P15)

Participants explained that relationships created a more supportive and informal offer than other services. This was achieved by being present in the home and developing relationships with the families so that they were comfortable in the presence of practitioners. Some participants described how there can be misunderstandings of their role, and this impacts what people think they do, and also the extent to which families may be concerned about being judged by them. This was discussed in relation to how this role is more health orientated, but it may be perceived more akin to social services.

'*But l, yeah. Whenever I went round, and it might not be the first visit, it might be every visit after that. But the first visit like that expectation, cleaning for the health visitor. You know, all that. And then actually when they find out that, and I think it just depends on health visitor, but when they find out for me particularly, that I'm really not bothered about how clean your house is and whether your dogs are going to jump on me or not, that's fine. And then the visits following that and after that just they are a lot more relaxed you know and they do feel happy to sort of get up and about and do jobs when I'm there and chat as we go and that really is what it should be, that is what health visiting is. You know you're supposed to be there to complement and support the family, not make it harder. So it's not meant to be a formal appointment like you're sat, you know when you're at the doctors'* (P12)

Participants spoke fondly about, and enjoyed, their relationships with families. In addition to it serving the purpose of providing a service to the families that allowed them to feel able to disclose or confide in practitioners, this was also a valued part of the role by participants.

> '*You know, I'm often going and doing the pre one year and then I go back and do the two and then they'll have another baby and I go back again and I might go back for four different children and you build up a bit of a rapport with that family and they see you out in the street and they chat to you and it's nice*.' (P14)

Some participants described how over their career they have seen and been part of changes to the health visiting service which has impacted upon their relationships with their families. Participants described how changes in models of delivery, including being divided into specialities and mandatory visits being delivered by different members of staff, meant they no longer had the continuity of visits with families resulting in less knowledge about the families. Participants reflected nostalgically, and with a sense of sadness, about the relationships they used to be able to have. They also missed the opportunity to have unstructured drop-in clinics that allowed for them to develop relationships and know their families and be able to identify changes in parents because of this.

> *'…..our role was to be out there in the community and actually delivering a service. People knew you, and they would know who were on your street and I think we've gone from that to….. to who's your eldest to we don't know. And, you know, I think that's sad'* (P10)

> *'so we had the four clinics and we used to see Mum. So you knew your parents, because we used to see Mum's weekly. So you'd see them all the time coming in. So you see, if they were feeling low, you pick up on them cues. You'd asked them if they*

wanted a home visit. If they wanted that extra support, so it's things like that that are feel get, got missed' (P13)

9.2 The office as an anchor

Throughout the interviews participants explained that prior to COVID-19 a significant change that had been adopted (under the leadership of a previous organisation) had been to transfer from office-based working to what was termed 'agile' working. This included a combination of working out of office-based hubs and working from home. Participants reported that this had been challenging, with both personal and professional impacts. The professional impact was described as a lost opportunity to share knowledge and experiences of practice or significant events which allowed individuals to develop their own practice through peer debriefing and sharing important learning collaboratively in a physical space. Participants explained that although this could still be done virtually, many struggled to find the availability to do so or felt that the technology and lack of physical presence was a barrier to discussions. The offices were an anchor where they gathered to discuss these aspects of the profession, providing an informal and supportive atmosphere.

'*…so you weren't seeing each other. This was pre COVID and people really struggled with that, you know, and still do. And I think from a clinical supervision point of view, it's really difficult, particularly for new starters. You know, you don't see people regularly……. it's the change has been massive. Absolutely massive. And people have just massively struggled with it. '* (P5)

'*And the other thing with the virtuals as well, you've not got that reflection with your peers. So if you had a really bad virtual really bad visit, you obviously years ago were*

all the offices and stuff and you know quite a negative visit you go back and you say ohh my God, this is just happened. What do I do? Where do I go from here and you could sound it out, you can't do that with virtual. I find that difficult not being as part of that team to be able to send that banter back over and you can ring them but then it takes ages, don't it? When you're ringing somebody you can't get off, telling you what they did last weekend and stuff. So you can't get them off phone and it's that as well. I found quite odd.' (P13)

In addition to the professional losses through the office environment not being available, staff also described the personal impact of not being present around their colleagues.

When they were physically apart from their colleagues often their own wellbeing, or lack of, was not obvious and they did not feel that they received the same level of support as they would have done if they had been regularly meeting in a physical space.

'So when I went off, obviously nobody saw that I was still working and I had to. I got phone calls daily of how he were changing and I think it was that as well trying to work through that and not having that support and not having that face-to-face in thingy, no one could see how much of an impact it had. And I kind of think it sometimes gets forgotten, do you know what I mean?' (P13)

There was also an impact of the capacity to 'switch-off' from work. The opening times of offices were limited, which protected their working hours, the move to virtual working took away the physical barrier to working out of hours.

'*I feel like you because your computer is with you all the time. You can never. You can always not stop. You could always, carry on working in the evening, which happened a lot as a health visitor. There was far too much work and not enough time,*

so you would work in the evening. You'd work the weekends in, so you would, you know, nobody was locking the door behind you saying no, sorry you can't come in like they did in the office, which was nice.' (P12)

Summary of results

Through the data analysis process, nine overarching themes with sub themes were developed. The first theme (Health Visiting Descriptions and Actions) included findings relevant to both the local context of the service and population needs, and the broader finding of the distinction between what health visiting staff see as the service offer and what their roles are. This is discussed further in the Discussion Chapter, in relation to the implications of the difference between what the service is measured against (Key Performance Indicators) and where staff, and parents see the value in the service.

The next six themes related more closely to the implementation of telehealth and provided a practical insight into the decisions around the use of telehealth, attitudes towards the use of telehealth, where it was valuable and where it was restrictive or limited practice. Although linked to organisational practices, such as decisions for use and available hardware and software, these presented findings that could be taken broadly to show how telehealth can facilitate or create barriers in the health visiting service.

The final two themes (The loss of home in health visiting, Relationships and camaraderie) demonstrate more profound insights into the nature of health visiting from the point of view of those practising it. The discussion about the use of telehealth provided a

catalyst for this, through the lens of the importance of home visiting and relationship building. This included being able to use expert skills and tacit knowledge (‘intuition’) in making assessments, ‘*Because we always say you get that feeling as soon as you walk into a house. You get a bit of a feeling and you, you know, something's not right. Something's a bit off. You get time spent in that house seeing what the scenarios like. So with a video you can't.’ P15.*

Knowing families’ personal situation was intertwined with building the relationships needed, reinforced by home visits or face-to-face clinics to enable judgements to be made, ‘*So you’d see them all the time coming in. So you see, if they were feeling low, you pick up on them cues. You'd asked them if they wanted a home visit. If they wanted that extra support, so it's things like that that are feel get, got missed’ P1*3.

The substantial findings in these two themes related to the use of expertise and embodied senses in observation and assessment and relationships. This is discussed further in the next section.

Discussion

Below is a brief discussion of some of this study, a full discussion is presented later in the thesis, where the findings from the study are integrated with the findings from the other studies.

The results of the interviews show the complexity of the health visiting service in relation to the needs of the population, which have changed through COVID-19 and are anticipated to continue changing with the cost-of-living crisis. To address these needs staff members described the structure of the health visiting service and the contacts they are expected to make but also explained the intricacies of their role which go beyond what is captured by key performance indicators, such as being an emotional support for parents.

Telehealth was implemented rapidly during the COVID-19 pandemic due to governmental regulations and restrictions. Generally, the participants in this study felt their organisation was quick to adapt to this sudden change, facilitated by the pre-existing structure and equipment (individual mobiles and laptops) already available to staff members.

Respondents noted benefits of the introduction of telehealth including, continuation of some form of contact with families and supporting contacts to be undertaken with reduced staffing (due to national staff shortage, redeployment, and sickness absence). However, there was also some resistance to telehealth amongst participants. For some this was at a practical level, with uncertainties about using the actual technology, especially the video software. For others, the resistance came from a profound disconnect between their beliefs about what health visiting is, including being present in family homes, providing relationship-based support and assessing for need and safeguarding concerns, compared to what was available for them to offer via telehealth. The moral distress caused by the clash between the

recognised necessity of telehealth due to the COVID-19 pandemic, and the incapacity to use their senses and conduct home visits was felt strongly amongst some participants. There were concerns that telehealth and remote working had a widespread impact of safety of the families they worked with.

Despite the context dependent benefits of telehealth in the COVID-19 pandemic, the scope for telehealth in this health visiting service in the future, from the point of view of the study participants, appears limited. It is limited to, professional meetings, specific areas of practice including infant feeding support, and for times when home visits may not be possible but there are no concerns about the family. For participants, the ethos of health visiting fundamentally misaligns with telehealth.

As part of the analysis, the themes were first organised in relation to the NASSS Framework (Greenhalgh et al., 2017), but then though discussion and refinement were changed to be grouped based on salience of the themes rather than the implementation framework. There were two factors that were key to this decision. The first is that by using the framework, it felt that some of the findings were being repeated. This was due to the findings having relevance for multiple domains within the framework, subthemes were being arbitrarily separated when they would have been more suited to appear under the same theme. For instance, subtheme 4.1 Thresholds for telehealth suitability and subtheme 4.2 Specific suitability and appropriateness of telehealth, were not originally in the same theme but listed under ‘The condition’ and ‘Embedding and adaption over time’ respectively, despite having linked findings.

The second factor that influenced this decision was that initially four themes were developed that did not fit into the NASSS Framework in any of the seven domains. These themes did not fit as they were not just about telehealth, but about views about and

experiences of working in the health visiting service more widely. This study was originally intended to be more aligned with implementation science but these addition themes that were developed around important aspects of feelings and beliefs felt to go beyond the practicalities of implementation, or attitudes towards the implementation of the telehealth and were about the service more generally. This can be in part attributed to the benefit of using semi-structured interviews which allowed for these unexpected themes to be found.

Findings in relation to the NASSS Framework

Although in the end the findings were not organised against the NASSS Framework as originally intended for the reasons described (see page 179), there were links between the framework and findings. The domain 'The Condition' in the NASSS Framework discusses the clinical and sociocultural aspects of the condition under examination (Greenhalgh et al., 2017). In this study, there was not a discrete condition (as there may have been with medical services), but instead is related to the provision and receipt of health visiting services, including the aspects relating telehealth. The theme 'Health visiting – Descriptions and Actions' relates to this aspect of the framework, as the findings showed that in addition to what they must do as part of their role, it is also influenced by the needs of the family.

The domain 'The Technology' in the NASSS Framework, addresses the features of the technology, relates to the theme, 'Practicalities of telehealth'. The findings of this study showed that working with the new technology was something many felt they were able to navigate, but this was not universal across all their colleagues. They also described technical challenges they, and the families they were working with, faced when using the technology such as the need for reliable Wi-Fi.

Three of the domains within the NASSS Framework 'The Value Proposition', ' The Intended Adopters' and 'Embedding and Adaption Over Time' are separate in the

framework, but some of the findings from this study spanned the three domains. This included the subthemes which were positive about telehealth and those that showed where the challenges are with telehealth. The beliefs amongst participants about the ethos of health visiting, and how telehealth does not align with these came through in the findings strongly and are likely to impact the potential for the continued use of telehealth.

The domain 'The Wider Context' in the NASSS Framework relates in this study to the COVID-19 pandemic and regulations related to this which influenced many aspects of participants experience. The other domain in the NASSS is 'The Organisation'. The findings from this study captured participant's experiences of how they feel that the organisation implemented telehealth and were generally positive about this. However, due to the focus of the question and sampling focusing on the delivery of services, there was limited information captured about the adoption decisions for telehealth. When this was asked of participants they often did not know or only had a very brief insight.

Findings related to types of knowledge

The experiences of the health visiting staff detailed in these findings, particularly their reservations about telehealth, what they feel the constraints of telehealth are, their core belief in home visiting and how they use their senses in observation and assessment, relate to how health visitors use different types of knowledge when working with families.

Making judgements about health care needs is based in practitioner knowledge bases, therefore it is important to understand how knowing influences health visiting practice (Appleton & Cowley, 2008). Appleton and Cowley (2008) describe seven different types of knowledge that may influence the needs assessment undertaken as part of health visiting practice: Propositional knowledge, Non-propositional knowledge, Practical knowledge,

Intuitive/tacit knowledge, Personal knowledge, Experiential knowledge and Knowledge of professional practice. The findings of this study have particular resonance for practical, tacit and experiential knowledge.

Practical knowledge relates to practical expertise and knowledge and skill mastery (Appleton & Cowley, 2008), this is the type of knowledge a lot of nursing knowledge comes from (along with propositional knowledge which relates to knowledge about something, that does not have to come from experience but could be described as 'textbook') (Burnard, 1987). From the point of view of a key theorist in this area, Schon, this kind of knowledge can be characterised as Knowing in Action '*There are actions, recognitions, and judgements which we know how to carry out spontaneously; we do not have to think about them prior to or during their performance. We are often unaware of having learned to do these things; we simply find ourselves doing them*.' (Schön, 1979, p. 2).

Tacit knowledge relates to how experts take holistic views of situations, have their knowledge embedded in their practice and is difficult for practitioners to describe (Meerabeau, 1992). This is reflected in Benner and Tanner (1987)'s description of nurses intuitive judgements and pattern recognition, which is a skill developed over time from education and experienced learning. They describe intuition as '*understanding without rationale*' and argue that this is a legitimate and essential part of clinical judgement making and what separates human from judgements of novice nurses or machines (Benner & Tanner, 1987, p. 23). Over time, expert nurses learn to recognise patterns of responses from patients, which forms the basis for the ability to determine which aspects of care are most important.

Experiential knowledge is '*knowledge gained through direct personal encounter with a subject, person or thing. It is the subjective and affective nature of that encounter that contributes to this sort of knowledge….. most of the things we know that are important to us*

belong in this domain' (Burnard, 1987, pp. 190-191). Experiential knowledge is built through experiences, and is not something that can be put down in words or learned from textbooks (Burnard, 1987).

Through their case study of health visiting practices in the assessment process for families receiving extra health visiting, Appleton and Cowley (2008) identified different processing knowledge which aided assessment. Some of the types of knowledge they identified are relevant for the findings from this thesis, and for others, the findings from this thesis expands upon these. This included two themes that have similarities with practical and experiential knowledge. This includes '*comparison of the client'*, where health visitors used their knowledge of clients to compare between visits to assess the situation and '*comparing against an expected norm*' where health visitors made comparisons between families and an expected norm (Appleton & Cowley, 2008).

In contrast, findings from the current study in this thesis showed that participants were somewhat limited in their ability use this kind of knowledge to compare family situations, due to the restrictions of telehealth, such as limiting what and who could be viewed through video or not at all via telephone, and reliance on the parents word and not their own observation of additional non-verbal cues. Additionally, participants in the study of staff experiences explained how lack of continuity of care resulted in them having less experiential knowledge about the families they work with.

Another aspect of knowledge described by Appleton and Cowley (2008) is more closely related to tacit knowledge. They report on 'experiencing gut feelings' which they describe health visitors responding to external cues that something is amiss. Participants in the current study also talked about an intuitive sense when something was not right, but in this case anchoring the trigger for this kind of knowledge to being physically in the homes of

clients. Participants described how when meeting families at home, they used their senses hearing, vision, sense of smell and ability to sense feelings such as tension between parents to create a knowledge of the family and make assessments. This was not described as a considered action, but something they seemed to do almost automatically, which relates to tacit and experiential knowledge. This was not possible through telehealth, and participants felt unable to identify possible concerns because of this, '*there are things that you can pick up in that home environment that you just can't via telephone or video. Even smells, sounds and where you look in the room sometimes' (P9)*. This new insight raises the issue of what critical information could be lost if a move to routine telehealth visiting limits the emergence of tacit knowledge. This study also demonstrated challenges to staff being able to use their practical knowledge, for instance being unable to see the child when undertaking a developmental check meant they were not able to assess the child themselves and instead had to rely on parent perceptions.

As noted above, tacit knowledge also seems related to Benner and Tanner (1987)'s argument for intuition being an essential part of clinical judgement, and is a distinguishing factor of human judgement. Removing health visiting staff from family homes, could pose the risk that families no longer have assessments undertaken by experts who are able to use a range of knowledges, and particularly tacit knowledge which seems to be intrinsically linked with their presence in the family home. Using their senses in this way was not something participants described as part of their mandated practice, or something they were measured against (such as a key performance indicator), but as something they did as a chosen part of their role, and which from experience, they knew to be critical to effective care.

Being present in family homes has been reported as a key source of health visitors being able to develop their knowledge about families, and how they construct risk (King, 2016). King (2016) reported how health visitors used their sight to build their knowledge of the environment, the relationships between family members, and make subsequent judgements about the safety of children and their families. The findings from the study of staff experiences in this thesis goes beyond this, as health visiting staff go beyond explaining observation but also how they use their other senses to inform their judgement in the family homes. Participants in this research also explained the difference in being in the home and being able to have a less restricted space for observation, compared to the limited view they had through a video enabled telehealth appointment where the parents were in control of what was seen.

The findings of the study of staff experiences presented in this thesis demonstrate the challenges of being able to utilise different knowledge types when work is not undertaken in the usual environment. By engaging with families via telehealth rather than face-to-face in a home setting, health visiting staff have restrictions placed on what they can use from their own knowledge base to assess the needs of families adequately. The findings therefore contribute to the theoretical understandings of knowledge base in health visiting. This includes how being able to use different aspects of their knowledge is intrinsically linked with being able to be present in family homes and how telehealth poses challenges to this.

When the findings of this study are combined with others such as Appleton and Cowley (2008) and King (2016), it may support conversations with commissioners and those involved in service delivery models about the importance of reverting back to primarily conducting home visits to facilitate use of health visitors knowledge and expertise, to provide support for, and assessment of needs of, families. In addition, there may need to be

consideration of how to train health visitors and other staff who provide the service experientially using different knowledge bases when working with families via telehealth.

Findings related to relationships and continuity of care

Relationships and rapport have been documented as central aspects of practice for health visitors, with the main focus being on developing relationships with mothers, as part of their judgement around risk and assessment of the home (King, 2016). With changes to the service reducing the opportunity and time to develop relationships, this was expressed by health visitors as a source of risk (King, 2016).

The findings for the study of staff in this thesis are similar to an extent but also suggest a different aspect on the reason for relationships and rapport. Like the findings reported by King (2016), respondents reported that relationships were important for their practice, including safeguarding and conveying the aims of the service. Participants explained that relationships were able to help differentiate the service offer from others (such as social services) and articulated the need for an informal and health orientated relationship between the family and health visiting staff.

A key additional finding from the study of staff experiences in this study is how participants expressed the personal, vocational benefits and enjoyment of being able to form relationships with families, and their sadness in how changing systems was diminishing opportunities for this. This goes beyond the impact of risk that is evident in King (2016). Participants in this study also felt losing their relationships with families resulted in loss of enjoyment of their role and a ss of opportunity to develop their knowledge of a family.

Chapter Summary

This chapter has presented a brief background, the methods, analysis, and results of the research study, exploring experiences of the implementation of telehealth in a health visiting service, and a brief discussion. The broader implications of this research will be presented as part of the wider discussion in Chapter 6. This study has started to address the gap identified by the systematic review by exploring experiences of telehealth and health visiting services during the COVID-19 pandemic. The following chapter will address this gap further by reporting on a study of parents' experiences of telehealth and health visiting in the North of England during the COVID-19 pandemic.

Chapter 5 – Study of parent experiences

Chapter Introduction

This chapter will describe the aim, methods, analysis, and results of a mixed methods study that explored parents experiences of telehealth and health visiting during the COVID-19 pandemic.

Aim

To understand parents' experiences of telehealth and health visiting services in the North of England during the height of the COVID-19 pandemic (2020-2023).

Methods

In line with the pragmatic methodology, I used a mixed methods for this study, combining quantitative and qualitative data collection and analysis, the most appropriate option to meet the aim. Mixed methods are suitable for exploring experiences of health services, giving a more comprehensive and complete understanding of the health care phenomenon (Smajic et al., 2022). Mixed methods have been used in health service research to provide complementary data, expansive data, develop methods or to confirm results (O'Cathain et al., 2007). I used mixed methods to both expand and ask different questions, and to compliment by asking similar questions.

Using mixed methods approach also allowed me to incorporate the perspectives of the ARC NWC Public Advisors who wanted to see a breadth of views, as opposed to that of a

smaller sample that qualitative methods alone would have provided. We also discussed that mixed methods allow flexibility in how people could participate in the study.

Design

This study had a sequential design, participants completed a questionnaire first, and then a sub- sample took part in an interview. This section first describes data collection for the questionnaire and then for the interviews.

Questionnaire

The questionnaire (Appendix 8) was designed to capture parent's experiences of telehealth visits from their health visiting service during the height of the COVID-19 pandemic. The questionnaire was developed to be completed quickly (approximately 10 minutes) to limit participant burden. This included the initial reading of the participant information sheet and consent form. The initial questions included consenting to the questionnaire and screening questions to check eligibility (including area where participants live, their age and telehealth contact with health visiting services).

Following the consent and screening questions, questions included if they were completing the questionnaire alone or with assistance, how they would describe themselves (as a parent or guardian), their number of children and how many children they were expecting or were aged 0-5 during the COVID-19 pandemic.

Questions then moved on to telehealth experiences, first asking about the modes of mandated universal offer contacts (Antenatal appointment, new baby appointment, 6–8-week check appointment, child's 9–12-month developmental review and child's 2- 2.5-year developmental review) then about their experiences of telehealth. For telephone and video calls separately (f relevant to the participant), they were asked to rate of a five-point Likert scale (from Strongly Disagree, Disagree, Neither Agree or Disagree, Agree, Strongly Agree)

about accessibility, affordability, information access, suitability for discussion, relationship building, feeling heard, feeling confident and access for care of their child. Then, they were asked about preferences for future modes of care for health visiting for key contacts.

The final questions related to wider, social determinants of health, digital equity and factors which have been shown to influence how people experience care (Cookson et al., 2016; Hu & Goldman, 1990; Jahnel et al., 2022; Laird et al., 2007; Leigh et al., 2012; Mead & Roland, 2009; Robards et al., 2012; Vedeler et al., 2023). Participants were asked if they had an impairment, their ethnicity or ethnic background, marital status, religion or belief, gender, trans status, sexual orientation, level of education, employment status and subjective standard of living. All questions had the option of 'prefer not to say'.

At the end of the questionnaire, there was information related to the second (interview) stage of research and the prize draw. All participants who completed the questionnaire were offered the chance to take part in a prize draw for one of ten £20 Love2Shop vouchers if they were prepared to share their contact details. They were made aware that this would remove complete anonymity, but that their details would be stored confidentially and securely.

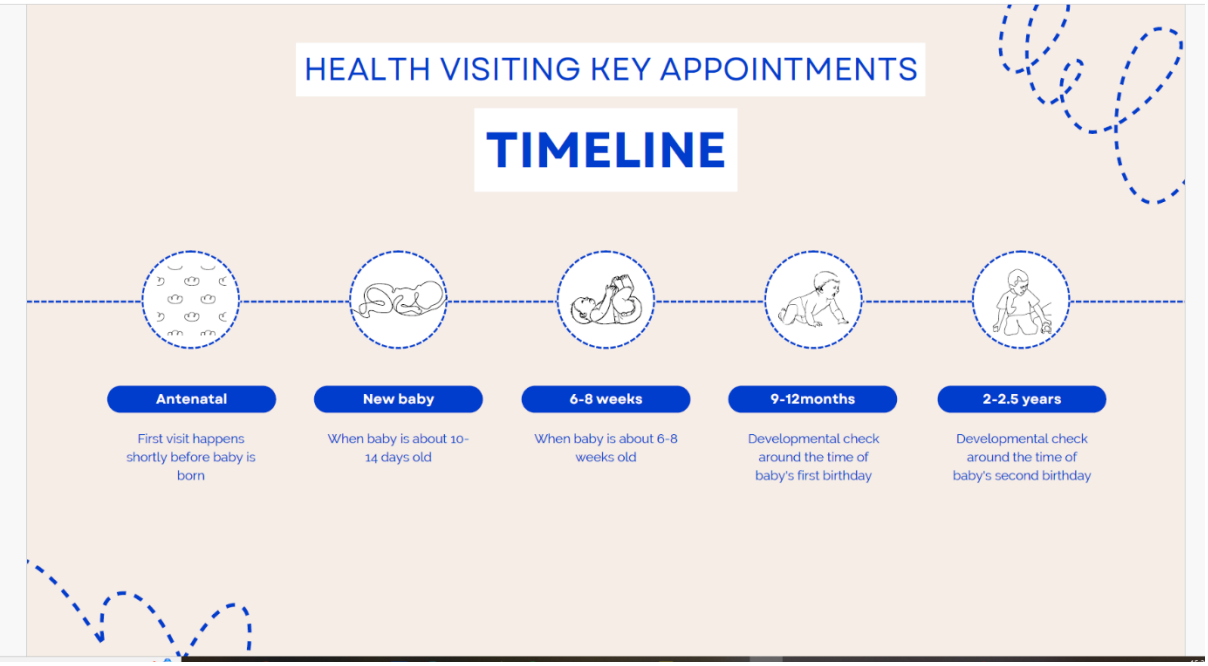
The questionnaire was hosted online through Qualtrics (Qualtrics, 2020).

Interviews

Ahead of the interview I sent participants the timeline document (Figure 6) showing the universal health visiting offer (the five visits that are mandated, excluding the two optional additional visits (Public Health England, 2021d)) and explained that we could use this to guide the interview if helpful. The timeline document was developed following discussion with supervisors and Public Advisors. This revealed that during the period of

seeing health visitors, parents are often also contacted and receiving care from other services, and it may be challenging to remember which provider was seen at what time. It was hoped that the five contacts on the timeline document would help anchor conversations to experiences of health visiting.

Figure 6
Timeline document for interviews



The interview guide (Appendix 10) was used flexibly to ensure key areas were covered whilst allowing the participant to have the opportunity to discuss what they wanted to share. It included questions that aligned with the timeline document, with the same three questions being asked for each offered visit or contact, followed by prompting follow up questions.

'Lets go through each visit one at a time, can you tell me

- *How, if at all, did the appointment take place? (telephone, virtual, face to face, did not have, don't remember)*
- *When did it take place? (Before or during or after pandemic?)*
- *What was the experience like?'*

Participants were offered the opportunity to have their interview over Microsoft Teams (with their camera off or on) or over the telephone. All interviews were recorded on Microsoft Teams.

Recruitment and Sampling

This section first describes the recruitment and sampling for the questionnaire, and then for the interviews.

Questionnaire

I created a recruitment poster (Appendix 7 – Recruitment Poster), with input from the educational supervisory team and ARC Public Advisors. A wide range of recruitment tactics were employed to promote the reach of the questionnaire, with the aim being to make it as visible to as many people as possible (Ponto, 2015). Physical and digital copies of the recruitment poster were distributed widely, including on social media, through existing university networks, the ARC network and other networks, playgroups, other family groups, relevant websites, Public Advisors, and their forums/networks and through local authorities.

With support from the ARC NWC Communications Team, I produced a video which provided information about the study. This was shared through the ARC NWC's communication channels with the (digital) poster.

I also contacted people who I had met through my LASPARC placement, and they facilitated me attending play groups and other family groups. There, I introduced myself and my research and offered the option of using a laptop (acquired through a competitive UCLan THRIVE grant) to access the online questionnaire at the time if people would like to participate without having to have access to their own device or use their own mobile data.

The study was available to anyone who wished to participate and met the inclusion criteria.

Inclusion and Exclusion Criteria

Inclusion Criteria

- Over the age of 18.
- Had contact via telehealth (including telephone call or video call) with health visiting teams between March 2020 and May 2023 (Dates adopted in line with World Health Organisation pandemic start and end declarations (Mahase, 2020; World Health Organisation European Region, 2023)).
- Could understand the information and consent form (independently or with support)
- Self-identified as a parent or guardian.
- Lived in the North of England.

Exclusion criteria

- There were no exclusion criteria for the questionnaire.

Interviews

The final page of the questionnaire briefly explained the interview and asked interested participants to leave their name and preferred contact details. I then contacted potential interviewees to confirm interest, before then providing information sheets and consent forms.

I planned to recruit a convenience sample of 10 participants, and to purposively sample up to an additional 10 more, to both allow for exploration of identified gaps in the existing interview data and to increase variation in terms of questionnaire responses to broader determinants of health questions.

All participants invited to take part in the interview had to meet the inclusion and exclusion criteria.

Inclusion Criteria

- Had taken part in the questionnaire
- Over the age of 18.
- Had contact via telehealth (including telephone call or video call) with health visiting teams between March 2020 and May 2023.
- Could understand the information and consent form.
- Self-identify as a parent or guardian.
- Fluent in English.
- Lived in the North of England.

Exclusion criteria

- Do not have access to a telephone or device to support Microsoft Teams.

Testing the questionnaire and interview guide

Both the questionnaire and interview guide were piloted to ensure clarity and acceptability. Following the success of the cognitive testing approach (Campbell, 2009) undertaken for the staff study, this approach was used again for this study. This included retrospective feedback for the questionnaire, and concurrent verbal probing with the interview guide.

For the questionnaire, a public advisor with lived experience completed a word version of the questionnaire, then gave feedback to BG on what they liked and disliked, and where wording was ambiguous or could be improved. In addition, the public advisor also made suggestions on how the questionnaire could be organised to reduce participant burden. This then led to the addition of skip logic in some areas to reduce some unnecessary elements for some participants.

For the interview, I followed the successful approach of the staff interview guide test (Chapter 4, Methods). This involved going through the interview guide with the public advisor, asking them about the question and how they would answer it. The interview was not recorded and instead I made notes about changes to the questions, and the answers given. I then reviewed the notes checking the data was suitable to answer the research question and amending the interviews questions where necessary.

Ethics

The study received ethical approval from UCLan (Appendix 11).

Analysis

This section first describes the analysis for the survey and then the interviews.

Questionnaire

All analysis was undertaken using IBM SPSS Statistics for Windows (2021). Descriptive statistics, including percentages and counts were performed.

Cross tabulations were used to examine associations between experience of telephone or video appointments and six demographic characteristics which had some variation in the sample. Some characteristics were condensed due to the small sample size. The six demographic factors included age (under 30 years old, 30-39 , or 40 years old and over), if the person considered themselves to have an impairment (yes/ no), standard of living (above average and much better, average, below average and much worse), Ethnicity (English, Scottish, Welsh, Northern Irish or British and other white background, or Asian and Asian British), marital status (Cohabiting/ living with partner/ Married or in a civil partnership, Separated, divorced or civil partnership dissolved, single) and level of education (Secondary education or Tertiary Education of University/equivalent). The experience of appointments was dichotomised due to the small sample size, as a good experience (Strongly Agree and Agree) and not a good experience (Neither Agree or Disagree, Disagree, Strongly Disagree).

A total of 96 cross tabulations were performed using Chi-square analysis with fishers exact. Due to the number of tests the level of significance was set at 0.01.

Interviews

The interview analysis was guided by reflexive thematic analysis (Braun & Clarke, 2022). I closely followed the guidelines for the analysis but used my reflexive practice to be creative and shape the analysis in a way that best fit the aim of this research. The analytic journey I undertook involved:

- **Reflexivity** - As a reflexive practice is a key principle of Reflexive Thematic Analysis (Braun & Clarke, 2022), I undertook reflexive exercises throughout the analytical process. This included, regular supervision where I discussed initial thoughts and justifications, regular reflections and impacts in a reflexive diary and specific exercises as guided in Braun and Clarke (2022). Some of these are detailed further in the reflexivity chapter (Chapter 7).
- **Note taking and reflections–** During interviews I made notes if participants said something that felt important, or in later interviews if something was said that felt resonated with what others had said. Immediately following each of the interview I wrote a reflective piece, reflecting on my experience of the interview and what stood out in the interview.
- **Familiarisation with the data** – I conducted all the interviews which was the first way I became familiar with the data. All interviews were recorded using Microsoft Teams which generated a transcript of the recording. I listened to the recording in full and amended the transcripts where necessary to make sure it was an accurate verbatim transcript. I then re-read each of the transcripts and made notes of any initial thoughts about what the participants has said.
- **Coding** – I used MAXQDA (VERBI Software, 2021) to support the coding. I proceeded systematically from the first to last interview, identifying data which seemed meaningful and relevant, and assigned a code label. I coded at different levels,

with some remaining close to what the participant had expressed (semantic codes) and some capturing meaning beyond what the words themselves said, instead drawing out more implicit meaning (latent codes). Some codes were used multiple times and others used to capture a single data item. Following the initial coding, I then reflected on my initial thoughts around the codes and discussed my thoughts with my supervisors and public advisors. I then went through the transcripts again in reverse order (from last to first), to check my code system, add new codes and condense codes.

- **Initial theme generation** – The guidance for theme generation is '*to start identifying shared patterned meaning across the data set*' (Braun & Clarke, 2022, p. 35). Although I found MAXQDA to be helpful for coding, it felt too restrictive to search for meaning rather than topic summaries. I therefore took a creative tactile approach, to look for similarities and cluster codes. I have captured some of the tactile coding process in Figure 7. I printed my code list, divided each code into an individual piece of paper. To do this I used a guillotine cutter to cut each individual code and then placed them into a bag (first image, Figure 7). I then started by taking one individual code from the bag at a time and moving the individual code and began moving them and constructing groups of codes (second image, Figure 7). Once I had groups of codes, I then transferred these on to large post it notes and added smaller post it-notes to have my preliminary themes and hold the codes together (third image, Figure 7).
- **Theme review and development** – Once I had my initial themes, I assigned preliminary theme names onto post it notes and added them to my initial theme (groups of codes, fourth image, Figure 7). I then went back through my data set and reviewed the themes against the coded extracts and the interviews (fifth image, Figure 7). This is where I identified that only a few of the initial themes captured what was

coming from the data. I then discounted some of the themes, condensed some (as some felt more akin to codes than themes) and developed new themes.

- **Theme refinement, definition, and naming** –Here I looked at the paper trials I had created and named the themes. Some theme names remained close to original ideas and others developed throughout the process. I also removed further themes, condensing an original 10 themes down to six themes.
- **Writing** – Finally I wrote up the themes. For each theme I wrote a paragraph which captured the core element of the theme, shared concept(s) amongst the theme's subthemes. I then began to write the subthemes, incorporating quotes from the interviews which I felt reflected and demonstrated each subthemes' message. Through the writing process connections became clearer so I further merged themes.

Figure 7
The process of initial theme development following coding and initial review of themes.

Figure 7 shows the initial theme generation and theme development review processes described above. This included moving away from MAXQDA to the tactile placement of codes to develop initial themes, before moving back to MAXQDA to review the themes against the data set.

Determining Themes

For this study I used reflexive thematic analysis to guide the analytic process. In this type of thematic analysis, new meanings are always theoretically possible because of meaning being developed through the interpretation of the researcher rather than inherent or self-evident in the data (Braun & Clarke, 2021). This therefore poses a theoretical challenge, as to whether saturation can be achieved.

Following the guidance of Braun and Clarke (2022), I continued to determine if my themes and interpretations were sufficient throughout the analytic process. From the initial theme generation I considered if there were conceptual patterns in my themes, checking if there was evidence of this across my data set and not just something that was expressed by a single participant. To do this I was flexible when creatively looking for patterns (Figure 7), and then ensured I went back to the data to remove initial themes that were more akin to codes where single meaning or individual elements of the data were being captured, rather than an overall pattern. I also referred to my interview guide to ensure that I had not used my interview questions as themes to summarise what participants had said but instead had captured my analytic work. The final themes that I created through my analysis had data that was reflective of the data set, with sufficient data extracts that could be used to demonstrate my interpretation.

Determining Quality and Rigour

Quality in reflexive thematic analysis, quality is dependent on '*immersion, creativity, thoughtfulness and insight*' (Braun & Clarke, 2022, p. 268). Therefore, to aim for a methodological approach that demonstrated these factors, I ensured that I had sufficient time

to undertake my analysis, and to immerse myself in the data. I realised the benefit of a tactile approach and have transparently documented my creative approach to analysis. I also have used my reflexive practice and worked with the supervisory team and advisory board members to develop insights into my own perceptions, and how this influenced my approach to the data.

For determining rigor in reflexive thematic analysis there is a checklist for the process of analysis which aims to support a rigorous process, that is systematic and reflexive (Braun & Clarke, 2022). I used this checklist as a guide throughout the analysis and then reported how (see pages 197-200) I undertook my analytical process which follows the same criteria in the checklist, but specific to this work and research question. This also included being reflexive in my analytical approach, including keeping an ongoing diary of decisions and influences I made during the process and documenting my position when approaching the data (see below).

Reflexivity

When I undertook this study, I had completed my LASPARC placement and the study exploring health care providers experiences of telehealth and health visiting (Chapter 4). The experience of this placement and this study meant that I approached this study with the perception of telehealth having both positives and negatives for health visiting during the COVID-19 pandemic. I felt cautious though knowing that I had only heard from health care providers and anticipating that parents could have different experiences. This was reinforced during the recruitment for this research where I spoke to parents who told me about their

experiences of health visiting during the pandemic, which for some of who I spoke to was limited. This led me to expect that I would hear in the survey and interviews that parents were disappointed about receiving their care in telehealth but would find some benefits of it too.

Results

The results section in this chapter starts with the results from the questionnaire, before moving on to the results from the interviews.

Results from the Questionnaire

Seventy- two people who had contact with health visiting services in the North of England between March 2020 and May 2023 responded to the questionnaire. Most participants were mothers (95.8%) aged 30-39 years old (73.6%) living in the North West (98.6%) (Table 11 and Table 12). Most had one (41.7%) or two (44.4%) children. Over half had experience of health visiting services prior to the COVID-19 pandemic (59.7%) in addition to experience during the pandemic. The majority of participants did not have an impairment (81%), were from an English, Scottish, Welsh, Northern Irish or British background (92.2%), were either co-habiting/living with partner or married/in a civil partnership (92.1%), were either not religious (45.2%) or Christian (43.5%), female (96.9%), heterosexual/straight (90.2%), had a university or equivalent education (75.8%) and were employed (80.6%). There was a spread of living standards across participants with 7.8% reporting below average standard of living, 50% average, 32.8% above average and 9.4% much better.

All respondents had access to broadband and/or Wi-Fi (some also had access to mobile data) all had access to a mobile phone, and the majority had access to multiple devices. All respondents rated their ability to use the internet as good or excellent, and their confidence as an internet user being fairly confident or very confident (Table 13).

Table 11
Breakdown of area participants live in.

Area	*N*	%
Yorkshire and The Humber	1	1.4
Leeds	1	1.4
North west	71	98.6
Chorley	6	8.3
Fylde	4	5.6
Hyndburn	1	1.4
Knowsley	1	1.4
Lancaster	6	8.3
Liverpool	5	6.9
Manchester	2	2.8
Pendle	1	1.4
Preston	11	15.3
Ribble Valley	3	4.2
Rochdale	1	1.4
Rossendale	2	2.8
Salford	1	1.4
Blackburn with Darwen	4	5.6
South Ribble	3	4.2
Tameside	1	1.4
Warrington	1	1.4
West Lancashire	1	1.4
Wigan	2	2.8
Wirral	3	4.2
Wyre	5	6.9
Burnley	6	8.3
Bury	1	1.4

Table 12
Demographic characteristics of participants.

Demographic characteristic	*N*	%
Age (n=72)		
18-24 years old	2	2.8
25-29 years old	7	9.7
30-34 years old	27	37.5
35-39 years old	26	36.1

40-44 years old or above	10	13.9
Description of self (n=72)		
Mother	69	95.8
Father or Other	3	4.2
Completion of questionnaire (n=72)		
Independently	72	100
Number of children (n=72)		
1	30	41.7
2	32	44.4
3 +	10	13.9
Children expecting or aged 0 years to 5 years between March 2020 and May 2023 (n=72)		
1	44	61.1
2 +	28	38.9
Previous experience with health visiting (prior to COVID-19) (n=72)		
Yes face-to-face	31	43.1
Yes telephone/video	2	2.8
Yes, face-to-face and telephone/video	10	13.9
No	29	40.3
Impairment or condition (n=63)		
Yes	12	19
No	51	81
Ethnicity or ethnic background (n=64)		
Asian or Asian British	5	7.8
English, Scottish, Welsh, Northern Irish or British or Any other white background	59	92.2
Marital Status (n=63)		
Cohabiting or living with partner or married or in a civil partnership	58	92.1
Single and/or separated, divorced or civil partnership dissolved	5	7.9
Religion or belief (n=62)		
No religion including atheist	28	45.2
Christian	27	43.5
Muslim	5	8.1
Any other religion or belief Including Jewish)	2	3.2
Gender (n=64)		
Male	2	3.1
Female	62	96.9
Trans person (n=64)		
No	64	100
Sexual Orientation (n=61)		
Heterosexual/Straight	55	90.2
Bi/Bisexual	6	9.8
Level of education completed (n=62)		
Secondary education	6	9.7
Tertiary professional technical	9	14.5
University or equivalent	47	75.8
Employment Status (n=62)		
Employed	50	80.6

Freelance or self-employed or student or other	6	9.7
Unemployed	6	9.7
Living Standard (n=64)		
Below average	5	7.8
Average	32	50
Above average	21	32.8
Much better	6	9.4

Table 13
Digital access and confidence using the internet

	N (64)	%
Access to broadband and/or Wi-Fi (n=64)		
Yes	64	100
Access to mobile data		
Yes	14	21.9
Access to a mobile phone		
Yes	64	100
Access to a desktop		
Yes	14	21.9
Access to a laptop		
Yes	58	90.6
Access to a tablet		
Yes	46	71.9
Ability to use the internet		
Excellent	45	70.3
Good	19	29.7
Confidence as an internet user		
Very Confident	46	71.9
Fairly Confident	18	28.1

How health visiting appointments took place

There are five mandated health visiting appointments (antenatal appointment, new baby appointment, 6–8-week check, child's 9–12-month developmental review and child's 2-2.5-year developmental review). Many appointments took place face-to-face in participant's homes, including 72.3% of new baby appointments and 52.3% of 6–8-week postnatal appointments (Table 14). Across the five appointments, the appointment with the least

telephone calls was the new baby appointment (10.8%, n=7) and the most was the child's 9–12-month review (22.2%, n=14). The fewest video calls were for the new baby appointment (1.5%, n=1) and the most was for the antenatal appointment (15.2%, n=10). There were high numbers of participants who did not have all five appointments, with nearly a third not having an antenatal appointment (30.3%, n=20). No participants attended any face-to-face groups and only a small number participated in a group via video (6.3%, n=4).

Table 14

How health visiting appointments and contacts took place for participants between March 2020 and May 2023.

Appointment		Face-to-face in my home		Face-to-face in a community setting		Telephone		Video Call		Did Not have this appointment		Don't remember	
	n	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Antenatal appointment	66	16	24.2	5	7.6	14	21.2	10	15.2	20	30.3	1	1.5
New baby appointment	65	47	72.3	1	1.5	7	10.8	1	1.5	8	12.3	1	1.5
6–8-week check appointment	65	34	52.3	4	6.2	13	20	2	3.1	11	16.9	1	1.5
Child's 9–12-month developmental review	63	27	42.9	2	3.2	14	22.2	8	12.7	10	15.9	2	3.2
Child's 2-year development review	65	28	43.1	6	9.2	8	12.3	4	6.2	14	21.5	5	7.7
Additional appointments arranged by the health visiting service	63	20	31.7	4	6.3	9	14.3	2	3.2	24	38.1	4	6.3
I contacted the health visiting service for advice	64	3	4.2	0	0	44	61.1	0	0	16	25	1	1.6
I attended a group organised by the health visiting team	64	0	0	0	0	1	1.6	4	6.3	57	89.1	2	3.1

Telephone contacts with health visiting services

Nearly two thirds of participants (86.1%, n =62) had a telephone contact with health visiting services (Table 15). Most participants reported feeling that the telephone contact was accessible (70%, n = 42), and affordable (84.7%, n=50). Over half of participants found telephone contacts to be a suitable way to access information from health visiting services (56.7%, n=40) and a suitable way to discuss what they wanted (54.3%, n=32). However, most participants reported that the telephone was not a suitable way to build a relationship (60%, n=36). The other three questions about telephone experiences had a greater spread of responses. Half of participants disagreed that telephone contact provided a way they felt heard and understood, while a third felt telephone contact did provide a way that they felt heard and understood. Half of participants disagreed that telephone contact allowed for them to feel confident talking, while a third did feel confident talking during telephone contact. Finally, when asked if telephone contacts were a suitable way to access care for their baby/child, over a third of participants disagreed, over a third agreed and a quarter neither agreed or disagreed.

Video contacts with health visiting services

Nearly one third of participants (33.3%, n=24) had a video contact with health visiting services (Table 16). Most of these participants reported feeling that that video calls were accessible (58.4%, n=14) and affordable (70.9%, n = 17), but over half disagreed that they were a suitable way to build a relationship (62.5%, n =15). About half of participants reported that they disagreed that video contacts provided a way that they felt heard and

understood (45.9 %, n=11), a way that they felt confident talking, (54.2 0%, n=13) and a suitable way to access care for their baby/child (56.5 %, n=13).

Table 15

Experiences of telephone contacts with the health visiting team between March 2020 and May 2023.

Experience of telephone contact		Strongly Disagree		Disagree		Neither Agree or Disagree		Agree		Strongly Agree	
	n	*n*	%	n	%	n	%	*n*	%	*n*	%
An accessible way to have contact with the health visiting team	60	4	6.7	8	13.3	6	10	30	50	12	20
An affordable way to have contact with the health visiting team	59	3	5.1	1	1.7	5	8.5	34	57.6	16	27.1
A suitable way to get the information you needed	60	6	10	11	18.3	9	15	25	41.7	9	15
A suitable way to discuss what you wanted	59	5	8.5	15	25.4	7	11.9	24	40.7	8	13.6
A way to build a relationship with the health visiting team practitioner	60	14	23.3	22	36.7	10	16.7	7	11.7	7	11.7
A way that you felt heard and understood	59	11	18.6	14	23.7	15	25.4	14	23.7	5	8.5
A way that you felt confident talking to the health visiting practitioner	60	8	13.3	17	28.3	13	21.7	14	23.3	8	13.3
A suitable way to access care for your baby/child	60	9	15	13	21.7	15	25	17	28.3	6	10

Table 16

Experiences of video contacts with the health visiting team between March 2020 and May 2023.

Experience of video contact		Strongly Disagree		Disagree		Neither Agree or Disagree		Agree		Strongly Agree	
	n	*n*	*%*	n	*%*	n	%	*n*	%	*n*	%
An accessible way to have contact with the health visiting team	24	2	8.3	3	12.5	5	20.8	10	41.7	4	16.7
An affordable way to have contact with the health visiting team	24	2	8.3	0	0	5	20.8	13	54.2	4	16.7
A suitable way to get the information you needed	23	2	8.7	7	30.4	4	17.4	6	26.1	4	17.4
A suitable way to discuss what you wanted	24	3	12.5	7	29.2	4	16.7	6	25	4	16.7
A way to build a relationship with the health visiting team practitioner	24	7	29.2	8	33.3	4	16.7	1	4.2	4	16.7
A way that you felt heard and understood	24	4	16.7	7	29.2	5	20.8	4	16.7	4	16.7
A way that you felt confident talking to the health visiting practitioner	24	4	16.7	9	37.5	1	4.2	6	25	4	16.7
A suitable way to access care for your baby/child	23	6	26.1	7	30.4	4	17.4	3	13	3	13

Preferences for how future health visiting appointments could take place

For the five contacts and any additional appointments offered by the health visiting service, most participants would prefer to have future contacts face-to-face (either in their home or a community setting) (Table 17). None of the participants would prefer a future new baby or 6-8-week check appointment to take place by telephone or video. Additionally, none of the participants would prefer a future 2-2.5-year developmental review by telephone and only one individual would prefer a video call. For future groups organised by the health visiting team, the majority would prefer these to be face-to-face (51.6%, n =33 in a community setting, 9.4% n=6 in their home), 1.6% would prefer groups to take place on the telephone (n=1), and none would prefer a group to take place via video call. If participants were to contact the health visiting service for advice, nearly half (46.9%, n =30) would prefer to use the telephone.

Table 17

Preferences for how potential future health visiting appointments.

Future appointment (n=64)[7]	Face-to-face in my home		Face-to-face in a community setting		Telephone		Video Call		No preference	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%
Antenatal appointment	34	53.1	15	23.4	5	7.8	4	6.3	6	9.4
New baby appointment	58	90.6	3	4.7	0	0	0	0	3	4.7
6–8-week check appointment	52	81.3	8	12.5	0	0	0	0	4	6.3
Child's 9–12-month developmental review	41	64.1	16	25	1	1.6	2	3.1	4	6.3
Child's 2-year development review	44	68.8	15	23.4	0	0	1	1.6	4	6.3
Additional appointments arranged by the health visiting service	26	40.6	13	20.3	7	10.9	2	3.1	16	25
I wanted to contact the health visiting service for advice	14	21.9	6	9.4	30	46.9	1	1.6	13	20.3
I wanted to attend a group organised by the health visiting team	6	9.4	33	51.6	1	1.6	0	0	24	37.5

[7] These results were derived from the question '*If you were to be in contact with health visiting services in the future, how would you like these contacts to take place?*'

Associations between demographic characteristics and reported feelings about telephone and video contacts with the health visiting team.

The result of the Chi-square with Fisher's exact tests showed no associations between demographic characteristics and experiences of telephone and video calls (Appendix 12).

The next section describes the results from the individual interview that some questionnaire participants took part in.

Results from the interviews

A total of 14 participants (who had taken part in the questionnaire) took part in an individual interview. All interviewees were mothers, half had experience of health visiting before, in addition to during, the COVID-19 pandemic. The majority (12/14) had more than one child (including step children) and lived with a husband, partner or boyfriend (13/14) (Table 18).

Table 18
Description of interviews and participant demographics

Participant Number	Mode of Interview	Length of Interview	Experience of Health visiting Prior to COVID	Number of children	Other comments (re demographics)
P1	Teams (Video/Audio)	53:01	No	2 (eldest 3 years, youngest 5 months)	Mother, lives with husband
P2	Telephone (Recorded on Teams)	49:21 and 6:59 (asked to record again)	No	2 (eldest 3 years, youngest 1 year)	Mother, lives with boyfriend
P3	Teams (Video/Audio)	52:34 and 2:38 (asked to record again)	Yes	2 (eldest 5 years, youngest 3 years)	Mother, lives with husband
P4	Telephone (Recorded on Teams)	53:13	No	2 (eldest 2 and a half, youngest 6 weeks)	Mother, lives with husband
P5	Teams (Video/ Audio)	49:08	No	1 (3 and a half) and stepson (14 years)	Mother, lives with husband
P6	Telephone (Recorded on Teams)	53:11	No	2 (eldest 2 years, Youngest 1 year)	Mother, lives with husband
P7	Teams (Audio Only, cameras off)	51:36	Yes	1 (3 years old)	Mother, lives with husband
P8	Telephone (recorded on Teams)	41:05	Yes	2 (eldest eight, youngest three)	Mother, single
P9	Telephone (recorded on Teams)	38:02	Yes	2 (eldest 4, youngest 18 months)	Mother, lives with husband

P10	Teams (Video/ Audio)	32:05	No	1 (3 ½ and 2 step children)	Mother, lives with husband
P11	Telephone (Recorded on Teams)	42:42	Yes	2 (eldest 5, youngest 3)	Mother, lives with husband
P12	Telephone (recorded on Teams)	41:57	No	1 (18 months)	Mother, lives with husband
P13	Teams (Video/Audio)	55:52	Yes	2 (eldest 7, youngest 2)	Mother, lives with partner.
14	Telephone (recorded on Teams)	47:56	Yes	2 (eldest 4, youngest 3)	Mother, lives with husband

The analysis of the interviews led to the development of six themes, which are shown in the table below along with the sub-themes (Table 19).

Table 19

Themes and subthemes from analysis of interviews

Theme	Subtheme
Theme 1 - Control lost and changes enforced (due to COVID-19)	11 Apprehension and grief 1.2 Imposed isolation 1.3 Experiences with midwifery and other services
Theme 2 – Expectations and Aspirations for health visiting	2.1 Awareness and understanding of health visiting 2.2 Anticipation and acceptance of telehealth 2.3 '*you need to put in a bit more effort* '– Effort and engagement
Theme 3 – The value of health visiting	3.1 Where needs are met 3.2 Surveillance and misalignment with telehealth 3.3 Professional observation and responsibility shift 3.4 Information access and telehealth
Theme 4 – Conducive conditions for conversation	4.1 Timing it right 4.2 Constraints on disclosure 4.3 Accessibility is not suitability 4.4 Preferences for future health visiting contacts
Theme 5 – Relationships as the foundation	5.1 Personal qualities of the health visitor 5.2 Relationships are fundamental 5.3 Wanting to know, and be known
Theme 6 – Frustrations with the service	6.1 Telehealth is inferior 6.2 *'it was for them, not for me*' – Feeling like a tick box exercise 6.3 Judgement, opinions, dismissal, and disappointment

Theme 1 - Control lost and changes enforced (due to COVID-19)

The theme of *'control lost and changes enforced'* captures the experiences of participants having children, and changes enforced upon participants because of the COVID-19 pandemic. This includes the threat of infection itself, and the impact to their lives and circumstances around their pregnancy and children's early years because of changes to the health care system and wider societal changes. There are three subthemes*, 'apprehension and grief', 'imposed Isolation'* and *'experiences with midwifery and other services'.*

1.1 Apprehension and grief

Participants described how they were very aware of COVID-19, and fearful of the potential consequences during the height of the pandemic. Some participants described feeling apprehensive of the impacts of the COVID-19 virus itself (e.g. the infection risk), and the ability to stay safe. One participant described having to continue working in the community whilst pregnant without personal protective equipment, and the fear of the potential impact of this on themselves and their family. There were also concerns amongst others that their family may become unwell, or the impacts of when they did have COVID-19, and in some cases a fear for their own life.

> *'I heard a few stories off people that were pregnant, you know, that like passing away during childbirth or being in a coma…..because they're contracting COVID like during pregnancy and then obviously they were vulnerable. And then you know a lot of mothers didn't make it, and that was what I was worried about. If I got and then you know, I died before seeing my child. Because some people did. Like it did happen to some people. And then because I'm Pakistani as well, we were at higher risk…..It was just a challenging time mentally.*' Participant 11

The opportunity to talk to other people and to be supported by others was diminished, resulting in feelings of uncertainty with not knowing what to expect when becoming a parent.

> ‘*And it was a bit awkward, because when you go into the surgery or the appointment, you're kind of like separate from, you're not talking to anyone. So it felt a bit weird. Because it was my first pregnancy as well, I didn't know what to expect. So it was a bit hard because you didn't get to speak to people as much’* Participant 12

Not being able to have the support of family members that would have otherwise been available, or to have conversations with other parents added to their concerns. This feeling of uncertainty also extended to participants’ older children, with them being concerned for their health and the disruption to their routines and schooling due to the pandemic.

There were also feelings of grief, and a longing for what could have been amongst participants, having an experience far from what they anticipated their ideal pregnancy and maternity leave would resemble. This included opportunities that they felt they had missed when being pregnant and was particularly poignant amongst mothers who were going through their first pregnancy.

> *‘I should have been celebrating my first pregnancy and things. And you don't get that first pregnancy back do you? ……..So I feel like I really missed out on that’*
> Participant 1

There was emphasis put on the loss of these experiences for their first pregnancy, as they described second pregnancies not being celebrated in the same way. One participant described their sadness at the loss of sharing the tactile experiences of pregnancy with others, with no one being able to see their bump or feel their baby kick.

Participants also described sadness at the loss of experiences available to them following the birth of their child, and in their maternity leave. This included, not being able to

see their friends, not able to attend groups and not being able to take their baby to other people's homes. Their experiences were often confined to their home and to those they lived with. This impacted themselves and their children.

> *'I didn't have the maternity leave that I was thinking about. My daughter didn't get to socialise with, you know, she didn't touch another baby until she started nursery at the end of that year*.' Participant 7

In contrast to the participants themselves, some felt that their partners benefited from the requirement to stay at home during the pandemic. They felt this brought the opportunity for the partners to be involved and have experiences with their children that would otherwise not have been possible without the pandemic associated changes, such as furlough and lock down.

> *'....so he actually got to spend a lot more time at home with my little one than he would have done otherwise. So it I guess it was swings and roundabouts.*'
> Participant 1

> '*It's interesting because ...me and my husband ...talking about this this morning, and there was absolutely a number of challenges for us with COVID as they were for everybody, but it did bring some nice moments as well. So you know, my husband got to spend five months, maybe with our daughter, every day that he wouldn't have been able to do otherwise. And he absolutely cherishes that time and just says how lucky he felt that he was.'* Participant 7

1.2 Imposed Isolation

Although personal circumstances were different amongst participants, there was a shared predominant feeling of being alone and isolated during the COVID-19 pandemic. This

isolation was imposed on them, with networks and opportunities actively taken away. Additionally, for some isolation was enforced upon them because they were sent to work from home sooner than their colleagues, or when their colleagues remained working face-to-face, due to them being pregnant. Participants explained how they were unable to spend time with their friends or families once they had their child, leading to a loss of practical support with their babies and children, and a loss of knowledge they could gain from others when feeling unsure with a new baby. This had a negative emotional impact, with many describing being upset due to the isolation, and having to 'illegally' seek support from their own parents to keep themselves and their children well. This was intensified for some who had partners who continued to work outside the home through the pandemic.

The expected opportunities for support and socialising were not available as participants had hoped. There was a sense of restriction and confinement due to being alone at home with a new baby.

> *'Well, we knew that things were different, second, third week of March. And so my mum and my dad, who had been a huge support to me in caring for [Child 1 Name] when I was at work, all of a sudden they weren't there to do that*.' Participant 14

Participants described that groups, classes and clinics that otherwise would have been available to them had been cancelled which meant '*I can't go anywhere' (Participant 3).*

> '*It was dreadful. It was very lonely. My daughter was a very wanted child. She was an IVF baby. So was really excited to finally be a mum and it was just lonely and miserable and my husband worked in a pharmacy so he had to still go to work while everybody else was furloughed, and* [I] *remember he'd go to work in the morning and I would just cry because I think it's just me and this baby on my own for 10 hours, not*

allowed to see my friends. Can't visit my family. There's no groups or anything to go on, so it was [a] *really lonely time*' Participant 10

Participants also described being alone and scared throughout their pregnancy, during labour and immediately after birth. One participant described having to negotiate the presence of her husband whilst undergoing a procedure with clinicians (with one clinician being supportive and one being against). Another participant described how the restrictions hospitals placed on patients meant that they had to be assessed for and receive the news of having a miscarriage on their own, and then being left without support. Some had made plans to try and mitigate being alone during their labour, such as having a home birth. However as part of the home birth, they experienced complications which required them to go to hospital, where they had distressing experiences.

'You know, without support and, been left in utter agony for hours [Interviewer: yeah]. Without support. And you know, and that's whilst I was in labour after I had my baby and I was left because my boyfriend couldn't stay. And then I was in hospital for days on my own, I was lying down for 30 hours on my own with a new baby, you know, with midwives would come and see me, obviously, but no physical support, no, no emotional support because of COVID, nobody was allowed to be with me. It's really isolating. It was a horrible, horrible experience.' Participant 2

1.3 Experiences with midwifery and other services

Participants described their experiences with midwives. For some, these were positive experiences, for instance even under the COVID-19 restrictions, where midwives were transparent and communicated clearly what the process and restrictions were, this made

participants feel comfortable. Some participants also highlighted the benefits of the face-to-face support they received from midwives following having their children, which provided comfort when restrictions prevented others from visiting, or when participants had negative experiences with other services.

However, this was not universal. Some participants reported having more negative experiences such as not feeling cared for and the midwife focus was solely on the baby, not coming to the home to weigh children but making mothers travel for weighing babies shortly after birth.

> '*They made me and my husband go on day three after I'd had the baby to go and get her for that initial weigh. They didn't come out. Whereas if it was now, like I've just had my second baby, I would have said like, no can someone come out to me, please. I've just given birth three days ago. I don't want to be going out and driving*.' Participant 4

In other cases, midwives and not entering participant homes and instead passing parents scale to weigh their babies themselves.

> '*It was the midwife that visited us at home. And I do remember that quite vividly, because she had to pass the scales through the window and we have to measure. We had to weigh [child 2 name] on the windowsill. Luckily, it was quite a big windowsill. But obviously she needed to have a look at the scale. Then we had to clean them and pass them back to her, and then we didn't have another appointment then.*' Participant 14

In addition, some participants had difficult birth experiences which they attributed to the actions of the midwives. Participants also received some of their care from the midwives

through telehealth, which they felt was inadequate support and dismissive of concerns (for instance when telephoning the service for advice following the birth).

> *'....they repeatedly swept around my cervix. Without telling me, without consent, and caused utter agony. It was horrendous. My baby [Child 1], he turned back-to-back. He turned round and I went down to 7 centimetres and I was in so much pain. I think I was in and out of consciousness for two hours. I couldn't speak to them. I didn't know when they were in the room or they're when they weren't in the room. They left me there for two hours. They didn't wake my boyfriend up. They just left him to sleep until it was time to call an ambulance and get me blue lighted into hospital because I was unresponsive*.' Participant 2

Some challenges happened during the pandemic but were not pandemic specific. This included participants being unwell throughout their pregnancy, having challenges during and after giving birth to their child and feeling disregarded by services. Participants felt that support generally for mothers was lacking, with not enough structures in place to provide support. Additionally, where there was support, this was sometimes restricted such as a one problem per visit rule, which was unhelpful for participants who felt they needed support for multiple issues or queries.

> *'I think just that that in person. That in person support and although I think even if even if I had face to face appointments, as a first-time mum, I don't think it would have been enough [laughs]. Do you know what I mean? I don't, I don't think that generally there's enough support out there. Like when you've had a baby. First or second time for that matter*.' Participant 1

Theme 2 – Expectations and Aspirations for health visiting

The theme '*expectations and aspirations for health visiting'* captures how participants viewed the health visiting service and what their expectations were of the service and individuals, who work for the service. The four subthemes are, 'awareness and understanding of health visiting', '*expectations of health visiting and health visitors', 'anticipation and acceptance of telehealth'* and *''you need to put in a bit more effort '– Effort and engagement'.*

2.1 Awareness and understanding of health visiting

Awareness of health visitors differed amongst participants. Some were unsure about what the role of the health visitors was, and some were confused about when they had seen health visitors compared to midwives during their pregnancy and after giving birth. Participants' awareness and understanding of health visiting was often hindered by a lack of available information about the service. Participants described that there was nowhere to find out information about what the service offered, or how this had been impacted by the pandemic. For some, because they did not know what the health visiting service could help with, or approach health visitors for support or advice, for some this meant turning to Google for answers instead.

> *'I think I remember wishing that they would have discussed a bit more about like ...personality, but like I wish they would have talked more about like oh is baby doing this. They like I know they're only little. But because I was quite anxious, I remember Googling a lot about like is it normal for babies to do this? ....And again I didn't*

really ask them again because I didn't really know much about the service.'

Participant 4

Participants understood the roles of health visitors to include protecting child safety, enquiring about domestic violence, and providing support at a time when more was needed beyond what friends and family can offer, which was seen as important. These were seen as a valuable service to parents in general. For example, while many did not feel at risk from domestic violence, they were concerned that this would not be the same all parents and children.

'*And then I think on that visit another thing what I noticed they ask is about domestic violence. So she asked me about like if there's any issues and stuff like that, which I thought was really helpful because I don't think any people ask about that. So you know, if there was someone else in the house you don't, you won't answer that question. But she was like as a part, if there's any issues, just to let her know she can provide information and that everything was confidential*.' Participant 12

'it's a really vulnerable time for a woman after birth, and sometimes they need that support from somebody else that's not family or friends. And so I think it is a really important service that they provide.' Participant 11

There was also a caveat often expressed by participants when critiquing the role of health visitors, stating that individuals can only do so much, and there needs to be more support at a wider system level. Participants discussed the decline in service offer and provision over time in addition to the general awareness of the broader challenges with staff shortages across the NHS.

'I think the major issue is, you know, like across the whole of the NHS is all of the you know, the staffing issues and workload and all the rest of it' Participant 1

The potential serious repercussions of this for this profession were expressed by participants, particularly in relation to the safety of children. Participants were also sympathetic and aware that much like themselves, individuals who work for health visiting services were having to adapt to and work during the COVID-19 pandemic.

> *'I felt, you know. Aware that they had a job to do and they were doing their job, they were under stressful periods of time as well, having to totally change the way that they were working so*.' Participant 5

2.2 Expectations of health visiting and health visitors

Some participants had experience of health visiting prior the COVID-19 pandemic, and they reflected on the differences between their earlier experiences and those in the pandemic. Those who had received health visiting services prior to the pandemic shared experiences of being seen at home and in community centres, continuity of the same health visitor, feeling supported, and developing rapport and relationships.

> *'It was good. Like even I built a relationship with her, I could talk to her about do you know whatever I was comfortable with and she, yeah she was really nice and approachable. And I feel like you built that, personal touch*.' Participant 11

This was then often contrasted with their experiences during the pandemic, which included the decline in accessibility of community centres and health visitors themselves.

> '*But the lack of availability of them just being in places like obviously Sure Starts aren't so common anymore. There were more so when [Child 1] was little and the ability to just go and speak to somebody. And that's what weighing clinics were great*

for because you could go get your baby weighed. And they could sort of size up whether there was any problems, whether it was just a worry, it was some, you know, quite often a lot of the things that you worry about can just be dealt with really informally. And that lack of availability, I think, is really sad.' Participant 3

When asked about the extent to which they felt they could trust the person they were talking to, participants described an implicit expectation of trust as with all health care professionals. This was extended to the wider service, with participants who had telephone appointments feeling confident that if they were overheard (at the health visiting service end of the call) it would only be by other members of the health visiting team. When face-to-face, although parents sometimes did not know the name of the person who was visiting, they were reassured by marks of the profession such as identity badges. However, there were limits to the extent of trust, which included limited or minimal introductions meaning participants did not feel they knew the person they were talking to, practitioners not making sufficient time for the appointment and meeting via the telephone.

'*you should be able to trust them because they're part of the health visiting team, but, because they're not here in front of you and are on a rushed phone call, no, not at all.*' Participant 8

There were contrasting expectations of the personal attributes of health visitors, and expectations and experiences differed amongst participants. Some participants described feeling lucky that they were able to get a nice health visitor, as they were not certain this would always be the case.

'*That's what I remember saying to him, she seems alright I said so that's the main thing. It doesn't sound like she's gonna cause any trouble or anything. Which sounds*

awful to say. I don't mean like they're going to go to trouble, but yeah, because you never know.' Participant 6

Participants explained that despite their awareness of and sympathy about the challenges the service (and wider health care system) faced, there was still an expectation that the service would be able to meet their needs as they arose. However, this was not always the reality. Participants anticipated of a lack of continuity of health visitor, with the expectation that they would likely not speak to the same person they did at their last appointment. This was disheartening for participants, as they did not get the continuity of care they wanted, and this created disillusionment with engaging with the service.

'I kind of expected that it would have been just anybody. I'd not lost my faith in the service, but I'd lowered my expectations of the service' Participant 6

2.3 Anticipation and acceptance of telehealth

Participants expected that some of their care and their babies and/or children's care would be delivered via telehealth, being aware of, and experienced with, the shift of work, socialising, and health care to telehealth during the COVID-19 pandemic.

'I think about that point, we'd done a lot of stuff like baby classes and things over video call as well' Participant 1

'Yeah, so with him…..It was alright, it because it was COVID and so much was just on the phone….there was nothing in person. I had no antenatal classes. There was nothing…. I couldn't go to anything or do anything. So I just didn't. You didn't even see professionals, if you know. I saw my midwife, occasionally at appointments….. I was very much used to not seeing any health professionals, so I wasn't surprised.' Participant 2

Participants accepted that telehealth meant that health visitors were less likely to spread COVID-19.

> ***'***I think it's probably quite important that you don't look back on it now and think, Oh well, that was quite, out of the ordinary, because actually at the time it probably wasn't because you didn't want people coming in your house unnecessarily. So that was probably the right response. For them.' Participant 3

> *'I know like I discussed a lot of the disadvantages, but the advantages of them not coming, were also that you know if they're going to everyone's house you don't know what they're picking up.'* Participant 11

However, for some the continued use of telehealth after the pandemic was seen as being driven by government attitudes and funding decisions towards staffing.

> *'I understand COVID was really strange, but in the beginning, apart from the PPE and stuff, the big stuff of the COVID only lasted for about six months. COVID is not an issue anymore. It's just an excuse by the government. [Interviewer: Yeah.] and understaffing'* Participant 6

2.4 '*you need to put in a bit more effort*' – Effort and engagement

Participants felt that the direction of effort should predominantly come from the health visiting team. Effort was often discussed in relation to the time health visitors afforded to appointments, their accessibility, and their face-to-face presence in homes. Participants felt that health visitors and the service should be responsible for initiating and advancing conversations and support for parents. Some participants described wishing the health visitors

had created that time and space for them, feeling that the contact had limited value when this did not happen.

> *'I think when I wanted to talk to them, I think they just wanted to get out and go to the next appointment. I felt a bit like it was rushed, like they didn't want to sit with me and talk to me. So it was like they were just coming to do the weighing and you know, the checking the questionnaire and then going*.' Participant 12

> *'And that's one thing I think needs to change is that the effort needs to be there. It might take you an extra 10/15 minutes per house, but your feedback and your service would then be absolutely top notch five out of 5, 10 out of 10. Whatever you want to give it. But you need to put in a bit more effort because there will be kids out there. It might from my experience now with my little one…..if anything had happened, they've not seen him for, like, six months That's a long time And it's yeah, it's heart breaking to think there's babies out there that needed that health visitor to go and see them and check them out'* Participant 6

Participants described the effort they were having to exert chasing health visitors and contact the service to advocate for support for themselves and their children. This included having to repeatedly call to arrange for developmental checks for children, seek support with sleeping and teething, and to ensure that appointments were going ahead when health visitors had not arrived for the booked visit. In contrast, where participants did feel that effort was being made during interactions, they reported a positive experience. This provided reassurance that the support was there should they need it, the opposite of when they had struggled to contact services.

'We were lucky enough that we didn't really need them, but you know it was always well if there isn't anything else or you know something changes let us know, get in touch and there was always a question about you as well.' Participant 14

Where telephone appointments took place, parents spoke positively about subsequent follow up face-to-face visits. Where an additional face-to-face appointment was not offered, and the appointment was solely conducted over the telephone, participants felt disappointed this had not been offered, and a sense they got minimum benefit.

For those who just had a telephone appointment, there was a disappointment between what they got out of the appointment compared to the effort it took to engage. The effort of engaging with the telephone call, alongside juggling their responsibilities as a parent (such as caring for their children), and then not having the sense of effort returned or being provided with help, left them questioning the purpose and value of the appointment.

'I just thought it was a bit of a bit of a waste because I, again 'cause I'd spoken to so many people due to the feeding struggle, in a way it was a bit more, it's just I was so busy. We were trying to like I'm doing all the things for the feeding and obviously just look after a baby because when they're not asleep you've got a lot of nappy changes and feeding etcetera. It was just more. It was more of a nuisance because it was like I don't have to sit there and speak to someone again if I don't really know and go through stuff that I've already told other medical professionals earlier' Participant 4

In addition, the effort required and not received meant that where participants tried to engage with health visiting services, their needs were not always been met which led to preferences for alternative sources of support. There were also challenges with accessibility and responsiveness of the service, which was contrasted with GP services, meaning that health visiting services were not the first choice for support.

'The area where we currently are, although they're nice when you speak to them, the actual service itself doesn't feel very like inviting and welcomed. And I know that I'd always rather speak to a GP first rather than the health visitors.' Participant 4

Participants also described how support from the health visitors was often given at a time where if there was a need, they were already in contact with a service providing support such as the hospital or infant feeding teams. There were some participants who regarded health visiting as the preferred source of support. However, for some there are limitations on the support they would seek from health visitors, with them being described as minor or something they would ask in passing, if for example they were attending a weighing clinic for their child.

Finally, the expectation that health visiting as a service should be doing more was acknowledged as motivation for participating in the research.

'*I just, I wouldn't want it on my good conscience, but something like this* [research project] *to pop up, not come up and not say that they need to be doing more, not as the person themselves. Cause a person can only do so much, but they need to be doing more to support them because they are the key to a lot of things*.' Participant 6

Theme 3 – The value of health visiting

The third theme, '*the value of health visiting'*, highlights where participants felt the value in health visiting service was, and where this was improved or reduced by the implementation of telehealth during the COVID-19 pandemic. There are four subthemes, '*where needs are met', 'altruistic surveillance and misalignment with telehealth', 'professional observation and responsibility shift'* and *'information access and telehealth'.*

3.1 Where needs are met

Where participants expressed their health visitor or the service had met their needs, this included where they had received information and advice in an often friendly and informal way from a health visitor. They also described experiences of health visitors being responsive to their needs and using the time in their appointments to discuss and support them with what they needed. This included advice on infant feeding and checking and supporting low mood.

> *'They were, they're great. They gave me, you know, all the vitamins. You know, vitamins for me vitamins for [Child 2 Name]. They gave me lots of advice, you know, links for websites they did. I think I recall them doing they had like a laminated sheet that had had different scores and asked me questions and see how I rated on sort of a scoreboard kind of thing. And that was regarding my…low moods'* Participant 9

Where participants felt that they had a positive appointment with health visitors, it often left them feeling as though they wanted more time with them, expressing that they often didn't have another place to have the conversations as they did in those appointments.

Some participants also shared experiences where they had been supported by a health visitor via the telephone, including feeling listened to and supported. For example, one participant reported that because they had a positive relationship with their health visitor, they knew they could reach out via telephone for support as they needed or schedule home visits. Another explained that they felt the support given by their health visitor went above and beyond their role as a health visitor. This included advocating for the participant and liaising with hospital staff for them to be supported in continuing to feed their baby when they were separated due to a hospital admission.

‘*She actually ended up being a bit of a guardian angel for me really……. I didn’t know what to do or who to speak to, and so I called her and she was really great.’* Participant 9

Participants explained that they wanted personalised support from health visitors, and this is what created positive experiences with the health visiting service and specific health visitors. They described how health visitors responded to their requests to help and, or, identified where they needed support and responded by advocating and supporting them, or arranging additional visits. For some participants, health visitors provided personalised care by ensuring that they remained in contact and provided weekly support where needed.

‘And I remember that really helped because I was in this mother and baby unit half an hour away from my house. It was in [Place], and I was just [in] *this room full of doctors. I didn't know. And just having that* [health visitor’s] *friendly face there really helped me feel a bit calmer in those meetings.*’ Participant 10

‘*I was a bit low after I'd had [Child 2 Name]. So ….she did all the all the checks for [child 2 name] but she could see, that she was fine, her concern was more about me. You know, it felt very genuine and very caring and yeah, I think and again she was like if you need anything call me’* Participant 9

3.2 Surveillance and misalignment with telehealth

Health visiting services were regarded as something important and valuable to participants and families more broadly. Health visiting teams were seen as important for safety of children and the safety of families and parents at risk of domestic violence. For this reason, face-to-face appointments in the home were seen by participants as the best way to ensure the safety of families. They believed this was the best way to pick up on safeguarding

concerns that could otherwise be missed by telehealth appointments. This is because they believed telehealth, including video calls, only provided a limited view of children and therefore were not sufficient to adequately assess the safety of children and their families.

> *'that was another one that I said to my friends. And I said, I said, I don't think it's a good safeguard to have like, I know that they're safe. I know that they're fine and nothing else is going on sort of thing. But what about the families that aren't? So it made me a little bit sad that yeah, they didn't even check him. And weigh him. Measure him, do whatever. Just an excuse to see the child 'cause, it wasn't a case of. Oh, can we see him? Is he alright?'* Participant 6

There were also concerns that telehealth rather than home face-to-face appointments did not provide the same level of privacy available to families to be able to disclose potential concerns.

> *'Yeah, I think that, you know, if you've got a video, if you're video calling and you're calling someone, you're not going to pick up on safeguarding concerns. As you would if you were there. That's a bit, you know, like in a general overview that's a bit concerning. And it's a really vulnerable time for a woman after birth, and sometimes they need that support from somebody else that's not family or friends. And so I think it is a really important service that they provide……others might not be safe in their home, and that kind of things that health visitors pick up as well. Say for example, if my husband was abusive to me and the health visitor is asking me also, what's your relationship like with your husband, I think if he's sat there on the video call.*'
> Participant 11

Some participants had received phone calls from health visitors following their children's admission to hospitals, and this was viewed positively. However, some felt that for

other families, telephone calls might not be sufficient where there were safeguarding concerns and that and an unannounced home visit may be the best way to ensure the safety of children.

Some participants did experience uncomfortable exchanges with the health visitors when being questioned about domestic violence, feeling that the health visitors did not ask in an appropriate way.

> *'She was a health visitor that was just about to retire. And I remember very, very distinctly her sitting on my sofa in my living room with my husband there. And she just leaned across to me and pointed at the part on the form where it asks about, speaking to Mum in private and whether there is any concerns about domestic violence. Now, that wasn't any, but if there had of been, I wouldn't have been able to say anything because my husband was sat in the chair opposite*.' Participant 3

Others felt that health visitors should ask about safety on every meeting, as they noticed the absence of the question in some interactions.

3.3 Professional observation and responsibility shift

In general, participants valued the role of health visitors and regarded them as skilled and supportive professionals who could provide an objective assessment and view of their children. When face to face with health visitors, participants felt reassured by their professional observation. Although recognising that they knew their own child best, they felt the health visitor could confirm or notice any developments or issues with their child, and this could be a positive experience.

> *'So we just checked all the milestones and she said she was meeting them all like plus more. So she was, you know, like on the advanced side. And that was so lovely,*

because that really reassured me that I was doing a good job and the health visitor gave me so much reassurance that I was doing a good job and it made me feel lovely' Participant 10

'It was nice knowing someone was coming in because I think there's like two branches to support, isn't there? There's like professional support, and then your family support. And I think it was nice knowing that someone was keeping an eye on us from the professional point of view.' Participant 1

In contrast, where appointments took place over telephone or video call, the experience did not enable confidence and reassurance in all parents. The aim of the interaction was questioned by participants when health visitors only had a small glimpse of their child or did not view them at all. This made participants feel more responsible for providing an accurate response to questions about their child. In particular, those who were first time parents described as challenging as they did not have anything to compare to.

'The appointment was fine. You know, I could respond to the questions and I was able to say…. was meeting his developmental milestones. However, there was a part of me also that felt that it was a bit too reliant on my perception of my child's development.' (Participant 14)

'*it's like a tick box exercise. Which I know obviously any developmental review is to some extent, but when you can't even see the person you're talking to because you're on the phone, it's like what's the point of that?*' Participant 3

Participants expressed the importance of weight changes, especially for young babies. This was something that they felt needed the professional guidance and expertise of the health visitors, and this is what they were left without. Not having the opportunity to have their child weighed was particularly difficult for some participants. It was discussed

frequently as a substantive change by those who had experience of health visiting prior to the COVID-19 pandemic. They compared this to when they had attended baby weighing clinics, which had also provided an opportunity to seek professional advice from the heal visitors in a more relaxed environment than attending a GP appointment.

> '*And then that felt like just there was just no opportunity to, you know, go to weigh her, which was a bit annoying because obviously with my son I could just get him weighed every few weeks. And I couldn't do that with her. Because obviously the centres were closed.*' Participant 11

> '*And also the concern about if you're going to weigh your own baby, you might be doing it too often. That can give you a false impression of their weight…..it can make you worry that they're not putting on weight when actually the issue is just that you're measuring them in between and also it's without any form of education. You can't just go and weigh your baby and be like, oh, right. OK, that's fine without any sort of expert knowledge or anything behind it. I just think that's really dreadful'* Participant 3

3.4 Information access and telehealth

One positive aspect of telehealth, particularly the telephone, was the ability to contact their health visiting service and access information or advice quickly. The health visiting service and health visitors generally were seen as helpful when they were able to provide information, in particular local information. Conversely, participants were disappointed when speaking to members of the health visiting service who did not have knowledge about or

information on local services. By being able to access the service by telephone, participants explained how they had immediate support for concerns out of hours, and the reassurance they received quickly brought relief. Other participants had access to health visitors mobile phone numbers and expressed their relief at being able to contact someone they know for information and advice when they needed it.

> *'put him in the car seat and it was projectile* [vomit] *and I was just concerned about it. And so I just rang them and they answered straight away and they said, oh, it's just probably stuck an air bubble in his tummy and you pressed on it and it just came out. So it's fine. Don't worry about it unless it keeps happening. But it was that was really helpful. Obviously I didn't need an appointment for that'* Participant 2

> *'If I had any questions, if it was worried about anything, I could just phone her. I had the office number her mobile number, so it was like a good bit of extra support that I could just ring her and have a chat if it needed to in between a visit*.' Participant 10

Additionally, participants found having their antenatal (health visitor) visit via the telephone to be an accessible way to get the information they needed or be directed to where they could access information.

> *'then just discussing, like, so when I have the baby, what I need to look out for, like sleeping and feeding patterns and where the information I can find and I found that really helpful because you know if you don't have anyone to talk to or already have the experience, you don't know where to find information. So when I had that call with her she gave me all the information I needed. So I found that really helpful and she went though it slow so I could understand it all.'* Participant 12

Theme 4 – Conducive conditions for conversation

The theme '*Conducive conditions for conversation'* captures the different elements that were needed for participants to feel that they could have a conversation with a health visitor which benefits them. It involves considering when and how conversations have taken place and the experiences of these, and what participants would like future interactions to look like. The four subthemes are, '*timing it right', 'constraints on disclosure', 'accessibility is not suitability',* and *'preferences for choice and face to face'*.

4.1 Timing it right

For some participants, their telephone appointments were unscheduled, and they answered their phone to a health visitor calling '*out of the blue'* (Participant 13) for an appointment. This was quite disorientating, and participants felt unprepared. They were often unable to recall what they wanted to ask due to the unscheduled nature of the call and were not supported by the health visitor prompting questions. Calls then ended quickly, and they were unable to ask the health visitor everything they would have liked to have discussed. This included where participant had been called by a health visitor to arrange an appointment, and instead did it as part of the booking call.

> *'it was quite out of the blue like I didn't know they were going to ring. It was just really random. I just answered the phone and it was like, oh, it was the health visitor*.'
>
> Participant 3

> *'So I think had I have maybe known that that was going to get a scheduled appointment in you even at AM appointments or PM appointment, I might have been able to write down a couple of things or you know my husband and said Ohh you*

were saying about this the other day, you know so they might have had me, you know on a list. But I certainly don't remember knowing in advance that that's what they were gonna do.' Participant 5

Participants also felt the rushed pace of both telephone and face-to-face appointments limited the amount that they could ask and discuss. This was exacerbated for phone calls when the participant could not see the health visitor. Being rushed gave them the impression that the health visitor did not really want to be there, reducing trust. This was particularly frustrating for those who had scheduled time off or left work early to be able to attend appointments.

'Well I mentioned to her sleep and then the autism tendencies and that's all I really felt like I could mention. I didn't really feel like there was an opportunity for anything else it was kind of like a rushed phone call.' Participant 8

'And I was like OK, this is over before it started, but fine.' Participant 11

In contrast, where telephone and video appointments were well paced, and participants did not feel disorientated or hurried, there were much better experiences.

'A lot of it's just the way that you spoken to, you know…. You don't feel rushed. You don't feel hurried. You don't feel like, obviously you're very aware that there are busy, you know that the strain that there under but you know they keep the appointment time when they've made an appointment time with you on the phone, they ring you when they say that they're going to ring you, which is…really important' Participant 14

4.2 Constraints on disclosure

Certain aspects of appointments either facilitated or created barriers to participants feeling that they could talk openly to health visitors. Speaking on the telephone or a video call rather than face-to-face put constraints on what and how long some participants wanted to talk. They did not feel that they could openly express they were struggling with low mood for example, feeling that this would have been more likely to be picked up in a face-to-face appointment. Participants also struggled to find a rhythm, with conversations being stilted when talking on a video call rather than face-to-face.

> *'I think when somebody is there, you just kind of like you know you've got a slot and I feel like you know with the video call, it was a bit rushed….. I don't think they made you feel like that, but it's just like, you know, you can't really talk for ages on a video call. Or there not just as much to say.*' Participant 11

Lack of continuity was also problematic. By not being able to see the same person for each appointment, participants felt reluctant to speak openly due to the lack of pre-existing relationship, regardless of the qualities of the individual they were speaking to. There was also a frustration with having to re-tell their story again from the beginning.

> *'Like following those listening appointments when those other I've seen those other professionals and I've probably not been as honest about that as I would have been if I've had someone that I've had that relationship with. I think*.' Participant 1

> *'They were all lovely individually. But to have someone different keep coming was a bit off putting. Because you feel like you have to explain everything from the beginning, then building rapport with someone again and trying to open up to*

someone again and whereas if its with the same person, I'd have felt more comfortable' Participant 9

'So whatever I told the first one, when I had another visit with a different person, I had to start all over again, even though they had my notes, you know, because we had a conversation before with the first one, I had to like catch up again with the new health visitor to tell her my story and everything.' Participant 12

It became evident during the research that the post-natal health visiting visits were not always undertaken by qualified health visitors. Participants described seeing or speaking to other practitioners including nurses, clinical assistants, and nursery nurses. The role of the practitioner and the presence of trainees in appointments also constrained what participants felt they could discuss and disclose. Where participants saw someone other than a qualified health visitor, they felt this limited what they could say.

'And then because it was. This clinical assistant or I'm not, you know, I'm not even sure what her job title was. That you didn't. It was kind of felt difficult to discuss things because they weren't the health visitor' Participant 1

Participants also had interactions where a trainee was present, which some felt disrupted the privacy of the appointments and some also found their presence to be uncomfortable. This was the case for one participant who explained that the trainees presence created some tension because of being described the participant as having a similar background.

'*So the way they were like sitting. I don't think she wanted to like be here, she wasn't looking at me or talking to me. It was just the health visitor talking. I think she was from the same, a similar background as me. I think she felt uncomfortable with the*

things that I was saying. It made me feel uncomfortable, and feel like I couldn't say everything in front of her. So it would have been better if it was just the health visitor.' Participant 12

For some, the presence of the trainee was unannounced until their arrival at their home which made participants feel awkward at the unexpected additional person.

4.3 Accessibility is not suitability

Participants explained that they did not have difficulties accessing telephone or video appointments. They described having both access to devices (including mobile phones) to be able to speak on the telephone and video, alongside having the internet to be able to support the call. Even where some participants had anticipated challenges, they were able to connect to video calls easily. Participants expressed concern that this would not be the situation for everyone, including those who did not have access to the internet. Concerns were also raised about the experience of appointments over the telephone or video for individuals who had language barriers.

'*It was alright and my phone at the time, wouldn't log into things, I would have loads of problems with it, so I was dreading it because my daughter has zoom calls from school and so I was dreading not being able to access it but for some reason that one actually worked. Just clicked the link and joined*.' Participant 8

'But then I think you know, the people that do have issues like language barriers and

stuff, would they have got different treatment? As in like would they not, not as in, so how would it have been accessible for them? Yeah. And not everyone has Internet, like we just we do think everyone, and most people have it but not everyone has it has it so you know.' Participant 11

Some felt uncomfortable viewing themselves on a video screen and tried to keep their face in as limited view as possible. For others, challenges with telephone and video calls related to more practical elements of trying to manage children at the same time. Participants described difficulties of having active children and trying to get them to engage with the calls, but without interrupting the appointment (such as closing the laptop) and trying to keep them still enough to be able to show them to the health visitor.

'And my little one was crawling all over it. Because that was the other thing. It was quite stressful because he was crawling at that point, and he also knew how to close the laptop. So you know when you just like, halfway through the call, he's just gonna shut the whole thing down. So yeah. It was quite stressful in a way.' Participant 1

Participants also expressed concern around having developmental checks that did not easily align with the virtual nature of telephone and video calls. Participants recalled being asked if their child could perform certain activities as part of the developmental check but finding it challenging figuring out how to show this via teams. Participants were also concerned about having to keep their child still for the duration of the appointment. Additionally, due to being isolated from other families and children at that time, participants explained the difficulty in answering questions over the phone that relied on a comparison to other children, which they did not have. This was made more challenging by not having someone with them to help explain it.

'There wasn't much sort of utility in it, because obviously nobody else was seeing your baby. So other than the really obvious ones, there was somewhere you were like, oh, can they do that? And not just in a kind of, oh, I've got a baby before, so I've got no idea whether they can make a pincer grip because I've never watched them because I'm like too busy trying to cook tea and look after a toddler as well but I think it was some about making noises and stuff like that……Well, if you're not actually speaking to somebody and they can sort of explain that bit, it's a bit difficult to know whether or not you need to be worried' Participant 3

'I think it just felt a bit odd doing it on teams because, we were just a bit like well, it just felt odd her not being in the room and being able to see my little one. Do you know what I mean? And we were talking about all these milestones, and we were just sat there on a laptop. It felt very impersonal and like it wasn't. I almost felt like there was no effort to get to know the family and what he could actually do' Participant 1

4.4 Preferences for future health visiting contacts

When participants discussed their planned or hypothetical future engagement with health visiting services, two aspects seemed important, the opportunity for face-to-face appointments, and choice. Face-to-face appointments in the home were a preference for several reasons. This included, making it easier to look after multiple children and engage with the health visitor, allowing health visitors to gain insight into the family home and the condition of the home, allowing for an adequate assessment of parent's wellbeing, allowing parents to know who their health visitor is and health visitors being able to view children themselves making it easier for parents to discuss what they need to. Face-to-face was also

the preference for new mums and for new baby appointments. Participants were also happy for future face-to-face appointments to take place in a clinic setting.

> *'Obviously because, you know even, even if I'm saying that even when we were here in my house, they didn't, they didn't see everything I was saying anyway because, my little boy just didn't do everything if that makes sense? But I makes it easier when they are here, or in a meeting room if that makes sense so they can see what I'm saying'* Participant 8

> *'I think face to face is better, it feels more personal. I think you can hide things better on the phone or on video or you can't express things that you could face to face*.' Participant 9

If there was to be another pandemic, then participants expressed a preference for video calls rather than the telephone. This was due to video calls allowing some form of face-to-face contact, which allows participants to feel more comfortable speaking and better able to judge the health visitors body language. Telephone was seen as something only suitable for quick checks or advice in between face-to-face visits.

> *'...when they rang me and..... It was like again, it's just a voice. You know what I mean? You don't know what they look like. You don't know. I think you miss a lot. Of like. What's the word. Like body language in a way.*' Participant 4

> *'Probably face to face as much as possible, I feel like when you're in your home, you can really get across everything that's going on and you can really build that relationship. But I'm also really happy to supplement with phone calls as well. You know, in between visits, if there's anything you need to check or ask or need a bit of advice, that doesn't always warrant like a big home visit, and that's fine*.' Participant 10

Choice was also discussed by participants when considering future contact, expressing that a range of options for meeting with health visitors should be available so that the one that best meets their need can be used. Participants felt that having choice could allow them to meet a health visitor around their schedule, if they found it easier to accommodate a phone call than a face-to-face appointment.

> *'Yeah, that's fair enough. And I think every appointment from that should be a choice. As to whether it should be a video, a telephone or a face to face. I think it should be an option. Because there might be some things you don't want to talk about face to face, there might be some things you don't want to talk about, you know, sort of on the telephone. Or on a video call or whatever. I think it should be. I think it should be an option.'* Participant 6

Theme 5 – Relationships as the foundation

This theme (relationships as the foundation) captures the importance to participants of being able to have a relationship with a health visitor, who is aware of their personal circumstances and needs, who can go beyond niceties to support them and their family. The three subthemes are, *'personal qualities of the health visitor', 'relationships are fundamental'* and *'wanting to know and be known'.*

5.1 Personal qualities of the health visitor

Where participants recounted positive experiences with health visitors and practitioners, this was often aided by the personal qualities of who they were speaking to.

Friendliness, warmth, tone of voice, humour, relaxed nature, and calming presence all were described by participants as qualities of health visitors that helped them be put at ease. Personal qualities also helped build trust and develop rapport and relationships between the participants and the health visitor. This included where health visitors shared something of their own life, such as a bit about their own families, or showing participants their dogs on a video call. Where health visitors were friendly, participants described feeling more relaxed and not under pressure to answer questions, or under pressure to ensure their child did what they were asked during development reviews.

> *'for the 9 and 12 months review. If they asked me something and [Child 1 Name] didn't want to do it, I remember being really stressed, like oh, my God, they're gonna not. They're gonna like lower her points down. Whereas with this one she had the understanding, like I know she's a toddler, she doesn't know who I am and she's not going to want to sit here, so don't worry. If, like, she wanders off or you know, she wants to start speaking to you instead and so yeah it was just more the way that she dealt and she spoke to me that that was really nice'* Participant 4

Where participants felt the health visitors were there for them and cared about them and their families, this reduced feelings of judgement or assessment and instead made participants feel supported. Participants described health visitors using anecdotes and humour to put them at ease and create an atmosphere that helped parents, especially when they were feeling vulnerable.

> '*I never felt that was you know being tested or being watched or whatever…..and that's when she was….looking around and she was looking around where [Child 1 Name] was sleeping. And you know all of those areas….. I didn't feel at any time, oh this woman here to catch me out, you know, she was very supportive and first and*

foremost she asked how I was…..I really felt that she was as interested in my wellbeing as she was in [Child 1 Name]'s wellbeing.' Participant 14

'She wasn't judgmental. She was there for both of us. I didn't just feel she was there for him. She was there for me as well.' Participant 6

There were limits to the extent to which personal qualities of the health visitor were sufficient to meet the needs of participants. Participants explained that although the practitioners they saw were often approachable and sympathetic, by seeing a different person at each visit there was not an opportunity to know the person to whom they were speaking.

'they've always been nice, but I do just think it would be it would be better, like I said, with the doctors you can go and see a doctor that you want to see if you wanted to see someone specific, it'd be better if it was run a bit more like that for the way you've built up trust between them.' Participant 4

5.2 Relationships are fundamental

Having a relationship with a health visitor was important for participants. Participants who developed a relationship with their health visitor explained the benefits of this including feeling confident to contact them following appointments, not feeling rushed in appointments, and having the space to ask questions and having their needs met. Prior to the COVID-19 pandemic, this relationship also extended to the wider health visiting service. Participants felt like they knew those who were running the clinics and were familiar to each other. For those who did not feel they had a relationship with a health visitor, they expressed that they would have preferred if they did have a relationship with a health visitor.

'It was nice and because I feel that as a first-time mum, they're just, you get bombarded with lots of different information and you don't really know what you're doing. And. It was nice to, you know, talk to her and this kind of I like build that relationship and with her during that initial meeting.' Participant 11

Being in the home environment facilitated the development of relationships between participants and the health visitors. Participants viewed their own homes as secure, confidential settings that provided them the confidence to discuss what they wanted. Whereas when speaking on the telephone, this felt to reduce some of the control parents had over the appointment, security, and privacy (compared to when appointments took place in their own homes). When in the home face-to-face, participants felt that they could read the body language of the health visitor, and vice versa, leading to better mutual understanding. Participants also described the benefits of being in the home of reducing fear of judgement and reducing the formality, both which help with developing a relationship.

'I think you worry, oh is the health visitor going to like me. Am I going to like them? Are they going to understand my parenting? Am I going to like the advice they give or am I going to get my back up a little bit at some of the advice and I think that's something you can really work around if you're just sitting having a brew in your house, I think you can get a good measure then.' Participant 10

'I think it's that face-to-face communication. Just being able to read somebody's body language makes a difference, you know, like to know. To build that relationship with them.' Participant 11

Where there were existing relationships between health visitors and participants that had been establish through home visits, telephone contact was acceptable and useful as participants knew the person they were contacting for support. This meant participants who

had a combination of telephone and face-to-face support from the same health visitor felt confident talking to them on the telephone and felt they had a good relationship.

> *'I think if it was someone new or someone else it might have been difficult, but because I've seen my health visitor face to face so much and we had such a good relationship, it was just like talking to a friend. It was nice.*' Participant 10

Where participants did not have a relationship with a health visitor, appointments were often not seen to have as much value. This was evident in telephone appointments, where participants described health visitors not trying to build rapport on the phone, which led to phone calls feeling transactional and '*just okay'* (participant 11) for themselves.

> *'And it's obviously never, not a health visitor you have ever spoken to, not a health visitor that knows anything about, about you, then yeah. Yeah, it was. And just one of those things that came and went.'* Participant 3

Some participants did not know who their health visitor was or were told they did not have a health visitor due to pandemic-related redeployment. This meant they were unsure who to contact if they needed help or advice. Some were told that only major issues warranted contact with a health visitor. Some just accepted that they would not be able to see the same person more than once.

> *'So two weeks after that, we were just about to go into lock down and I didn't get a phone call. I didn't get anything. I rang up at 10 weeks like the health visiting team and asked for my midwife, erm health visitor sorry. Uh, and was told that she'd been redeployed back to Midwifery due to COVID, and I didn't actually have a health visitor. But they couldn't give me a health visitor or put me in touch with anyone unless there was a major concern*.' Participant 8

5.3 Wanting to know, and be known

Participants wanted to know who their health visitor was, or who they would be seeing from the health visiting service. Participants preferred when they were able to see the same person consistently, as this helped with relationship development, support, and the confidence to disclose. Participants expressed the importance of initial introduction when speaking to health visitors on the telephone or when having some visit their home. By not knowing who they were meeting or speaking to, this meant they were unable to say who they had spoken to previously and did not feel as they knew who they were seeing at the time.

> *'I think it was just literally like and so and so I'm a nurse working with the health visiting team and that was kind of it. There was no like. You know, I work with your health visitor or, you know, there was nothing like that. It was just like I'm here I'm from the health visiting team.' Participant 1*

> *'it would just be nice to have a name before because it's stranger that you're letting into your house. To look at your kid and have a chat with you. But I was OK with it, but I think it would be better if on the letter they sent me they just got the name on it on who I was meant to see'* Participant 4

In addition, participants wanted their health visitors to understand themselves and their family and be attuned to their personal circumstances. Where participants felt known, and felt their family was known by health visitors, this helped facilitate building a relationship and was appreciated by participants. For some, being known by and being asked using their name rather than a generic 'mum' was appreciated. One participant described how she was assigned the same health visitor for her second child as her first and was pleased that she had remembered her and her personal circumstances and continued to support her with these.

'It was fantastic because you just don't have to, you know, she was really good at remembering, you know, whether she'd written a little note for herself or whatever, but you know, she remembered again. [Husband's name], wasn't that my husband wasn't there for that visit either. But you know, she remembered to ask about him and, you know, knew a little bit. It's a bit like when you go to a good hairdresser and you know they remember where you've got on your holidays and stuff, it makes you just feel that they know you are a little bit.' Participant 7

'*I've spoken to my friend she's like oh it bugged me when they just call you mum, well I didn't have that you know they knew my name they called me P14 I wasn't just referred to as, oh and how's mum? It was they knew you and they had obviously taken time to read your file and so that was good'* Participant 14

Theme 6 – Frustrations with the service

This theme '*frustrations with the service'* captures frustrations that participants when they felt they did not receive an adequate service for themselves or their children. The three subthemes are, '*telehealth is inferior'*, '*'it was for them, not for me' – feeling like a tick box exercise'*, '*judgement, opinions dismissal and disappointment'*.

6.1 Telehealth is inferior

Telehealth, including telephone and video calls with the health visiting service were seen as less than, rather than equivalent to face-to-face appointments. For participants who

were first time mums whose first appointment was by telephone, they reasoned that they did still get the information at a time when they were still working. However, they felt it would have been better face-to-face as this would have allowed for a mor personal interaction than what was achievable over the telephone. There was also a sense that telephone appointments did not equate to seeing a health visitor, as participants distinguished when they were physically able to see a health visitor comparative to speaking with one.

> *'I didn't actually ever see a health visitor. Well I did, sorry, but the first one was the 9-to-12-month review was when I actually physically saw someone*.' Participant 4

> *'a lot of it was over the phone. We had a review at some point via Teams, so we didn't really have that like human input'* Participant 1

6.2 '*it was for them, not for me*' – Feeling like a tick box exercise

There were frustrations about the purpose of the appointments and contacts. The appointments often felt like 'tick-box' exercises to participants, who perceived they met the requirements of the service not participants and their family. This was true of all contact types, face-to-face, telephone and video. Participants felt that they were asked questions quickly, without time given to establish rapport and brought to a swift end. Appointments felt agenda led and adherent to a generic schedule, making the appointments feel like a business like, impersonal encounter. This was quite offensive for participants who had re-scheduled their days and their children's care to be able to attend appointments.

> *'You know, like anything that they had a tick box for was the only time I ever had heard from them.*' Participant 13

'I think they just wanted to get the appointment over and done with. But it didn't feel like, like they were there to see me, they just wanted to do like a tick box.' Participant 12

'And it just made me a little bit like, I understand you might have a massive list, but at that point in your life when you've got this little baby, you need to make sure that everybody's on the same team and that team is to make sure that baby's OK. And at that point, I felt I was just a tick box. Which I thought was very sad.' Participant 6

Telehealth contacts meant that participants had a passive experience on the telephone and videos. They felt questions, and developmental checks were done for official records to be completed and boxes to be ticked. They felt the time was not used to develop a relationship or enquire deeper about participants and any questions they had or provide the information they needed.

'Again, it was…clearly just there was a checklist of developmental milestones that we went through, whether I had any concerns or not. So it was quite a brief appointment' Participant 14

'it felt like a box ticking exercise and it was really quite frustrating because I had a lot of problems within pregnancy and I had a lot of problems in labour, with my little boy, so I had a lot of questions to ask……. It was just someone to listen to, listen to me and tick the boxes' Participant 2

6.3 Judgement, opinions, dismissal, and disappointment

Sometimes participants felt as though they were being, judged interrogated and chastised by staff from the health visiting service for the choices they were making. They felt that some staff, including health visitors, were antagonistic in some instances, including

where opinions (rather than information) were given on basic care such as how long to hold their baby. Participants also felt that health visitors did not respect decisions that they had made, such as co-sleeping, and used language which was disrespectful and implied that participants were not keeping their children safe.

> *'She was friendly, but one of the things she was saying, she said. And so when you fed her, don't get it. Don't. Don't hold it too much because she'll get used to holding her too much. So when you feed her, always put her down in her Moses basket. And I just thought, you having a laugh?..... She she's a week old. She wasn't even a week old. She you know. How's that baby gonna know that I'm holding her too much?'*
> Participant 13

> *'She said something about she gave me a sleep assessment. Then I've just thrown it in the bin because. I was a bit pissed off with it saying P2 is aware that [Child 2] is safer sleeping on her own in her own cot. And I just thought that terminology was really disgust, like, really. I didn't like it at all because me and [Child 2], we co-sleep. I co-slept with [Child 1] until he was a year as well. I just think. I just think the way the way people demonise you for it, P2 is aware that [Child 2] is safer sleeping on her own in her own cot. I thought that was. I don't even know what the word insulting and suggesting that, I'm not trying to keep my baby safe.'* Participant 2

When participants reached out to health visitors when they had concerns about their children's health, some their concerns were dismissed immediately, and no further support or help was offered or presented to parents. This was also true for parents who disclosed concerns about their own health and wellbeing but were not given any response or any help. Participants believed that this was due to this not being part of the scope of the health visitor role and not wanting to take undertake the extra work it required to support them. In cases

where help was sought, the tone and language used by health visitors sometimes projected judgement and blame onto the participants, insinuating they were at fault.

> *'I phoned, I kept phoning, I'd had a, he was being sick and a lot after feed, and having up to 15 diarrhoea nappies a day. And they, the duty lady man, whoever I spoke to. Just said try comfort milk and that's all I got. So I was like that was really helpful. That was the help I got'* Participant 8

> *'it sounded like a more mature health visitor on the phone. And you know, she kind of suggested that I'd put my daughter in danger because this could be an allergic reaction and she could go into anaphylactic shock. You know, she said you need to take this very seriously. I remember because I was, I think I was getting a, I was waiting for some shopping so I can still visualize where I was. You know when you just taken aback, so comments that people give you And I just said, I got a bit cross with it, and I just said hang on a minute. I rang your team to have this conversation, this is what you told me to do.*' Participant 7

Where participants believed that health visiting services should have been able to offer the support they needed, they were sometimes referred to other services instead.

> *'I remember thinking I could write a list of as long as my arm of stuff that I want to ask right now and you're telling me that I can only talk about one thing, which is probably like one of those 50 questions I've got. So it just it just didn't really feel like it would hit the spot for what I needed at that time*.' Participant 1

> *'And I just remember thinking, what an absolute waste of a day I could've, I could've tried to get her in this morning, but I've stuck with the this like, oh, no, go with the health visitors. Like, that's what they're there for, to get advice. And they can help you out. But then just be told, oh, no, we can't actually do anything, you need to go and*

speak to your doctor. It was like I could've just gone in this morning and spoke to the doctor. Do you know what I mean?' Participant 4

Some of the indifference towards health visiting contacts expressed by participants was linked to the extent to which they saw value in the interaction compared to the effort of engaging. For some, appointments did not provide any additional information or support to what other services had told them. Despite this, the continuation and perseverance to continue with the appointment was motivated by wanting to ensure that their child was benefiting from the service rather than themselves.

'……. But yes, I just remember feeling it was a bit more like I can't really be bothered having this phone call and if it wasn't for obviously like the checking on [Child 1 Name], I probably wouldn't have wanted to do it because I knew they might ask me something different about [Child 1 Name] and I wanted to make sure she was getting checked. That's why I had the phone call.' Participant 4

Summary of questionnaire and interview findings

Across both the questionnaire and interview results, there were a range of views on the nature and benefits of health visiting specifically, and the use of telehealth in general. When it came to the giving of advice, telehealth was seen to have value for around half of questionnaire respondents. The interview results showed participants found being able to access advice via the telephone helpful, as it provided the information they needed quickly. However, there was less confidence in the use of telehealth for other contacts with the health visiting service.

The findings of the questionnaire and interviews indicated accessibility does not equal suitability, especially for child development reviews, maternal wellbeing and ensuring families are safe.

In both the questionnaire and interview results there was a preference for face-to-face future care, as it allowed for better insight into families and their homes. However the need to accommodate individual preference and choice was also evident.

From the questionnaire results, only a few participants attended a group organised by the health visiting service by video call and none expressed a preference for attending a group via video in the future. The majority expressed a future preference for face-to-face groups. In the interviews, participants did not have the opportunities they had envisaged during their pregnancy and maternity leave during the COVID-19 pandemic, such as not being able to be around their support network or talk to other parents. There was grief over the loss of face-to-face contact with both the health visiting service, and their friends and family.

Both the questionnaire and the interviews identified challenges to developing relationships with health visiting service staff members. Relationships were complex with challenges directly related to telehealth. This included receiving rushed and unscheduled phone calls, not allowing for personal interaction and the feeling the telephone was for the benefit of the service (tick-box exercise) rather than for the participants. In addition, there were broad challenges to developing relationships such as lack of continuity of care, feeling judged and having concerns dismissed.

Summary of results

The use of reflexive thematic analysis led to the development of six themes, of which all had a minimum of three subthemes. The first theme (Control lost and changes enforced) related to the context of COVID-19 and explored the experiences of parents beyond health visiting, showing how their lives were impacted by the legislation imposed at the time, '*it was just lonely and miserable and my husband worked in a pharmacy so he had to still go to work while everybody else was furloughed, and* [I] *remember he'd go to work in the morning and I would just cry' Participant 10*. It also described participant experiences with services that were involved in their own and their children's care at the same time as health visiting services '*It was the midwife that visited us at home. And I do remember that quite vividly, because she had to pass the scales through the window' Participant 14*.

Two themes (Expectations and Aspirations for health visiting, and Frustrations with the service), demonstrated parent's experiences with the service, which were often negative or included where they felt the service needed to improve '*you should be able to trust them because they're part of the health visiting team, but, because they're not here in front of you and are on a rushed phone call, no, not at all.*' *Participant 8*. This included parent's reflections of challenges with the service, including feeling as though the service could be putting more effort into working with families and appointments feeling like a 'tick-box exercise', *'You know, like anything that they had a tick box for was the only time I ever had heard from them.*' *Participant 13*. It also showed that due to their experiences with other services and with the context of COVID-19 telehealth was an expectation '*I was very much used to not seeing any health professionals, so I wasn't surprised.' Participant 2*.

The other three themes (The value of health visiting, Conducive conditions for conversation, Relationships as the foundation) all had some link to how the influence of

continuity of care and the presence or absence of a relationship with a health visitor influenced their experience of the service. This included expectations of lack of continuity (*'I kind of expected that it would have been just anybody. I'd not lost my faith in the service, but I'd lowered my expectations of the service'* Participant 6), how lack of continuity was frustrating and constrained what they felt able to disclose (*'So whatever I told the first one, when I had another visit with a different person, I had to start all over again.* Participant 12) but also experiences of where continuity meant that relationships had developed which enabled participants to reach out for support when they needed ('*She actually ended up being a bit of a guardian angel for me really….. I didn't know what to do or who to speak to, and so I called her and she was really great.'* Participant 9).

Where parents had a relationship with a health visitor, this brought benefit to them. This included knowing who to contact following appointments if needed, having the space to talk and feeling that they were known to the health visitor (*'It was fantastic because you just don't have to, you know, she was really good at remembering, you know, whether she'd written a little note for herself or whatever, but you know, she remembered…'* Participant 7). This had implications for telehealth, with those having a relationship feeling as though telehealth was suitable (*'I think if it was someone new or someone else it might have been difficult, but because I've seen my health visitor face to face so much and we had such a good relationship, it was just like talking to a friend. It was nice.*' Participant 10), but others feeling that the home environment was the best space to build a relationship (*'I think it's that face-to-face communication. Just being able to read somebody's body language makes a difference, you know, like to know. To build that relationship with them.*' Participant 11).

Relationships and continuity of care seemed to be where parent's placed the most value (or lack of value) with the service. This aspect is therefore discussed in more depth below in relation to wider literature.

Discussion

The findings of this study show the experiences of telehealth and health visiting services in the context of the COVID-19 pandemic. The use of the telephone and video calls were prevalent throughout different appointments. Participants felt that by the service using telehealth, it took away some of the aspects that makes the service valuable such as their ability to enter peoples home to meet families and offer support, and to provide their professional observation skills in terms of child development, maternal wellbeing, and safeguarding.

In addition to some concerns with the use of telehealth, there were benefits and an acceptance of telehealth during the COVID-19 pandemic. Participants expressed an understanding of safety of limiting face-to-face contact during the pandemic and appreciated the ability to have some contact with the service, especially when seeking information and advice. The COVID-19 pandemic was a particularly challenging time for participants, with many being isolated and not having the experiences they thought their maternity leave or service journey (including with midwifery and health visiting) would bring.

Where participants felt the service did not meet their needs, this was often due to the service level of provision not being enough, appointments feeling too generic and standardised and the individual approach of health visitors and other practitioners who judged, dismissed, or did not support participants. Conversely, where participants felt they received personalised support and their needs were met, they reported positive experiences of the service.

Relationships were important to participants, as where they were present or absent often influenced their experiences. Telehealth was a potential challenge to relationship

development, as the questionnaire results showed that both telephone and video calls did not provide a suitable way to build a relationship for many participants.

There is a detailed discussion of the findings from this study and the previous study of staff experiences, the strengths and limitations and the wider relevance in the Discussion Chapter (Chapter 6).

Findings related to relationships and continuity of care

One of the key findings from this study of parent experiences of health visiting services was the experiences and of, and aspirations for, having a relationship with a health visitor and continuity of care. A review by Haggerty et al. (2003) identified three types of continuity of care across different types of health care, informational continuity, management continuity and relational continuity. The two aspects of continuity that most align with the findings from the study of parent experiences in this thesis were, informational continuity (making current care appropriate for individuals based on the use of information of personal circumstances and past events) and relational continuity (an ongoing relationship between one or more providers and the patient/service user). Findings from the study of parent experience included examples of how, when these aspects of continuity were present, they enabled positive experiences, including knowing who to reach out to for support, and feeling that their needs were met. Where these were not present, participants described feeling reluctant to talk, frustrated about having to re-tell their story and overall saw limited value in the appointments.

There is some existing literature relating to relationship building and continuity of care in health visiting. A study including interviews with health visitors and observation of health visitor-client encounters, described relationships as an enabling mechanism, and something that also relied on there being trust between the parties (De La Cuesta, 1994). This is reflective of the findings from the study of parent experiences in this thesis, in which the presence of trust and relationships can influence the extent to which parent's want to, and feel able to, engage with health visiting services.

A realist evaluation of an enhanced health visiting programme in Scotland which included interviews with health visitors and parents identified four components of programme theory, two of which have relevance for the findings in this thesis, 'Trusting relationships' and 'Home visiting versus drop-in clinics' (Doi et al., 2017). Trusting relationships were improved through the enhanced service, the continuity of care it provided, and adequate visit times to develop the relationships. Home visiting and drop in clinics were wanted by parents, as home visiting facilitated relationships with the health visitors and drop in clinics allowed for social support opportunities (Doi et al., 2017). The findings presented in this thesis of parent experiences also demonstrate the impact of being able to have a relationship or not with a health visitor, and a preference for being visited in the home to develop relationships, which is where parents felt confident and felt that the face-to-face encounter allowed them to use their own, and also witness the health visitors, body language which reduced feelings of formality and judgement. In addition, findings relating to the experiences of health visiting staff (Chapter 4) also demonstrated their preference for home visiting, having the time to develop relationships and being able to run clinics to facilitate interactions between families. These elements were challenged by the introduction of telehealth, including the move to online groups.

Outside of the UK, other countries with similar models of care for vulnerable families during pregnancy and in the months following the birth have shown benefits of continuity of care models for women or families with needs that require additional support (Frederiksen et al., 2023). The programme described by Frederiksen et al. (2023)includes seeing the same midwife throughout the pregnancy and the same health visitor postpartum. Through a combination of observation and interviews of the staff who provided the care and parents who participated in the study, three key findings were reported. These findings were 'Developing relationships over time: knowing and wanting to be known', 'Handover of information over time: being known across providers, services and sectors' and 'Matching needs for support over time: receiving relevant, timely and flexible services'. The three aspects of continuity care that were found in Frederiksen et al. (2023)'s study reflect similar findings to the findings from the study of parent experience's in this thesis, showing the benefits of having a continuous relationship, and being known to services.

In addition to health visiting services, continuity of care has been shown to have dramatic influences on outcomes for women and babies. A recently updated Cochrane Review found that women who receive midwifery continuity of care models are more likely to have a spontaneous vaginal birth, report positive experiences and are less likely to need clinical intervention (including caesarean section and instrumental birth) (Sandall et al., 2024). A realist review by Fernandez Turienzo et al. (2021) explored the impact of midwifery continuity of care models on preterm birth in pregnant women. The review found that mechanisms that are included in continuity of care models, including trusting relationships, access to support services and community networks may influence preterm birth outcomes.

There is a need to explore further the impact of the presence, or absence of continuity of care in health visiting, from both a parent and staff perspective. This is due to the limited existing knowledge about the influence of relationships and continuity of care in health visiting presently. Additionally, the knowledge of the influence of other services and other aspects of care on health outcomes, and the findings of from the study of parent experiences in this thesis justify further exploration of this.

This would also include a focus on the extent to which this is impacted by the stage that telehealth this introduced as a method of meeting families, as recent work has suggested that early telehealth appointments can increase negative outcomes in other home visiting programmes (Holland et al., 2024). Additionally, with the cross over of care from midwifery and health visiting in the United Kingdom, it is important for future work to consider how continuity across these two services could influence outcomes and experiences.

Chapter Summary

This chapter has presented the methods, analysis and results of a mixed-methods study exploring the experiences of parents who had contact via telehealth with health visiting services during the COVID-19 pandemic. The next chapter will be the discussion chapter, which in addition to discussing the findings from this study, will discuss the other studies undertaken and what this thesis has found.

Chapter 6 – Synthesis and Discussion

Chapter Introduction

This chapter first brings together the findings from the three studies in the thesis, the systematic review, the qualitative study of health visiting staff experiences and the mixed-methods study of parents. Next the implications of the results for health visiting and services more broadly are discussed. Then the strengths and limitations of the studies that have been undertaken are considered. Finally, recommendations for health visiting services and future research, the contribution of the work and a conclusion for the thesis is presented.

Synthesis of findings

It was always the intention to synthesise the findings, but the method by which this would be done was decided following the success of using the using the convergence coding matrix (Crossland et al., 2020) in the systematic review final synthesis. This is in line with the pragmatic methodological approach adopted for this study. As for the review, a coding matrix was developed to show where the themes from the three studies showed agreement, silence (where there is no agreement or disagreement between study findings) or dissonance (where the specific theme arising from one study disagreed with the theme finding from another study) (Table 20). In the table silence is highlighted in light blue and dissonance in light red. The findings from this matrix were then used to explore key findings across the studies.

Table 20

Synthesis of qualitative findings from systematic review, study of staff experiences and study of parent experiences.

Systematic review			Study of staff experiences			Study of parent experiences		
Theme/ Agreement	Silence	Dissonance	Theme/ Agreement	Silence	Dissonance	Theme/ Agreement	Silence	Dissonance
Impact on Families			X			X		
Challenges of the evolving system			X			X		
Impact on services			X				X	
New benefits for health care providers				X			X	
Positive and Negative experiences of telehealth			X			X		
Extent telehealth can meet needs and deliver care			X			X		
Ease of using the technology			X			X		
Preference for visit type and future use			X			X		
X			Health Visiting – Descriptions and Actions					X
X			Context of telehealth implementation				X	
X			The organisations culture and capacity for implementing telehealth				X	
	X		Decisions for using telehealth				X	
			Practicalities of telehealth				X	
X			Where telehealth brought value			X		
X			Working with families at a distance			X		
X			The loss of home visiting in health visiting			X		
X			Relationships and camaraderie			X		
	X			X		Control lost and changes enforced (due to COVID-19)		
	X				X	Expectations and aspirations for health visiting		
	X		X			The value of health visiting		
X			X			Conducive conditions for conversation		
X			X			Relationships as the foundation		
	X				X	Frustrations with the service		

Key findings from the studies

The convergence coding matrix (Table 20) showed that many of the systematic review findings were echoed in the empirical studies undertaken for this PhD. Since the systematic review question was broad, and not specific to health visiting, (*What are parents' and health care providers' experiences, and views, of telehealth in the first 1001 days (of life) during the COVID-19 pandemic?*), it produced quite generalisable findings. Where there was 'silence' it was mainly because health visiting specific findings were not located in the review papers. Therefore, the following section will focus on the four key domains that showed either agreement or dissonance between staff and parent experience studies undertaken in this PhD.

Health visiting should take place in the home

The transition from home visiting to telehealth appointments was not widely welcomed. The systematic review, and studies with staff and parents all revealed challenges with and reservations about telehealth. There seemed to be a fundamental belief from both health visiting staff and parents that health visiting should take place face-to-face in the home. Health visiting staff and parents shared similar concerns, including, not being able to have health visitors view the home (linked to concerns around safeguarding) and not being able to use cues such as body language to help develop a relationship. Both groups preferred health visiting to be primarily face-to-face, with only certain specific elements of the service offer (professional meetings and infant feeding support from a health visiting staff perspective, and access to additional information from parents) being regarded as suitable for future telehealth.

Health visiting staff and parents also raised different concerns. For health visiting staff, by not being in the home they felt unable to observe the home surroundings and, therefore, to make judgements about what needs there were for an individual family, and how they could provide tailored support. While telehealth provided audio and in some cases limited visuals, staff felt they could not pick up on subtle cues (such a body-language, or sounds coming from other rooms in the house) or the general state of the home environment. Fundamentally, for almost all the health visiting staff interviewed, telehealth did not align with their core belief that home visiting is critical for the delivery of health visiting.

For parents, telehealth meant they felt more responsible for self-assessing their child's development, and that they missed the opportunity for a professional assessment. They did not feel they were getting the experience of 'seeing' a health visitor, and appointments felt like a tick box exercise for the benefit of the service, rather than being all about supporting them.

The importance of relationships

The importance of relationships was found in the systematic review and was discussed by both health visiting staff and parents in this thesis. Health visiting service staff felt that forming relationships with families was an important aspect of their role and the health visiting ethos more broadly, helping parents feeling comfortable disclosing issues. Health visiting staff also reported that it was the aspect of their work that staff took enjoyment from. They valued the opportunity to develop longstanding relationships with parents, which sometimes continued throughout parents having multiple children. Reflecting on the relative loss of the space to make meaningful relationships in recent years brought a sense of sadness in some of the health visiting staff narratives. They explained how the health

visiting service had changed both due to COVID-19, and even before the pandemic hit, when changes had been made to the structure of health visiting services. Combined, these changes meant they were no longer able to form relationships with families in the way that they had done historically, and in a way they would ideally want to.

The value of positive relationships and sadness over the absence of relationships was also described by parents in the mixed-methods study. Parents wanted to be known by a health visitor and wanted a health visitor to know them and their family. Those who were able to develop relationships with health visiting staff described that it assisted with feeling that their needs were being met and meant that they were then more comfortable to engage with telehealth. For parents who did not feel that they had a relationship with health visiting staff, this reduced the value of the service for them. These parents expressed that they would have preferred to have had a relationship with a health visitor.

Discrepancies in understanding of health visiting services and roles

The health visiting service, and what the offer is, was discussed by both health visiting staff and parents, but in distinct ways. Health visiting staff presented a clear outline of the service offer, what they were mandated to deliver and the agenda of support and appointments that was offered. Health visiting staff also described the health visiting service as the ‘go to’ for children’s health. By contrast, some parents reported that they would be more likely to seek help from their GP, due to knowing and trusting their GP, and easier accessibility. When health visiting staff described their role this was not always aligned to the description of the official service offer. Often they gave more emphasis to instances of providing personalised support to parents, including emotional support. The distinction

between the service offer and the actions they undertook provided contrasts and similarities to the parent's experiences.

Some parents had limited awareness and understanding of the health visiting service, quite different to the structured outline provided by staff. For many parents, the nature of the health visiting service seemed to be more elusive, and they were not sure what the service could and could not help with. In contrast, for parents who had a positive experience of health visiting and felt their needs were met, their description of the health visiting service was similar to the descriptions of the role health visiting staff gave.

Parents were positive about support when it was informal, personalised to them, responsive to their needs at the time, and they were supported with what they needed. This was contrasted with parents who had a more negative experience of health visiting, where they had felt their personal choices or concerns were not adequately responded to or supported and were left feeling judged, dismissed, and disappointed.

Limited benefits of telehealth

Parents and health visiting staff did report some benefits to telehealth, but these were limited. From the mixed-methods study, parents valued the opportunity to access information easily through telehealth. Some participants explained that having the option to reach services out of hours, or, for some participants, to contact a health visitor on their mobile, often meant they could access advice and information quickly, bringing a sense of relief. The qualitative study with health visiting staff showed that the benefit of telehealth for working with parents was either contextual (providing a way to maintain contact in the COVID-19 pandemic) or supported organisational challenges (allowing for more visits to take place when there were

staff shortages). Some specific services, such as support for infant feeding, were also cited as benefiting from telehealth access. The greatest benefit for staff was the transfer from in-person to on-line meetings, was allowing for greater involvement with other professionals, overcoming challenges of busy diaries and lengthy travelling.

Implications of findings

The findings from this thesis have implications for health visiting services, but also other services that work with families in the early years.

A scoping review prior to the COVID-19 pandemic identified three core practices that influence how health visitors work to provide the delivery of the universal service (Cowley et al., 2013). These core practices were '*the health visitor-client relationship, health visitor home visiting and health visitor needs assessment'* (Cowley et al., 2013, p. 12). The results from the research in this thesis show that all three of these core principles were challenged by the implementation of telehealth, with both health visiting staff and parents struggling to develop relationships with each other, and staff only being able to provide limited home visits and having a reduced capacity to assess needs. Telehealth constrained the practice of health visitors work and therefore has a potentially limited scope when delivering universal services.

In addition to relationships being seen as a core practice for health visiting, it was something that health visiting staff described as an enjoyable as part of their role. Losing the part of the role they enjoyed was not unique to health visiting staff during the pandemic. The maternity workforce faced similar challenges, including emotional distress and feeling only

able to provide the bare minimum rather than the personalised care they wanted to be able to offer (Cordey et al., 2022).

Needs assessment and home visiting are two of the core practices of health visiting (Cowley et al., 2013). The need for home visiting and needs assessment is escalating, with health visitors reporting an increase in families being affected by poverty, increase in the use of foodbanks by families, increases in perinatal mental illness, increase in domestic abuse following the COVID-19 pandemic, and the cost-of-living crisis (IHV, 2024). Additionally, women in the North experience the highest rates of domestic violence in the country and high rates of deprivation (Bambra C et al., 2024). Health visiting staff explained that only by being in family homes can they feel confident searching for needs and using their senses and experiences to pick up on cues and make observations that can allow them to fully support families. Telehealth restricted what they could observe, and lead to concern from health visiting staff about what was missed during the COVID-19 pandemic. With the current cost-of-living crisis at the time of writing this thesis, it will be important to support health visiting staff to return to primarily face-to-face home visiting to check homes for needs related to this.

Previous research has shown that health visitors have an awareness of the influence of their judgements and potential stigmatising impacts on families (King, 2016). The results of the study of health visiting staff experiences in this thesis, showed a complex pattern around judgement and assessment. Health visiting staff saw it as part of their role to judge the home, but also did not want parents to make effort for them (such as cleaning the home for their visit). This contrasted with the results of the study of parent experiences, where some felt supported, and others felt judged, and in some cases insulted, by comments made by health visiting staff when undertaking their assessments. How to balance assessing the home without parents feeling negatively judged is a challenge for health visiting services that needs to be explored further.

It has been argued that one of the most important aspects of health visiting is identifying babies and young children at risk of poor outcomes (Morton, 2024). The Healthy Child Programme (led by health visitors until school entry) has safeguarding children embedded in the model, and argues that health visitors have a vital role in keeping children safe (Public Health England, 2021d). Although unable to draw any conclusions on causality, it has been reported that in the last 10 years Emergency Department attendances for children (0-4 years) have increased by 42%, whilst at the same time there has been a significant cut to health visitor workforce numbers. One of the reservations about telehealth expressed by health visiting staff, was that children who may be vulnerable were not being seen due to the use of telehealth instead of home visits during the COVID-19 pandemic. Being able to physically see children to assess their wellbeing and development is important to both health visiting staff and parents, and further supports the argument for limiting the use of telehealth. Instead, services need to be structured to ensure families, and in particularly children, are being seen face-to-face, but this is challenging when health visiting in England is facing a funding and staffing crisis. Indeed, Morton (2024) recently reported a 40% reduction in health visitors since 2015, and a 27% (£850 million) cut to funding in the same time frame. There needs to be an increase in funding and measures put in place to address the staffing crisis to ensure families feel supported and staff feel they can adequately deliver the service and Health Child Programme in a way that is valued by staff and parents, and not one that just supports the shortage of staff numbers and resources. The change needs to come to support the service, rather than the service using mechanisms such as telehealth to support the shortfall.

It is not just health visiting in the UK that has traditionally used models of home visiting to support families. Other counties such as the USA have home visiting programmes to support families facing adversity (based on socioeconomic risk factors such as low income

or young maternal age (Holland et al., 2024). Holland et al. (2024) compared outcomes in the USA of one home visiting programme (Nurse-Family Partnership), for families who had their initial contacts face-to-face and those who had their initial contacts via telehealth. They found that having initial contact via telehealth, increased the likelihood of negative outcomes including elevated depressive symptoms, lower likelihood of retention, higher likelihood of earlier programme drop-out and completion of fewer screening assessments. The study did compare intake with face-to-face home visits prior to the COVID-19 pandemic, with intake at telehealth during the pandemic and so there should be some caution when interpreting the results and considering what impact the external context may have had on parents. However, even with this, the findings have important implications for when telehealth should be introduced in programmes, and what it should be used for. This aligns with the findings from this thesis with both staff and parents preferring predominantly face-to-face visits, with telehealth only being used for certain aspects of service provision.

One of the frustrations parents experienced was feeling like their appointments with the health visiting service were a tick box exercise, for the benefit of the service not themselves. Cowley et al. (2004) describe how health visiting has evolved from general support and surveillance to the use of health needs assessment tools which align with implied thresholds for support and aligns within a medically-defined model. If health visitors are having to use tools to 'tick-box' as part of their assessment, it is therefore unsurprising that these appointments felt transactional for parents. If these tools are used, then they should be done so alongside the aspects of the service that parents valued, such as face-to-face visits at home and personalised support from a health visitor they have a relationship with.

In the last 20 years there has been a change in the emphasis on child protection for the health visiting service. The guidance for health visitors in 2001 considered the function and justification of health visiting to be public health, not child protection (Cowley et al., 2004).

Although the current commissioning guidelines do include a broader public health agenda (Office for Health Improvement & Disparities, 2023), there is also a notion of prioritising surveillance of factors associated with risk. For instance, it lists the statutory duties of local authorities to include the linking of public health with social care, and specifically states that health visiting should contribute to, and play an important part in, safeguarding. This emphasis on risk and safeguarding could contribute to an explanation of the tension felt by health visiting staff when they could not enter family homes, and the restrictions of undertaking this kind of assessment via telehealth.

The original focus of relationships and friendships, including 'mother's friend' (in addition to surveillance) (Peckover, 2013) associated with health visiting has also changed. In the current guidance for commissioning health visiting, there is limited reference to relationships. Relationships are only described as something that is done as part of efficient working to support the aims of behaviour change, health protection and child safety (Office for Health Improvement & Disparities, 2023). However, the opportunity have relationships with health visitors is seen as important by parents, and influences their decisions around engagement and heath visitors see relationships as a mark of success in their work (Worth & Hogg, 2000). This was reflected in the findings from this research, with both health visiting and staff describing relationships to be fundamental. Prior to the pandemic, this was the experience of women who had antenatal contacts, with some finding visits to be a space for relationship building and others feeling like it was an assessment of themselves (Olander et al., 2019).

These changes are reflected in the wider changes in health care including, structured formats and prioritising efficiency, does not give relationship building the same level of priority. NHS England priorities for 2024/2025 includes a focus on improving productivity,

and supporting the workforce (NHS England, 2024). However, this does not include creating space for therapeutic relationships).

In health visiting, key performance indicators are set at a national level which are monitored and reported. They focus on the percentage or coverage of visits that have been undertaken, but do not take into account what health visiting staff and parents consider to be important, based on this and other studies, including relationships and continuity of care (Office for Health Improvement & Disparities, 2024; Public Health England, 2021e). Performance indicators in the UK are used as part of performance management processes to demonstrate efficiency and effectiveness (McCance et al., 2012). The findings from this thesis showed that health visiting staff, when asked about their role, gave descriptions aligned with the key performance indicators and what is outlined as their role in the Healthy Child Programme. However, they placed more value on having the privilege of being in family homes, supporting them on a personal level and where possible developing relationships with families. This was reflected in the findings in this thesis of parent experiences, where some reported that aspects of their care were left feeling like a 'tick-box exercise', and they questioned the value of this. This was different to those who had relationships and felt supported by health visiting staff. This brings into question the value and the purpose of the key performance indicators. It appears that parents and health visiting staff prioritise different aspects of the service compared to what is measured at a national level at key performance indicators.

A study by McCance et al. (2012) used a consensus approach (an initial small workshop followed by a consensus conference) to explore what key performance indicators were relevant for nursing and midwifery practice from the perspective of senior nurses, nurses, commissioners of services and representatives of higher education, government and professional bodies. The results of the consensus work were eight key performance indicators

that were agreed should be a priority. These indicators included reference to consistency of care against identified need, patient confidence, safety and involvement and time spent with patients by staff. These indicators from this study closely align with the findings of this thesis, where effort and relationships are viewed as the preference for what staff would want their role to involve and what parents would like to receive from the service. Unlike the indicators for health visiting at a national level, they do not relate to percentage and coverage of appointments that have been undertaken.

These tensions extend to other professions and services. An exploration of priorities of those working in primary care settings have shown that while health systems focus on performance and quality measurements as indicators of quality, staff describe quality based on personal staff standards, communication with service users and co-creating quality care (Farr & Cressey, 2015). Similar to the impact of staffing pressures described in this thesis, the study of primary care staff explored the tension of how financial and efficiency pressures impacted on staff attempts to provide quality care (Farr & Cressey, 2015).

A study exploring experiences of individuals working in UK Accident and Emergency departments explored how the increased operationalisation of their profession, including monitoring and the use of targets and protocols, impacted on their values of '*patient centeredness, empathy and compassion*' (Kerasidou, 2019, p. 179). A study in other health care systems in Europe has shown differences in prioritisations between clinicians and managers (Skirbekk et al., 2017). This research showed that clinicians often wanted the time and autonomy to carry out patient-centred work, but under the pressure of managers who focus on efficiency and volume of people seen (Skirbekk et al., 2017). With the focus on efficiency and risk, there is a question to how far the rollout of telehealth could further erode the essential factor of authentic relationships between health visitors and families.

Implications of findings for health inequalities

There was limited data related to health inequalities in the findings from both the study of staff experiences and the study of parents experiences, which could in part be due to limitations of the methodology which are discussed below (see strengths and limitations). From the study of staff experiences, participants described that video enabled calls incurred a cost for families, and that some did not have the amount of data needed for this or access to data at all. Staff also reported concerns about using telehealth when working with families with additional needs, families who were less experienced with technology, and families who did not speak English (including when interpreters were being used). Staff provided descriptions of what the thresholds were for suitability of telehealth with a family, and this included not using it (instead having face-to-face visits) with families with additional needs, safeguarding concerns and when babies were considered vulnerable (the new birth visit). From the study of parent experiences, participants did not describe challenges they had faced themselves but raised some of the same concerns as the staff, expressing concern for those who did not have access to the internet, or where there were language barriers.

Access to health care services for the whole population on equal terms is a key issue for health inequalities (Dahlgren & Whitehead, 2021). This study has raised concerns about potential unequal access to care when telehealth is used, but it has not been able to capture direct experiences of this. However, if there is a reliance on telehealth to access health visiting services, it could follow similar challenges for vulnerable groups that have been faced with other health care access. This includes insufficient data, not having local language skills, fear/lack of trust with and poor communication in the digital environment (Kaihlanen et al., 2022).

However, there is also the potential that if as the staff in this thesis describe, telehealth is used appropriately with thresholds in place, it could support health visiting and health equity in line with proportionate universalism principles. If services are delivered according to degree of need as proportionate universalism suggests (Marmot et al., 2020), it could be possible that families where there continue to be no concerns receive telehealth appointments from health visiting services, and those with greater need receive face-to-face visits. This may address both the concerns around staff shortages and also ensure that those with greater risk of poor health receive the most input from services. This could be possible if we consider families to be the focus of health visiting, but with the role to needs assess children as part of health visiting, can telehealth ever be suitable from an equity angle when it is not possible for health visiting staff to physically assess or communicate directly with a child through this?

Given the limited contribution of the findings from this thesis towards understanding the role of telehealth and health visiting in regard to health inequalities, this needs to be further explored beyond the context of the COVID-19 pandemic. This needs to be done using research methods which will allow for equitable participation and includes those who may experience health inequality.

Strengths and Limitations

Strengths and limitations of the systematic review

There are different types of review methods, each of which have their own methodological strengths and weaknesses. Systematic reviews systematically search for, appraise and synthesise research evidence and reports the process and findings in a transparent way which would allow for the process and outcomes to be replicated (Grant & Booth, 2009). By undertaking a systematic review, I avoided some of the weaknesses of other review types. This includes the potential for bias selection in literature reviews, the limited analysis of mapping reviews, the lack of critical appraisal of sources in scoping reviews or the introduction of bias that time constraints of a rapid review bring (Grant & Booth, 2009).

As the aim of the systematic review in this thesis was specifically to understand and aggregate all the existing studies that captured parent and health care provider experiences of telehealth, an integrative systematic review was an appropriate method to adopt. Integrative systematic reviews allow for a range of research methods to be included. This is different to other systematic review methods which focus on a narrower inclusion criteria, for instance meta-ethnography only synthesises qualitative primary studies (Whittemore & Knafl, 2005), or meta-analysis where the majority combine data from randomised controlled trials (Ried, 2006).

By including primary research which uses varied methods, the integrative review method has the potential to provide a holistic, comprehensive insight into complex health care problems, as it has done so in the review in this thesis exploring experiences of telehealth in the first 1001 days (of life) (Whittemore & Knafl, 2005). Integrative reviews are also useful when there is a need to explore a new or emerging topic (Torraco, 2005). Although telehealth as an intervention is not new, the COVID-19 pandemic presented a

unique context in which it was being used and warranted an exploration of both parents and health care providers experiences of its use. However, the inclusion of diverse methods may mean that it is not possible to provide more than a superficial data analysis, which could be incoherent or inaccurate (Hopia et al., 2016). In this review I tried to mitigate this challenge by following the guidance of Thomas and Harden (2008) to undertake a thematic synthesis, and develop new understandings from the synthesis of the included data.

A critique of integrative systematic reviews is that questions can be raised about the rigour of the methods used in the literature searching, data extraction and synthesis if these are not clearly specified, given the range of literature included (Whittemore & Knafl, 2005). Therefore, for this thesis, I developed a protocol prior to undertaking the review, which was then followed and each stages documented to show how the review was performed, and how the results were produced to ensure transparency around how the review was conducted.

The systematic review was developed and conducted in the initial stages of the PhD (2021-2022). At the time the question that underpinned the review felt sufficient to explore the literature around experience of telehealth in the first 1001 days (of life) during the COVID-19 pandemic due to the contemporary nature of the topic. The findings from this study were able to show a breadth of experiences of both health care providers and parents and highlighted the limited work around experiences of health visiting and telehealth. By undertaking an integrative systematic review, I was able to include both quantitative and qualitative data, which was important due to the qualitative findings showing additional experience to what was captured by the quantitative data. These findings were then able to be used to inform the development of the empirical studies and the final convergence synthesis across studies. By undertaking a CERQual assessment of the themes developed from the review this was a transparent way to show the extent of confidence that could be placed in the findings.

The limitations of the systematic review were that by adopting a broad research question the findings that were quite general in nature and as such were limited in depth and detail. A more refined question that focused on a specific aspect of care or population could have produced more detailed and nuanced findings. This was also a likely influence as to why the quantitative data was so heterogenous, meaning that a meta-analysis could not be performed and instead the narrative synthesis of qualitative findings was undertaken.

Strengths and limitations of study of staff experiences of telehealth and health visiting

The method adopted for data collection for the study of staff experiences was online, individual interviews. Interviews are a widely used approach in health research, as although agendas are often set in the form of interview guides, interviews open up responses and allow participants to provide an account of their experiences (Green & Thorogood, 2018). A purely positivist critique would argue that interviews only capture what is said by specific individuals, and that what is said in the interview space is only an interpretation of reality and not generalisable knowledge (Green & Thorogood, 2018). However, this thesis adopted a pragmatic, theoretical position, in which methods for gaining knowledge are dictated by the kind of insights sought. In the case of staff experiences, what I sought was transferability of experiential insights, rather than generalisability of 'facts', making interviews an appropriate method choice.

Usually, interviews are conducted face-to-face (Mack et al., 2005). However, the interviews for the study of staff experiences took place via Microsoft Teams, due to the COVID-19 related restrictions in place at the time the study was conducted and University

guidance for student researchers. There were both strengths and limitations of conducting the interviews online.

The approach allowed for participants to have greater flexibility over where and when they were interviewed. This felt important due to the staffing challenges mentioned by participants, meaning the interviews could take place around their commitments. However, this still required participants to volunteer over an hour of their time (to read the participant information sheet, ask any questions, be consented and participate in the interview). An alternative method such as a questionnaire may not have yielded as much rich detail, but may have been more suitable for health visiting staff who would have liked to share their experiences but did not have time to participate in an interview. A questionnaire could have also offered greater anonymity for participants (Young, 2015). Even though anonymity and confidentially were assured, participants could have been sceptical when discussing experiences related to the organisation that they currently worked for.

On a practical level, there was the advantage that Microsoft Teams also records the interview securely to the University's network. This reduces the risk of lost recordings or recording devices and keeps participant data secure. Microsoft Teams also has the feature for transcription of the recording; however I found this to be very inaccurate and so I still transcribed the interviews myself.

Due in part to the success of my LA SPARC NIHR placement (Chapter 4, Placement details), I was able to recruit participants from different roles, with different amounts of experience and with different attitudes to the implementation and use of telehealth in health visiting. Overall, I felt that data collection was sufficient with the staff I interviewed, and the aim of the research was met. However, there was limited data around the organisation and

business side of implementation in the results, with only limited understanding of the adoption of telehealth at an organisational level being available. A wider recruitment approach including business managers and communications and IT Teams who may have insight into the organisational and wider system changes could have given a more in depth understanding of implementation.

One aspect that was both a strength and weakness was working with a single service. Benefits included developing a detailed insight into implementation and developing relationships with the organisation's leaders. The relations developed meant that they were supportive of plans to translate this applied piece of research to practice at a local level. Pragmatically, ethics and research site set up was simpler for a single service than for multiple settings which was more appropriate for the resources available as a student researcher. If additional services had been included this could have allowed for comparison between services, which may have illuminated which themes were transferable, and which were more service specific.

A further strength of this research was that it addressed the gap identified by the systematic review about the limited evidence of health care provider's experiences of telehealth and health visiting during the COVID-19 pandemic. In addition, this research included questions to explore and subsequently has provided insights into challenges that staff were aware of when providing an equitable the service in the North of England. This included working with rural communities, those who need interpreters and the availability of reliable data and access to Wi-Fi. This is important learning which should be considered when looking at the continued use of telehealth in health visiting to ensure that inequalities are not exacerbated.

Strengths and limitations of study of parent experience of telehealth and health visiting

Undertaking both a questionnaire and interviews allowed some of the limitations of each method to be overcome. For instance, the questionnaire forced participants to choose from pre-set responses, but the interview open-ended questions allowed for the participants to express what they wanted (Mack et al., 2005). Questionnaires only provide a snapshot of experiences, not rich-in depth details (Young, 2015). Combining a questionnaire and interview meant that there was an opportunity to collect a snap-shot of experiences from a large number of participants, and then more detailed insight from the interviews.

Interviews provide a space for participants to express themselves and their experiences in a way that they may not otherwise have the opportunity to do so (Mack et al., 2005). Mack et al. (2005) suggests that participating in interviews can be cathartic, or beneficial to have someone listen when given the opportunity to share their story. This is something I found in the interviews, with many participants reflecting following the interviews that they enjoyed having the opportunity to discuss their experiences. They also expressed that by sharing their stories, they hoped they would be able to make a difference to the delivery of health visiting services in the future. However, this is not the case for all participants, which is why I created a distress protocol and included relevant support services to signpost to on the participant information sheet. In the event this protocol was not needed.

The interviews for the study of parent experiences took place either online via Microsoft Teams or the telephone. As with the interviews for the study of staff experiences, the online interviews brough both strengths and challenges to the data collection.

Location of where interviews should take place is something that requires thought, with interviews ideally taking place in private, where interviewees feel a sense of ownership of the space (Green & Thorogood, 2018). For some participants, this can mean wanting to be interviewed in their home, but this can then feel disruptive with setting up recording

equipment, or if there are other people in the home who need to leave to ensure privacy (Green & Thorogood, 2018). Additional challenges with interviewing in the home can include people feeling uncomfortable about neighbours perceptions of interviewers being seen to arrive (Warren, 2002). Face-to-face interviews that take place in other locations also bring challenges. Interviews taking place in researcher offices can be logistically challenging (as it will involve travel, and possible organisation of childcare), and neutral spots such as cafes may not be private (Warren, 2002). By having the interviews take place online or over the telephone, some of these challenges could be overcome. The participant could have the freedom to choose where they joined the interview from, including their own homes. This also reduced the need to organise childcare, with some participants choosing to speak via the telephone so they could still look after or feed their children at the same time.

A concern about using online interviews for this research could echo the findings of the study findings, in that it could have limited the development of the researcher/participant relationship that is critical for effective interviewing. While I could not know how the participants felt about this, as I did not ask them, my perception was that they were open and forthcoming in their responses expressing a range of experiences.

A strength of this study was the development and use of the key appointment timeline document. As the interviewer, I felt this aided the flow and pace of the interview and allowed for a smooth transition between discussions of different experiences. Sending it to participants in advance of the interview allowed them to have some understanding of what the interview would include and for them to prepare. Some participants told me that looking at the timeline document prompted them to find their child's red book (a small book given to parent's which should be completed by health visitors and GPs marking milestones in

children's early years) to remind themselves of events. For others, it provided insight and a surprise when they compared the service they received, with the 'official' timeline. For example, participants described not knowing that antenatal visits were part of the health visiting service as they had not had any contact until after their child was born.

For both the questionnaire and the interviews, one inclusion criteria was a minimum age of 18. This was decided based on advice from a member of the advisory board who explained that health visiting services would likely be primarily face-to-face even during COVID-19 for young parents, as there is often additional support beyond the universal offer for these families. However, this does mean that a limitation of this study is that it did not capture the experience young parents may have had of telehealth appointments they received in addition to face-to-face appointments.

The questionnaire had overlapping strengths and limitations. It was designed to be a low burden and to be completed quickly. I believe this was achieved as many people participated in the short three-month recruitment period and there was a relatively small drop-out rate from the beginning to the end of the questionnaire. However, the disadvantages of this include that the limited number of questions has hindered some insight. For example, the questionnaire asked about how a particular appointment took place, but did not specify for which child, or during which period, participants were answering for. As some people had multiple children, the findings do not necessarily represent the service journey through a particular pregnancy and early years. This is the same issue for the questions relating to the experience of the telephone and video contacts on the questionnaire. The benefit of the mixed methods approach, incorporating the interviews and use of the timeline document, was that it did balance this limitation. During the interviews I was able to explore service journeys and experiences of parents who had multiple children and had been in contact with health visiting services for multiple children.

There were equity issues with the questionnaire, and therefore the interviews, as only questionnaire participants were eligible to participate in the interviews. This included the questionnaire being available online only. The option of using a laptop to complete the questionnaire was not taken up, and all participants stated that they completed the questionnaire by themselves. This aligned with all participants rating their confidence and ability using the internet highly. The limitation of this is with the recruitment strategy and mode of questionnaire has not reached those who find the internet less accessible for research, and therefore probably also for accessing services including health visiting. Similarly, the questionnaire was only available in written English so was not accessible for those who need alternative formats and languages or translators. These issues were similar to the issues with the interview, with it only being able to participate via the telephone or Teams and only available for those who spoke English.

An additional limitation is that the participants were primarily resident in the North West of England, with only one participant being resident in Yorkshire and the Humber and none who lived in the North East. This could be explained through the recruitment techniques employed, and the work I had done in the North West meaning that this was the core of the networks I had developed. Although I did try and engage with local authorities, charities and groups active on social media in the North East and Yorkshire and the Humber, this was more challenging as I did not have the relationship I had with communities in the North West (many developed though University Networks in the North West and through my LASPARC award). However, despite the limited geographical scope, the findings from the questionnaire and interviews were not grounded in the place in which individual's live but were reflective of wider factors which influenced the experience of contact with health visiting services. This means it does not limit the transferability of the results as the learning gained from this study is applicable to services across the North of England and the United Kingdom more widely.

Recommendations for practice and future research

Commissioners of health visiting services should recognise the importance of relationships between health visiting staff and parents, and the link between continuity of practitioner and good relationships with service experience. Health visiting staff need to have the work they do to form relationships recognised and supported as part of their role and to have the continuity and time with families to develop these relationships.

Both commissioners and deliverers of health visiting services need to recognise the limitations of telehealth compared to the benefits of face-to-face home visits in health visiting. There needs to be a plan for increased funding and staff recruitment and retention which would allow services to be able to provide face-to-face support for families, where this is their preference or where the health visiting service thinks it is appropriate for a specific family.

Following the COVID-19 pandemic and in light of the current challenges facing the UK population and the health visiting service, there is an opportunity to look at the service and re-model it to ensure it is a service staff want to work with (to ease the challenges of staff shortages) and parents want to engage in (to ensure optimum experience and outcomes for all families). Research should look to explore acceptability of the current model and potential alternatives.

Future research should consider using alternative methods to undertake equitable research to explore the experiences of individuals for whom this research was not accessible. This will include research that does not rely on digital access and is available in other formats and languages to understand more about the experiences of health visiting beyond the COVID-19 pandemic of parents from different backgrounds. Research funders should ensure

that there are sufficient resources available to undertake this work, including the funding for interpreters and specific recruitment and research activity materials available in different languages and formats.

Additionally, research should be carried out at a national level to understand more about regional differences in experiences of health visiting for both staff and parents, and how these may be related to local delivery models to explore differences in models to see what support works well for services and families.

Contribution to knowledge

This thesis has provided an insight into the experiences of telehealth and health visiting during the COVID-19 pandemic. The systematic review and updated literature search (Chapter 3) showed there was limited knowledge of the experience of either parents or health visiting staff in this area at the time of the COVID-19 pandemic. This thesis has therefore made an original contribution to understanding the experiences of telehealth and health visiting. By including the experiences of both health visiting staff and parents it has given an insight into what the COVID-19 pandemic was like for them, their reservations about telehealth and where they saw benefits that have the potential to continue beyond the pandemic. The hope is that this applied research will now be taken to commissioners and delivers of health visiting services in the North of England and used to help inform their future models.

In addition to the contribution to knowledge outlined above, this thesis also adds to the theoretical work that has taken place around health visiting, knowledge use in health visiting, relationships, continuity of care, and the implementation of telehealth. While the

findings on health inequalities were limited, they do suggest that both health visiting staff and parents who are not disadvantaged are very aware of the potential implications of limitations of health care provision for those who do experience systemic disadvantage.

This work has shown how telehealth can be obstructive to health visitor-parent relationships, and how it limits health visitors use of tacit knowledge, alongside other forms of knowledge, to make assessments of and subsequently support families. It also demonstrates the impact of families on their experience of universal services when they are unable to have the rapport and relationships that enable them to trust their caregiver and therefore, share important information about themselves, their children and their family.

Although telehealth was shown to have some contextual benefits in the specific situation of the COVID-19 pandemic, the analysis in this thesis indicates that it poses challenges to the ability of health visiting staff to do the kind of job they want to do. This argues for caution about the extent to which it should be used in health visiting moving forward.

Plans for impact

Following completion of the thesis I will now be trying to create impact from what has been learnt. This will include widely disseminating the findings through outputs including publishing in academic journals and conferences. I will also include continuing to work with Public Advisors to explore options for how to report the results to the wider

public. Finally, I will look to continue working with the health visiting service which supported the research to inform future service delivery.

Conclusion

The COVID-19 pandemic was a challenging time for both parents and health visiting staff. Parents felt apprehensive about the impacts of the virus itself, feeling isolated from support and not having the experiences around birth and parenthood that they had anticipated. For parents, telehealth was seen as useful for obtaining advice form health visiting services, but beyond this face-to-face appointments were preferred. The preference for face-to-face was centred around knowing that this would allow for a professional to directly interact and observe their children (and other families children). It also allowed for a better relationship development between the family and staff member, which could lead to the opportunity to develop trust and, where needed, disclose concerns. For health visiting staff, there was a resistance to telehealth due to the profound disconnect between their values and sense of what health visiting is, and what it should be doing to support families, and what was able to be achieved over a telephone or a video call. The belief that being present in a family home allowed them to use their senses and experience to make a holistic assessment of need, and create the space to develop relationships with families, which was where they got enjoyment from their role, was taken away by the introduction of telehealth. For both parents and health visiting staff, the benefits of telehealth were restricted to specific, transactional and context (pandemic) specific, aspects of the offer, and there was a clear consensus for a predominantly face-to-face service to be provided in the future.

Chapter Summary

This Chapter has brought together the findings from the studies included in the PhD and their implications. From this recommendations were produced which suggest possibilities for the health visiting service consideration and future research. The chapter provided an argument for the originality of the thesis, and some practical learning from the research that may help inform others undertaking research in this area. Finally a conclusion is provided summarising the thesis. The next chapter (Chapter 7) is the reflexivity chapter which captures some of the reflections and reflexivity throughout the PhD journey.

Chapter 7 – Reflexivity

Chapter Introduction

As described in the theoretical framework and methodology chapter (Chapter 2) , as part of ensuring transparency around decisions on the choice of methods, and rigour in qualitative work, I developed a reflexive and reflective practice throughout my PhD. This chapter will describe key ways in which I developed my reflexive practice throughout the PhD, the changes in my beliefs and attitudes, and how this influenced the research and outcomes. It also includes some thinking around the decisions about adopting certain terminology. The chapter concludes with a statement of reflexivity that I completed at the end of writing the thesis.

Thinking when deciding upon telehealth terminology

In addition to the literature I read when defining the terminology for use in this thesis around telehealth (Introduction Chapter), I also based this on additional thinking including;

- There is a disconnect between 'telemedicine' and health visiting. Health visiting in the UK is a universal public health provision which is mainly delivered by health visitors. The public health provision and aims of the service seem to contrast with the medical/disease/diagnosis orientation of telemedicine. This also does not seem to fit with care for mothers and infants. There feels to be a difference between medicine and the wider role of supporting things such as feeding and child development.
- Telehealth could be more suitable as it goes beyond just physicians to capture service provision by a wider pool of providers.

- COVID-19 has produced a lot of literature and guidance on this area with different terms including digital/remote/virtual/teleconsultations which are less defined and used interchangeably.
- Telehealth and telemedicine have connotations of telephone but in recent times digital/virtual methods such as Zoom/ Microsoft Teams are also common as are individual unique platforms and digital services.
- Some health visiting reports have referred to video contacts. However, from work with the Public Advisors and advisory group, does not seem to cover that some people have just had telephone calls.
- Across the PhD work including the placement work and work with public advisors I did not hear anyone use the phrase telemedicine. This suggested that there may be disconnect academic terms and what health visitors and the public call this type of care, such as virtual contacts or telephone appointments. Although these are separate, it makes sense for applied research to use something more in keeping with phrasing in clinical language.
- Remote monitoring is also a newer term which seems to be different from telemedicine and health. It also often includes additional technology or devices to measure or report clinical signs such as pulse oximetry for blood oxygen levels.

Therefore as described in the introduction (Chapter 1) I chose to use the terminology ‘telehealth’.

Reflexive Thinking on use of a Theoretical Framework

As theoretical perspectives were an unfamiliar concept, I first raised the issue in supervision explaining that I needed a starting point. I was directed to what would become one of my core texts and the place to start (Crotty, 1998). From this, I began to understand the hierarchy of a theoretical framework, the decisions that needed to be made and the influence they would have at the preceding and succeeding level. From this book, I then began to follow a chain of references to explore concepts in further detail. I also began to explore works in similar fields to this research, and I found that many works do not give attention to the philosophical underpinnings of their research. Additionally problematic was that for those that do, the amount of flexibility and variation in the authors use of theory is both beneficial to the development of knowledge, but a challenge for the naive and novice PhD student who is trying to learn. I wanted to avoid what Sandelowski (2000) called 'methodological acrobatics' and designate my study to a well-known, or well-accepted methodology when that might not truly reflect what I was trying to achieve. Therefore, although several methodologies could have been manipulated in a way that would or could underpin this work, I spent a considerable amount of time working through which was the right methodology to use. I therefore read broadly, exploring different ontologies, epistemologies, and theoretical perspectives before then going back to my aim and beginning to make justified decisions and develop my theoretical framework. At the start of the PhD process, I set an aim for the overall work to define the scope and intended outcomes of the research. After the reading and learning process described above, I then revisited my aim as the basis for starting to build my theoretical framework.

Reflexive Exercises

There were three main reflexive exercises that I engaged in throughout the PhD. The first was to write a statement at the start of each year of study. I did this to reflect upon where my individual experiences of studying and outside of the PhD had the potential to influence what I was doing, what I was hoping to achieve and any learning that I felt had a significant impact over the last year.

> *'My own attitude to the research has changed so much over the last two years to the research. I have always wanted this to amount to an applied piece of work and to it mean something rather than just the qualification, but I can't say I had a direction on where I thought I wanted it to go. Now, having worked with staff members and families during my placement and initial studies I feel passionate about these people and really feel that I want what is best for them. I know telehealth is part of that to consider, but the wider context and environment of low investment in health care and especially that around women and children has just become more and more apparent and is a very sad reality'* Extract from reflection 01/06/2923

Another exercise I undertook was completing a reflexive diary. This included reflecting and considering the impact of actions concerning many aspects of the research. For instance, in this diary I captured challenges with analysis, and where I needed guidance and to adopt an approach that allowed for more creative thinking. When collating the themes for the systematic review, moving to a tactile medium (post it notes) to consolidate themes was incredibly helpful, and from this, I took this method forward for my empirical research to assist with the analysis of the data.

			forward with other analysis for other studies.
25/08/22	Stage 1 – Theme development	I was then able to write some initial themes following the above methods. 	

This is also where I originally captured my learning about the importance of piloting interview guides. This is discussed in the health care provider's experience chapter. This involved me understanding the importance of language and collaborating with people with lived experience to ensure research is developed with their involvement to ensure the research materials used allow for a good participant experience and useful outcomes.

The third key reflexive practice involved undertaking regular supervision. Throughout the PhD, I met with my supervisors at least once a month, where I provided updates and brought for discussion areas that I needed guidance or support, findings to be discussed and receive feedback on and other aspects of the research. I found supervision incredibly helpful throughout the PhD, and as such I prepared agendas and took detailed notes following each session capturing the discussions and decisions made.

The notes from supervision were then also incorporated into the reflexive diary. This included where I was reflecting on topics raised in supervision, developing them, and writing practical solutions in the reflexive diary. For instance, following a conversation in supervision about how parents can potentially see a lot of health care providers in a short space of time around a new birth (such as midwives, health visitors, GPs and potentially specialists such as neonatologists) some structure may be required to assist with the interview

to orientate the conversation to centre around experiences of health visiting. This was something I reflected on and thought a timeline might serve this purpose. I was then able to take this idea to the Public Advisors who agreed, and this this is something I then developed to be used alongside the interview guide in the parent's experience study.

Reflexive statements from Supervisors

As my supervisors were also involved throughout the research, I asked them to provide reflexive statements about how their perceptions which they brought t supervising the PhD and how it may have influenced their decisions.

> *'Soo is a midwife and a mother of three children. She had minimum contact with the health visiting service as a service user, but, at the outset of supervising this PhD, she believed that for many families the service offers an important bridge to positive parenting. In terms of remote health care, she believed that it could be useful to enable access to certain kinds of support (mainly informational) for those who find it hard to access face to face care but that it was limited in terms of relationship building between the health visitor and the family, which is critical for optimal tailoring of care provision and for effective emotional and psychological professional support.'* Professor Soo Downe

> *'Rebecca is an epidemiologist and a mother of two children. Her first was born just over a year before the COVID-19 pandemic and the second in early Spring 2022. Rebecca had face-to-face contact with the health visiting service with both children, because the height of the COVID-19 pandemic fell between the 9-12 month and 2-2.5 year visits for her first child. At the outset of supervising this PhD, she believed that*

telehealth could offer families greater flexibility in terms of scheduling health visiting appointments, but that some elements of the service, such as breastfeeding support and emotional support, would not be well suited to delivery by telehealth. She expected that benefits and downsides of telehealth could be felt differently by families from different population groups. Rebecca experienced changes in continuity of care in the health visiting services and in the accessibility of baby weighing clinics herself over the course of supervising this PhD, the latter of which was related to the COVID-19 pandemic but not to telehealth. This led Rebecca to believe that some beneficial service changes initially implemented to facilitate telehealth delivery during the COVID-19 pandemic like scheduling appointments rather than expecting families to wait in for the health visitor, had not been maintained, while other less positive changes, like baby weighing clinics being by referral only had been adopted.'

Dr Rebecca Geary

Conclusions from Reflexive Exercises

Experience and change in values and beliefs.

When I started this PhD, I had no personal experience of health visiting services as I am neither a parent nor a health care professional. I had previously worked on digital implementation studies but in mental health. I had a neutral approach to digital resources and healthcare, as I was more interested in understanding what would be needed for successful implementation for staff and understanding service user attitudes than whether it was

effective or not. However, as demonstrated by the extract above from my reflective free writing practice, once I started collaborating with the Public Advisors, and health care providers and having discussions with the public I felt a shift in my values and beliefs. I became more enthusiastic about wanting to find what worked for services and service users.

I have also had a change in attitude towards health visiting. When I started the PhD, like with digital resources, I was quite neutral about health visiting. However, as I have engaged more with services and families, I have moved to becoming very passionate about the service. I have since written about the need for greater recognition for health visiting (Gill et al., 2022) (Link to access in Appendix 13) and have begun working with others who are also passionate about the service. I think the impact of this will have been to have taken a more optimistic approach to the research, identifying positives and then looking to frame challenges in a way that promotes reasonable action or change rather than just as a negative.

Choice of methods

Through the three study chapters (Systematic Review, Health Care Providers Experiences and Parents Experiences) I have outlined the methods chosen and justification for each of these, whilst considering the chosen methodology and theoretical framework. This has meant that all three studies have focused on understanding experiences. There is also the possible influence that coming into this PhD I was familiar with some of the methods used.

I have considered whether these methods influenced the recruitment to the studies, particularly for the study of parent experiences. When recruiting at the time I witnessed that alongside my promotion of an online questionnaire there were several other requests at that time, and I knew through the systematic review there had been an influx since the start of COVID-19 pandemic, with researchers wanting to understand about the influence of the pandemic on all aspects of life. When speaking to people and promoting the research on an

informal level, people seemed very keen to talk to me and wanted to share their experience and so I was surprised at the number of responses I got. I think there may have been some fatigue around requests for completing a survey, but an informal discussion in a place that was comfortable them (at family groups and play groups) was more suitable. I would therefore consider alternative and more creative methods for the research that will follow these studies, which remove some of the formalities of the methods I used and create space for a more relaxed and informal dialogue.

Final Reflections (29th August 2024)

The PhD journey has been complex and brought with it both challenges and opportunities, which have influenced both myself and the work done. I started out at the beginning of the PhD feeling confident in my abilities as a researcher, but quickly realised that although I was an adequate research assistant, I did not yet possess the skills or knowledge required to be an independent researcher. I also embraced the challenge of seeking out a topic that needed to be explored, within the remit of my funding agreement. This journey has led me to develop a sound knowledge base of health visiting, and a belief in telehealth limitations for the service, of which I was indifferent to both at the start (June 2021). Now at the end of the PhD (August 2024) I find myself to be an advocate of health visiting, truly believing that with appropriate resources it is invaluable to families. I also find myself concerned with the scope of future telehealth, being potentially used to overcome challenges such as the national shortage of health visitors, rather than in consideration of if it is suitable for both families and health visiting staff.

Chapter Summary

This final chapter has included reflections made throughout the PhD and the influence this had on the methods and analysis of the studies. It has also included reflexive statements from myself and my supervisors, for transparency about how our preconceptions may have influenced the research. I have also documented how throughout the PhD my beliefs and attitudes have developed with the experience of undertaking this work.

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Appendix

Appendix 1 – Health Inequalities Assessment Toolkit (HIAT)

Note taking Form

1. Mapping inequalities relative to your research

What is the problem you plan to address and which dimensions of social and health inequalities are relevant?

What are the root causes of those inequalities beyond possible behavioural/lifestyle factors? Have you considered how they intersect?

PPI: How have you involved members of the public and other stakeholders in helping you identify the problem you want to tackle and the relevant dimensions of inequalities?

Problem to be addressed

- Experiences of telehealth during Covid-19, with a focus on health visiting
- It is unclear if, or how, telehealth can reduce or widen health inequalities, and how benefits and challenges may differ between individuals and groups. Studies outside of Health Visiting have shown promising socio-economic impacts of telehealth including increased access to services, cost-effectiveness, and better quality of care (Jennet et al., 2003). However, a reliance on technology is likely to highlight existing vulnerabilities and widen disparities if precautions are not taken. Reports have outlined how technology-based solutions are highly susceptible to underlying inequalities in access and uptake (Katzow, Steinway, & Jan, 2020).

Dimensions of social and health inequalities

- Telehealth – Digital access, Wi-Fi access, signal, data availability, digital literacy, system literacy
- Health inequalities are being explored as part of systematic review
- Wider determinants of health and other equity focused questions are included in parent's study

What are the root causes of those inequalities beyond possible behavioral/lifestyle factors? Have you considered how they intersect?

- Inequalities in access to health visiting services and the provision of the service is important, with and without telehealth, this has been incorporated into the interview guides with staff to find out more.
- Social and community networks available to the individual may also influence need for the service and access.
- The general socio-economic and environmental conditions – these are being explored in the staff study and will also be incorporated into the survey of the parent's study and then will be used to purposive sample for interviews.

PPI

- Public Advisors reviewed the interview guides, questionnaires and other research material and we have worked collaboratively to develop survey questions and interview guide.

Note taking Form

2. Integrating equity issues into research questions

How can your research questions be framed in a way that enables you to identify potential inequalities and explore their causes?

PPI: Have you involved members of the public and other stakeholders in shaping your research questions?

Framing Questions

- The overarching questions themselves will not include equity themselves, but the research is being approached with an equity lens. Therefore, throughout the studies involved questions will be include which explore equity.
- Questions have been included within the staff study to explore equity in access and uptake of telehealth.
- Questions will be included in the parent's survey, which will look to inform experiences and used to sample for the interview element.

PPI

- Yes, public advisors have been involved in developing and reviewing the questions.

Note taking Form

3. Designing and conducting research sensitive to inequalities

Will your study design, data collection, and analytical methods enable you to capture the structural causes of inequalities and identify any differential impacts and experiences?

PPI: How have you involved members of the public and other stakeholders in shaping the study design and in analysing and interpreting the data?

Research design

The first study of the PhD is a systematic review which will explore experiences telehealth in the first 1001 days during the Covid-19 pandemic. As part of this I will explore the extent to which the literature has explored health inequalities.

One of the studies will involve surveys and interviews to understand parents' experiences of telehealth used during their remote appointments with health visitors, to explore the reach and effectiveness of telehealth. To understand the impact of telehealth across the gradient of health inequality, parents from in the North will be recruited, and the questionnaire will involve questions on the wider determinants of health. With intersectionality in mind, we will also try and look to recruit people from different areas to explore networks and availability of networks, we might also consider looking at differences in other factors according to the HI model being used.

The other study will explore health care providers experiences of telehealth in health visiting services, questions will be asked relating to perceptions of access and experience of families.

PPI

- Semi-structured individual interviews will follow guides developed through an initial literature search, along with input from public advisors and health visitors who make up the study expert advisory panel.
- Surveys and interviews used in parent study are including to try and capture wider determinants of health and inequity in a sensitive way.

Note taking Form

4. Prioritising findings relevant to action on inequalities in reporting and dissemination

What are the most effective ways you can share your findings relevant to understanding and/or reducing health inequalities? Which audiences should you target and why?

Have you considered whether your research findings and their dissemination could inadvertently contribute negatively to inequalities and how this could be avoided?

PPI: How have you involved members of the public and other stakeholders in planning and disseminating your findings?

Reporting and Dissemination

- Following the completion of the literature review and studies, I will facilitate work with local services to develop policy, practice recommendations. The recommendations that are developed through this study will be combined with learning from the previous studies, so that, if using telehealth is maintained, health inequalities could potentially be mitigated or reduced.
- I will continue to work with the Public Advisors and advisory board to disseminate the findings.
- I will be very clear about the scope of the research to try and mitigate inadvertently negatively contributing to health inequalities.

Note taking Form

5. Principles and practice in equity sensitive research

Have you considered whether you may be making implicit assumptions or have implicit biases that influence your research? How might you mitigate against these?

PPI: Are the involvement processes in your work transparent to the members of the public and other stakeholders involved and is there a feedback/complaints process set up?

I am keeping a reflective diary throughout the PhD, reflecting on how my bias influence decisions made and how this then impacts on the interpretation and outcomes of the research. I will be adding an equity lens to this too.

The public advisors are supported by the team based at Liverpool and I encourage them to reach out to them if they have any concerns.

Appendix 2 Search terms for Cumulative Index of Nursing and Allied Health Literature (CINAHL), MEDLINE, PsycINFO and PsycARTICLES

S52	AB S19 AND S28 AND S42 AND S49	Limiters - Published Date: 20200301-20220331 Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S51	S19 AND S28 AND S42 AND S49	Limiters - Published Date: 20200301-20220331 Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S50	S19 AND S28 AND S42 AND S49	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S49	S43 OR S44 OR S45 OR S46 OR S47 OR S48	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S48	opinion*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S47	perspective*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S46	belie*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S45	view*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S44	Experience*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase

S43	(MM "Attitude+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S42	S29 OR S30 OR S31 OR S32 OR S33 OR S34 OR S35 OR S36 OR S37 OR S38 OR S39 OR S40 OR S41	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S41	parent*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S40	“child* health*”	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S39	“child* care”	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S38	babies	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S37	famil*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S36	"infant health*"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S35	"infant care"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S34	childbirth	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S33	matern*	Expanders - Apply equivalent subjects

		Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S32	antenatal*	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S31	(MM "Postnatal Care")	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S30	(MM "Prenatal Care")	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S29	(MM "Pregnancy+")	Search modes - Boolean/Phrase
	S20 OR S21 OR S22 OR	Expanders - Apply equivalent subjects
S28	S23 OR S24 OR S25 OR S26 OR S27	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S27	"virtual care"	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S26	"virtual health"	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S25	"remote monitoring"	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S24	"remote health"	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S23	"remote care"	Search modes - Boolean/Phrase

S22	Tele*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S21	(MM "Remote Consultation+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S20	(MM "Telemedicine+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S19	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S18	"General practi*"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S17	GP*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S16	obstetric*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S15	doctor*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S14	"home visitor*"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S13	"health visitor*"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase
S12	midwi*	Expanders - Apply equivalent subjects

		Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S11	"health care provider*"	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S10	staff*	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S9	famil*	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S8	women*	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S7	(MM "Physicians+")	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S6	(MM "Health Personnel+")	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S5	(MM "Nurses+")	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S4	(MM "Fathers+")	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S3	(MM "Mothers+")	Search modes - Boolean/Phrase
		Expanders - Apply equivalent subjects
S2	(MM "Caregivers")	Search modes - Boolean/Phrase

S1	(MM "Parents+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase

Appendix 3 – Search Terms for MIDRIS

1	Parent*.mp. [mp=abstract, heading word, title]	24523
2	Caregiver*.mp. [mp=abstract, heading word, title]	2546
3	Mother*.mp. [mp=abstract, heading word, title]	55436
4	Father*.mp. [mp=abstract, heading word, title]	5313
5	Nurse*.mp. [mp=abstract, heading word, title]	16902
6	"health Personnel".mp. [mp=abstract, heading word, title]	1703
7	physician*.mp. [mp=abstract, heading word, title]	6353
8	women*.mp. [mp=abstract, heading word, title]	113974
9	Famil*.mp. [mp=abstract, heading word, title]	23203
10	staff*.mp. [mp=abstract, heading word, title]	9663
11	"health care provider*".mp. [mp=abstract, heading word, title]	2596
12	midwi*.mp. [mp=abstract, heading word, title]	37942
13	"health visitor*".mp. [mp=abstract, heading word, title]	2460
14	"home visitor*".mp. [mp=abstract, heading word, title]	70
15	doctor*.mp. [mp=abstract, heading word, title]	4767
16	obstetric*.mp. [mp=abstract, heading word, title]	31916
17	GP*.mp. [mp=abstract, heading word, title]	1498
18	General Practi*.mp. [mp=abstract, heading word, title]	2051
19	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18	206062
20	Tele*.mp. [mp=abstract, heading word, title]	3330
21	"Remote Consultation".mp. [mp=abstract, heading word, title]	8
22	"remote care".mp. [mp=abstract, heading word, title]	4
23	"remote health*".mp. [mp=abstract, heading word, title]	17
24	"remote monitoring".mp. [mp=abstract, heading word, title]	20
25	"virtual health*".mp. [mp=abstract, heading word, title]	10
26	"virtual care".mp. [mp=abstract, heading word, title]	12
27	20 or 21 or 22 or 23 or 24 or 25 or 26	3382
28	Pregnan*.mp. [mp=abstract, heading word, title]	129424

29	"Prenatal care".mp. [mp=abstract, heading word, title]	4198
30	"Postnatal Care".mp. [mp=abstract, heading word, title]	4904
31	antenatal*.mp. [mp=abstract, heading word, title]	24866
32	matern*.mp. [mp=abstract, heading word, title]	90131
33	childbirth.mp. [mp=abstract, heading word, title]	16335
34	"infant care".mp. [mp=abstract, heading word, title]	1621
35	"infant health*".mp. [mp=abstract, heading word, title]	2387
36	famil*.mp. [mp=abstract, heading word, title]	23203
37	babies.mp. [mp=abstract, heading word, title]	17976
38	child* care.mp. [mp=abstract, heading word, title]	1099
39	child* health*.mp. [mp=abstract, heading word, title]	6893
40	parent*.mp. [mp=abstract, heading word, title]	24523
41	28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40	206035
42	Attitude*.mp. [mp=abstract, heading word, title]	8725
43	Experience*.mp. [mp=abstract, heading word, title]	35952
44	view*.mp. [mp=abstract, heading word, title]	8610
45	belie*.mp. [mp=abstract, heading word, title]	6821
46	perspective*.mp. [mp=abstract, heading word, title]	6058
47	opinion*.mp. [mp=abstract, heading word, title]	3393
48	42 or 43 or 44 or 45 or 46 or 47	56262
49	19 and 27 and 41 and 48	902
50	limit 49 to yr="2019 -Current"	181

Appendix 4 CERQual Assessment for systematic review

Table 21
CERQual findings of qualitative synthesis relating to parents only

Review Finding	Relevant Papers	Methodological Limitations	Adequacy of Data	Coherence	Relevance	CERQual Assessment	Explanation of confidence in the evidence assessment
Theme 1 – Impact on Families							
Preference for Face to Face – Despite the risk of COVID-19, a preference for face-to-face care was expressed by parents for themselves and their babies.	Norris et al. (2021),Panda et al. (2021)	The two studies were both of high quality, they were scored very highly in the quality appraisal (Norris B+ and Panda A-). The only imitations were limited or no reflexivity. **Minor concerns**	There is only limited data from both studies about the preference for face to face. Both papers are both only from the experiences of parents and not from staff. **Moderate concerns**	Both papers discussed the same preference to be seen face to face despite the risks that COVID-19 brought. **Moderate concerns**	The focus of both papers was broader than telehealth, and there was only a small section related to the impact of telehealth which is captured in this theme. **Moderate/Serious concerns**	**Low confidence**	Low confidence focuses on the limited data and the relevance of the papers. The papers are both of high methodological quality though.

Table 22
CERQual findings of qualitative synthesis relating to staff only

Review Finding	Relevant Papers	Methodological Limitations	Adequacy of Data	Coherence	Relevance	CERQual Assessment	Explanation of confidence in the evidence assessment
Theme 2 - Challenges of the evolving system							
Shortcomings of telehealth - Staff described several aspects of care that compared to face to face, telehealth cannot match.	Ferrara et al. (2022), Galle et al. (2021)	Both are strong papers with minor limitations, Galle is a mixed methods paper and scored a B on the QUADS tool. Ferrara, is a qualitative paper and scored a B, as it is it did not have reflexivity. **Minor Concerns**	Only two papers contributed to this theme, with most of the data coming from the Galle paper and only a small amount coming from the Ferrara paper. Both papers only focus	Although different topics are discussed from papers around what telehealth cannot replace, there is coherence in where telehealth is problematic centred around communication and not being able to view surroundings and families face to face.	Galle paper - Telehealth not the full focus of the study but concerned a lot of the data. Ferrara – Goes up to age 3 so beyond first 1001 days but does adequately describes staff experiences.	**Moderate confidence**	Although only capturing provider experiences this is a theme which has minimal methodological limitations, high coherence and both papers are relevant. The main concerns arise from the adequacy of the data.

			on the experiences of providers. **Moderate concerns**	**Minor Concerns**	**Minor concerns**		
Rapidly adapting to new ways of working - Health care providers had to adjust how they worked sue to the implementation and use of telehealth.	Ferrara et al. (2022),Ennis et al. (2021), Gadsby et al. (2022)	Ferrara and Gadsby are qualitative papers which both scored a B. Both scored well overall except neither had reflexivity. Ennis is a mixed methods paper which scored a B on the QUADS appraisal tool, it scored well overall with a couple of flaws. **Minor Concerns**	Although three papers contributed to this theme there was only a small amount of data. Telehealth was not the focus of any of the papers so only a limited amount of data has been extracted from each. All papers only discuss	All papers discussed changes of working to telehealth/online ways of working into effect and how they needed to adapt to meet the challenges of this, whilst also sometimes seeing some benefit. **Minor Concerns**	Ferrara – Goes up to age 3 so beyond first 1001 days but does adequately describes staff experiences. Ennis and Gadsby – Although telehealth not the whole focus there is a lot of data from Gadsby on this and a small amount from Ennis.	**Moderate confidence**	Moderate confidence Minor methodological and coherence concerns. Main reason this was scored down is adequacy and relevance of the data.

			perspective of providers, which is fine as this theme focuses on that side. **Moderate Concerns**		**Minor-Moderate Concerns**		
Theme 4 – New benefits for health care providers							
Increased professional communication and collaboration - The change of working patterns, due to the pandemic and use of telehealth allowed for greater communication between healthcare providers.	Galle et al. (2021),Ferrara et al. (2022), Gadsby et al. (2022)	Ferrara and Gadsby are qualitative papers which both scored a B, Silvero scored an A-. All scored well overall except none had reflexivity. Galle scored a B on the QUADS appraisal tool, both scored well overall with a couple of flaws.	Substantial amount of data from each of the three papers **Minor Concerns**	All agree on the benefit of professional and communication and collaboration. **Minor Concerns**	Galle and Gadsby papers - Telehealth not the full focus of the study but concerned a lot of the data. Ferrara – Goes up to age 3 so beyond first 1001 days but does adequately describes	**Moderate confidence**	This theme is overall strong with only minor concerns in each section.

		Minor Concerns			staff experiences. **Minor Concerns**		
Opportunity to develop staff and services - The implementation of technology was described positively, in the opportunities it allowed such as learning, flexible working and a reduction in bureaucracy.	Gadsby et al. (2022),Ferrara et al. (2022),Fogarty et al. (2022)	Ferrara and Gadsby are qualitative papers which both scored a B, Silvero scored an A-. All scored well overall except none had reflexivity. Fogarty scored a B on the QUADS appraisal tool, scored well overall with a couple of flaws. **Minor Concerns**	Adequate data from each of the studies contributing to the theme **Minor Concerns**	Relationships, working patterns and learning were discussed positively across all the contributing data. **Minor Concerns**	Ferrara – Goes up to age 3 so beyond first 1001 days but does adequately describes staff experiences. Gadsby papers - Telehealth not the full focus of the study but concerned a lot of the data. Fogarty – paper focussed on a telehealth intervention	**Moderate Confidence**	This theme is overall strong with only minor concerns in each section.

		in the first 1001 days, however it was not focused just on the experience but also efficacy. **Minor Concerns**

Table 23
CERQual findings of qualitative synthesis relating to parents and staff

Review Finding	Relevant Papers	Methodological Limitations	Adequacy of Data	Coherence	Relevance	CERQual Assessment	Explanation of confidence in the evidence assessment
Theme 1 – Impact on Families							
Gains and losses – The subtheme incorporates the mix of feelings and experiences that parents and health care providers had about telehealth. With some feeling communication was deepened and enriched, but also insufficient and distant.	Gadsby et al. (2022), Jensen et al. (2022),Jackson et al. (2022), Ferrara et al. (2022)	Four studies contribute to this sub theme. All four were given a score of 'B' as part of the qualitative appraisal. All four studies were lacking reflexivity but all presented data which justified the findings and had other markers of rigor. Minor concerns.	Of the four studies that contribute to this theme, two of the papers (Gadsby and Ferrara) focus of the experience of staff and two focus on the experience of women (Jackson and Jensen). There is only a small amount of data from each of the four papers on the gains and losses brought by telehealth.	The two papers focusing of staff have data to show both gains and losses, but there are only losses discussed by the studies exploring women's views. There is therefore potentially a disconnect between the views of staff and women. This suggests moderate	Ferrara – Goes up to age 3 so beyond first 1001 days but does adequately describes staff experiences. Gadsby, Jackson, Jensen – Telehealth not the full focus of the study but concerned a lot of the data. Minor/Moderate Concerns	Low confidence	More concerns for studies of parents (women's) experiences as these seem to focus more on the loss than the health care provider studies which are more balanced. There are minor methodological limitations in all studies.

			Moderate concerns	concerns on coherence with staff having a positive and negative views, but women only expressing loss. Moderate Concerns			

Developing and maintaining relationships – There was a reduced ability to develop rapport and relationships, but some relationships were still able to be maintained.	Ferrara et al. (2022), Galle et al. (2021),Jackson et al. (2022)	Three studies contribute to this sub theme. All were given a score of 'B' for the qualitative appraisal (Galle is a mixed methods study so appraised using QUADS). The qualitative papers (Ferrara and Jackson) were transparent and were rigorous but did not have reflexivity. Galle paper was a good quality paper with minor limitations. Minor concerns	Of the three studies that contribute to this theme, two of the papers (Galle and Ferrara) focus of the experience of staff and one focuses on the experience of women (Jackson). There is a lot of data about the impact of telehealth on relationships from the perspective of staff but not a lot from the perspective of parents/women. Minor concerns for staff, Moderate/Serious concerns for parents	All papers discussed the negative impact on relationships with services being delivered through telehealth. The relationship. Women only described the negative impact (Jackson). One of the papers discussed some positives of using telehealth to maintain relationships (Ferrara). Minor concerns	Ferrara – Goes up to age 3 so beyond first 1001 days but does adequately describes staff experiences. Galle, Jackson – Telehealth not the full focus of the study but concerned a lot of the data. Minor Concerns	Moderate confidence	All papers have only minor methodological limitations. There is a good adequacy of data from staff, but less from parents. All discuss the negative impact of relationships because of delivering care through telehealth.
Theme 2 - Challenges of the evolving system							

Barriers to access – Challenges to access included digital literacy, finance, and lack of supportive infrastructure.	Fogarty et al. (2022); Galle et al. (2021)	Both studies were mixed methods and assessed using QUADS and scored a 'B'. Both were strong papers with only minor limitations. Minor Concerns	Galle paper focuses on health care providers, and Fogarty paper includes both families and providers. There is a lot of data from the Galle paper but only limited data from the Fogarty paper. Moderate Concerns	The Galle paper described several challenges, one of which was the challenge of the actual technology which was also captured by Fogarty. There was some overlap, and coherence from the Galle paper, but not great overall. Moderate Concerns.	Galle paper - Telehealth not the full focus of the study but concerned a lot of the data. Fogarty – paper focussed on a telehealth intervention in the first 1001 days, however it was not focused just on the experience but also efficacy. Moderate Concerns	Low confidence	Although papers were methodologically strong and there were moderate concerns across all elements of CERQual assessment.
Navigating the system – Due to the change to services, individuals were left having to 'navigate' the system and alternative	Ferrara et al. (2022), Jackson et al. (2022),Jensen et al. (2022),Panda et al. (2021)	The four papers that contributed to this theme were all methodologically strong. Panda was a very high-quality paper (A-) the only imitations were	One paper focuses on the experience of health care providers (Ferrar) and the other three focus on the experience of parents	All studies discuss from both families and providers perspectives the challenges in the frequency of change and how this was a	The focus of Panda paper was broader than telehealth, and there was only a small section related to telehealth.	Moderate confidence	Although all only a limited amount of data across the four papers, the papers were all methodologically strong with good coherence within

means of contact (telehealth).		limited or no reflexivity. Ferrara, Jensen and Jackson were given scores of 'B', they were transparent and were rigorous but did not have reflexivity. Minor concerns	(Jensen, Jackson and Panda). There is only a small amount of data from each of the four studies. Moderate Concerns	challenge to work out who and how to get in touch. There flet to be good coherence amongst the limited data. Minor Concerns	Jackson, Jensen – Telehealth not the full focus of the study but concerned a lot of the data. Ferrara – Goes up to age 3 so beyond first 1001 days but does adequately describes staff experiences. Minor Concerns		the theme and data adequacy.
Theme 3 – Impact on services							
Doing the best under the circumstances – The context of the COVID-19 was acknowledged, and health care providers were doing their best in the face of using telehealth during the pandemic.	Ferrara et al. (2022), Jackson et al. (2022)	Ferrara and Jackson were given scores of 'B', they were transparent and were rigorous but did not have reflexivity. Minor concerns	There is only a small amount of data from the Ferrara paper and an even smaller amount from Jackson. Major Concerns	There are only two sections of data from the staff perspective from a single intervention study (Ferrara) and one section of data from the perspective of parents (Jackson), but both did have	Ferrara – Goes up to age 3 so beyond first 1001 days but does adequately describes staff experiences. Jackson – Telehealth not the full focus of the study but concerned a lot of the data.	Low confidence	There is not a lot of data to support this theme, with only one paper from each perspective creating major concerns with data adequacy.

				a coherence on doing the best considering the circumstances. Moderate Concerns	Minor-Moderate concerns		
Disruption, change and replacements - Telehealth was seen as a change or replacement to anticipated care which felt disruptive.	Gadsby et al. (2022),Galle et al. (2021),Ferrara et al. (2022), Silverio et al. (2021), Ennis et al. (2021)	Ferrara and Gadsby are qualitative papers which both scored a B, Silvero scored an A-. All scored well overall except none had reflexivity. Ennis and Galle are mixed methods papers which scored a B on the QUADS appraisal tool, both scored well overall with a couple of flaws. Minor Concerns	There is a substantial and adequate data from each of the five papers for this theme. There is a slight difference in balance though with four paper being from a staff perspective and only one being from parents. Minor- Moderate Concerns	The data is very similar with the discussion of telehealth being seen as a change or replacement of care set amongst wider disruption to care. Minor Concerns	Ferrara – Goes up to age 3 so beyond first 1001 days but does adequately describes staff experiences. Gadsby and Galle – Although telehealth not the whole focus there is a lot of data Ennis and - Telehealth not the focus and Silvero -only a small amount of data	Moderate confidence	This is a coherent theme with adequate data so support it. Its main limitation is the lack of balance between data from health care providers and parents.

					Minor Concerns		
Potential for online groups - One version of telehealth delivered broadly was online groups. These were viewed positively by health care providers, but negatively by parents.	Galle et al. (2021), Jackson et al. (2022), Hantoushzadeh et al. (2021)	Jackson was given a score of 'B', they were transparent and rigorous but did not have reflexivity. Hantoushzadeh was given a B+ as it was overall strong with only very minor flaws. Galle scored a B on the QUADS appraisal tool, scored well overall with a couple of flaws. Minor concerns	There was only a small amount of data from each of the studies, but there was more from the provider side than parents side. Moderate concerns	There was a disconnect between the views of providers who saw it as a good alternative and parents who saw it as difficult to navigate and limited social interaction. This is captured in the description of the theme. Minor-moderate concerns	Galle and Jackson - Telehealth not the full focus of the study but concerned a lot of the data. Hantoushzadeh telehealth not the focus and only a small amount of relevant data from this paper. Minor-Moderate Concerns	Low confidence	In all sections there were minor to moderate concerns. Main concerns focussed on limited data from parents perspective.
Services continue but look different - Services did not stop, but the changes including the	Ferrara et al. (2022), Fogarty et al. (2022), Gadsby et al. (2022), Galle et al. (2021)	Ferrara and Gadsby are qualitative papers which both scored a B, all scored well overall except	All four papers provide the perspective of health care providers, it only gives their view and does not	All papers discuss that services continued to operate and to be there to meet needs,	Galle and Gadsby papers - Telehealth not the full focus of the study but concerned a lot of the data.	Moderate confidence	Minor concerns across domains. This theme was downgraded because of adequacy of data.

use of telehealth meant they had a different look to before the pandemic.		none had reflexivity. Galle and Fogarty- Both studies were mixed methods and assessed using QUADS and scored a 'B'. Both were strong papers with only minor limitations. Minor Concerns	consider parents perspective. There is an adequate amount of data from the for papers to support this theme. Minor-Moderate Concerns	but this involved telehealth to deliver care rather than face to face for a lot of appointments and contacts. There was good coherence within the data in this theme. Minor Concerns.	Fogarty – paper focussed on a telehealth intervention in the first 1001 days, however it was not focused just on the experience but also efficacy. Ferrara – Goes up to age 3 so beyond first 1001 days but does adequately describes staff experiences. Minor Concerns		

Table 24
Results of the CERQual Findings for the narrative synthesis of quantitative data

Review Finding	Relevant Papers	Methodological Limitations	Adequacy of Data	Coherence	Relevance	CERQual Assessment	Explanation of confidence in the evidence assessment
Quantitative Theme 1– Positive and negative experiences of telehealth	Delioğlu et al. (2022); Gemperle et al. (2022); Holcomb et al. (2020); Jeganathan et al. (2020); Kloze and Wojtal (2021); Liu et al. (2021); Madden et al. (2020); Nakagawa et al. (2021); Quinn et al. (2021); Sulaman et al. (2022); Talmont and Vitale (2022)	Six of the studies were of good quality (scores of Bs) and 4 were of lower quality (Cs), balance of lower quality studies lowered overall score. **Minor - Moderate Concerns**	There is a good amount of data for this theme, with data from 10 studies contributing to the theme, capturing both parent and health care provider experiences, showing both positives and negatives of the experience for both populations. **Minor concerns**	For parents, satisfaction was addressed through a lot of the papers included in the theme, except with two of the papers on virtual physiotherapy which focused on more specific experiences such as adherence and management. For health care providers, there were more positives than negatives,	Some of the studies were more relevant than others, such as those focusing on the prenatal care which is more universal in the first 1001 days compared to specialist virtual physiotherapy. However all papers had telehealth as the focus. **Minor**	**Moderate confidence**	Although this a comprehensive, theme the overall score is lowed by the methodological quality of the studies and difference in experiences between parents and providers lowered the coherence score.

				different from parents, with only one reporting clear negative experiences and the majority having positive experiences around similar facets. **Minor-Moderate Concerns**			
Quantitative Theme 2– telehealth can be used to meet needs and deliver care	Fogarty et al. (2022); Gemperle et al. (2022); Holcomb et al. (2020); Jeganathan et al. (2020); Madden et al. (2020); Nakagawa et al. (2021); Quinn et al. (2021); Sulaman et al. (2022);	Six of the studies were of good quality (Bs) and three of lower quality (Cs) **Minor - Moderate Concerns**	There for how health care providers could meet needs by delivering care this way and what the benefits and concerns were around this. However, there was only limited data for parents experience of this.	Coherence is concerning as three studies with parent data describe different concerns, and there are differences with the health care providers as well, which all though in summary show positives and negatives are	All papers focus on telehealth, there is very limited data that is relevant for parents, but a lot from health care providers, however this is made up of a small section from each of the papers.	**Low confidence**	Theme is heavily weighted on health care provider experiences and even within that there are only small amounts from each paper. Some concerns about methodological limitations.

	Talmont and Vitale (2022); Tozour et al. (2021)		**Moderate Concerns**	not coherent within. **Moderate - Serious Concerns**	**Moderate concerns**		
Quantitative Theme 3– Ease of using the technology	Fogarty et al. (2022); Holcomb et al. (2020); Jeganathan et al. (2020); Kloze and Wojtal (2021); Madden et al. (2020); Nakagawa et al. (2021); Quinn et al. (2021); Sulaman et al. (2022); Tozour et al. (2021)	Five of the studies were of good quality (Bs) and four of lower quality (Cs), which is a closer split than others, with a similar amount of lower quality papers. **Moderate Concerns**	There is a good amount of data for both parents and health care providers on using the technology. **Minor Concerns**	Coherence is lowered by it being unclear the extent of challenges with technology with parents as quite opposing experiences detailed and staff reporting barriers for parents with accessing the technology, whereas for health care providers it was very clearly mainly positive for staff. **Moderate Concerns**	All papers included focused on telehealth and had questions relevant to the practical use of technology. Telehealth being broad though does mean some nuance may be missed by not having coherence over which technology. **Minor Concerns**	**Moderate confidence**	This theme has balance of data for parents and health care providers, but lower coherence with mix difficulty-ease for parents but all ease for health care providers.

Quantitative Theme 4– Preference for visit type and future use	Holcomb et al. (2020); Jeganathan et al. (2020); Kloze and Wojtal (2021); Liu et al. (2021); Madden et al. (2020); Nakagawa et al. (2021); Quinn et al. (2021); Sulaman et al. (2022); Tozour et al. (2021)	As above, five of the studies were of good quality (Bs) and four of lower quality (Cs), which is a closer split than others, with a similar amount of lower quality papers. **Moderate Concerns**	There is a lot of data contributing to this theme, but it is weighted towards parents preferences for future use. The number of papers describing each experience is similar, but there is more data available about parent's future use. **Minor-Moderate Concerns.**	Preference overall for face to face for parents except under pandemic conditions, whereas greater willingness from staff to continue se except for one study. Overall there are concerns with coherences and disjointed between populations. **Moderate Concerns.**	Papers were relevant for this theme and clear data related to this theme, including about use and confidence of use. **Minor Concerns**	**Low confidence**	Although this theme does present experiences from both populations there is low coherence and not enough data for health care provider experiences.

Appendix 5 – Interview guide for study of staff experiences of telehealth and health visiting

Individual Interview Guide

Title of the research project: EXPECTele – Experiences of Covid-19 and Telehealth
Name of researcher(s): Professor Soo Downe, Bethany Gill

Introduction

We would like to hear your experiences about using telehealth during the Covid-19 pandemic. We want to find out how it happened, what it was like for you, what was helpful and what was challenging when using it. We would also like to discuss what would be needed to scale up and sustain the use of telehealth in health visiting.

We will use your interview data for several things including, as part of Bethany Gill's doctoral thesis, to disseminate findings and make change, and to help create an evidence base for telehealth in health visiting more widely.

I am going to ask you some questions about you and your role first, and then about telehealth. These questions are quite broad, which hopefully will us allow us to discuss your unique experiences. These questions are just a guide so please do jump in with anything you think is important for us to know throughout the interview. We will also have some time at the end if there is anything you would like to add.

Before we begin can I check

- Have you read the participant information sheet, do you have any questions?
- Thank you for signing the consent form, do you have any questions?
    - Just to remind you;
    - We will be recording the interview and transcribing it
    - Your participation is voluntary, you can withdraw at any time and can decline to answer questions
    - You will have two weeks following this interview to withdraw your data
- Do you have any questions about anything before we begin?

We expect this interview to last between 45 minutes to 70 minutes. Are you comfortable do you need a break/get a drink before we start? Please let me know if you need a break or want to stop the interview at any point.

Demographic Information

- What is your job role?
- How long have you worked in this role (or similar role)?
- How long have you worked for 0-19 services?
- How old are you?
- How would you describe your gender?

Interview Guide

<u>(Sections are bold and underlined and are there to guide the researcher and will not be asked to participants,</u> key questions are bold which will be asked where appropriate (some questions may be more suitable for some participants but not others), *prompt questions are in italics and will be used as needed to facilitate deeper exploration.)*

<u>The "condition" (Population and their needs) - Families from 0-5 (and care from health visiting services)</u>

In your role as a [job role], how do you work with families to support them?

- *What support do infants/children need?*
- *What support do parents/caregivers need?*
- *Who does it involve?*
- *What does it involve?*

What are the demographics of families you work with?

- *Are there any groups of people you (health visiting services) struggle to engage with?*
- *Are some of them likely to be socio-economically disadvantaged, homeless, or socially excluded?*
- *Is health visiting something that families from different socio-economic, religious, ethnic, cultural backgrounds could experience differently? (Why? How?)*
- *Might some have religious restrictions or expectations that would affect how they engage with health visiting services and their acceptance of technologies?*
- *Are some likely to have low health literacy (poor understanding of health/care and how to manage needs)?*
- *Are some likely to have low system literacy (poor understanding of how to navigate the health or care system)?*
- *Are some likely to have low digital literacy (poor understanding of technologies and how to use them)?*
- *Are some of them likely to have problems understanding the language used by staff?*
- *Are the needs of families different depending on socio-economic, religious, ethnic, cultural backgrounds? (Why? How?)*

Do you think there might be changes in the population and their needs over the next 3-5 years?

- *Long term impact of Covid-19?*
- *Cost of living crisis?*

The Wider System

Please can you tell me a bit about the situation in which you started using telehealth more in 2020?

- *What was happening nationally?*
- *What was happening locally?*
- *What was policy/practice guidance like at the time and what is available currently?*
- *What were professional bodies (e.g. Nursing and Midwifery Council/iHV, CPHVA, RCN) response to the implementation of telehealth? Support? Opposition?*
- *Was there any political support/opposition for the implementation of telehealth?*
- *Was there any financial support/opposition for the implementation of telehealth? (Commissioning at a local or national level?)*
- *Are there any family groups/ lobbying groups that support/oppose the technology?*
- *What is the public perception/interest/expectations of telehealth and health visiting services?*

The Technology (Technologies)

What technology/technologies have you used to deliver support remotely?

What technology/technologies are you still using?

What are the key features of the technology/technologies?

Was/is the technology easy to use?

- *Is it dependable?*

What kind of knowledge did/does the technology generate?

- *Did/does it allow for the information that is needed to be gathered?*
- *What knowledge was generated/made visible by the technology?*
- *Is it accepted/trusted/sufficient for decision making?*
- *What help do you offer users (e.g. helpdesk, hands-on support)?*
- *What has been the experience of supporting the introduction of the technology?*

What knowledge and/or support was/is required to use the technology? (Staff and families)

- *What equipment do you need? Does it work with existing software/hardware? Is trouble shooting required? How do you access support for this?*
- *What is needed from the families' side? Is it accessible to them?*

Where did/does the technology come from?

- *How was the technology procured?*
- *What is the client-supplier relationship like?*

- *Is it sustainable? (If the supplier withdrew would you be able to get something similar elsewhere?)*
- *Is it affordable to you and families?*
- *Is the technology adaptable? Can it be adapted to individual situations or adapted more broadly?*

Does the technology rely on other technologies to work?

- *Are there plans to make the technology connect with existing technology infrastructure?*
- *Does it need to be installed across multiple technical systems to achieve 'integration'?*
- *Will there need to be an upgrade to the organisation's IT system (e.g. new hardware, better bandwidth) to support use of the technology across the organisation?*
- *Would any target users have to upgrade their personal device(s) or home IT system?*

To what extent do you think the technology (and/or the service model it supports) will become outdated or require updating in the next 3-5 years?

- *To what extent can the technology be adapted to take account of future changes?*
- *To what extent will the technology supply model change?*

<u>The Value Proposition</u>

What value did/does the technology bring to you and the health visiting service?

- *What is the technology's; Advantages? Disadvantages? Desirability? Efficacy? Safety? Cost effectiveness?*
- *Value to health visiting services in particular? In particular for identifying/eliciting need/vulnerability? Picking up risk factors? Building relationships? Supporting engagement in interventions?*
- *Is the value different for different levels of health visiting? Universal services? Universal plus? Universal partnerships plus? Specialist services? Additional advice giving?*

What value did/ does the technology bring to the family?

- *What is the technology's desirability for families?*
- *What are the advantages and disadvantages for the family?*

What is the technology developer's business case for the technology?

- *Have they previously trialled the technology?*
- *Do they have an evidence base for it?*

The adopter system

Who in the service was/is using the technology?

What do you think of the technology?

- *What do staff think of the technology?*

What changes, if any, have there been in staff roles, practices and identities as a result of implementing the technology?

- *To what extent would implementing the technology require staff to do their jobs in a different way and/or interact with different people or teams?*
- *To what extent would implementing the technology require new or different steps in the care pathway (e.g. new administrative processes)?*
- *Did individuals or teams have the resources, time, space or support to learn to use the technology?*
- *Has the technology meant that staff have had to work in a way that could be viewed as inappropriate, unprofessional or that creates risk?*

What do families think of the technology?

- *What is expected of the family (mother/father/parent/guardian) to use the technology and is this achievable by and acceptable to them?*
- *Is it practical? Does it require substantial input?*

Are there others who may be impacted by using the technology (parents, extended families, carers, guardians, commissioners, non-clinical staff?)

- *Would technology require input from others (e.g. relatives, care home staff), who may be unable or unwilling to learn to use it?*
- *Would the technology make someone else's job obsolete or more difficult?*

How do you anticipate that individual users' perceptions of the technology will change over the next 3-5 years?

- *Do you think patients, or their lay carers are likely to change their views on the technology?*
- *Do you think key staff groups are likely to change their views on the technology?*

The Organisation

To what extent was the organisation ready for the technology (technologies) to be used?

What is the organisation's capacity to innovate?

- *At the local level? At the national level? Has this changed with organisation change?*
- *What are the organisations national and local leadership for innovation and implementation like*?

What is the learning culture like?

- *What opportunities are provided for staff to talk about new ideas/projects and to learn new skills?*

How ready was/is the organisation for this technology supported change?

How easy was the adoption decision?

How easy was the funding decision?

What changes were/is needed in routines, pathways and processes?

What work was/is involved in the implementation and who did/will do it?

<u>Embedding and adaption over time</u>

How much scope is there for adapting and continuing the technology and the service over time?

Over the next five years do you think there will be any changes that will impact of the implementation and sustainability of technology?

- *Population changes?*
- *Necessity of technology?*
- *Value of the technology?*
- *Changes in staff or family perspectives towards technology?*
- *Policy, regulatory and economic changes?*
- *Organisation structure?*
- *Health visiting?*

<u>End of the interview</u>

Thank you that's all my questions, do you have anything you would like to add that we haven't covered?

This is the end of the interview, do you have any questions?

Appendix 6 – Ethics Approvals for study of staff experiences of telehealth and health visiting.

Ymchwil Iechyd a Gofal Cymru
Health and Care Research Wales

NHS
Health Research Authority

Professor Soo Downe
University of Central Lancashire
Preston
PR1 2HE

Email: approvals@hra.nhs.uk
HCRW.approvals@wales.nhs.uk

27 October 2022

Dear Professor Downe

HRA and Health and Care Research Wales (HCRW) Approval Letter

Study title:	**A qualitative investigation of the experiences of using remote care for health visiting services during the Covid-19 pandemic.**
IRAS project ID:	**316063**
Protocol number:	**NA**
REC reference:	**22/HRA/4114**
Sponsor	**University of Central Lancashire**

I am pleased to confirm that HRA and Health and Care Research Wales (HCRW) Approval has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications received. You should not expect to receive anything further relating to this application.

Please now work with participating NHS organisations to confirm capacity and capability, in line with the instructions provided in the "Information to support study set up" section towards the end of this letter.

How should I work with participating NHS/HSC organisations in Northern Ireland and Scotland?
HRA and HCRW Approval does not apply to NHS/HSC organisations within Northern Ireland and Scotland.

If you indicated in your IRAS form that you do have participating organisations in either of these devolved administrations, the final document set and the study wide governance report (including this letter) have been sent to the coordinating centre of each participating nation. The relevant national coordinating function/s will contact you as appropriate.

University of Central Lancashire
Preston PR1 2HE
01772 201201
uclan.ac.uk

15th November 2022

Bethany Gill
School of Community Health and Midwifery
University of Central Lancashire

Dear Bethany,

Re: HEALTH Ethics Panel Application
Unique Reference Number: HEALTH 0381

The HEALTH Ethics Review Panel has granted approval of your proposal application, 'A qualitative investigation of the experiences of using telehealth for health visiting during the Covid-19 pandemic.'. Approval is granted up to the end of project date*.

It is your responsibility to ensure that

- the project is carried out in line with the information provided in the forms you have submitted
- you regularly re-consider the ethical issues that may be raised in generating and analysing your data
- any proposed amendments/changes to the project are raised with, and approved, by Committee
- you notify ethicsinfo@uclan.ac.uk if the end date changes or the project does not start
- serious adverse events that occur from the project are reported to Panel
- a closure report is submitted to complete the ethics governance procedures (Existing paperwork can be used for this purpose e.g. funder's end of grant report; abstract for student award or NRES final report. If none of these are available use e-Ethics Closure Report Proforma).

Yours sincerely,

Simon Alford
Deputy Vice-Chair
HEALTH Ethics Panel

* for research degree students this will be the final lapse date

NB - Ethical approval is contingent on any health and safety checklists having been completed, and necessary approvals gained.

Appendix 7 – Recruitment Poster

Appendix 8 – Questionnaire for parent's experiences of telehealth and health visiting during COVID-19

Word version of the Questionnaire

Version 2 15/09/2023

Q 1. What area of the North of England do you live in?

Answer options

1. North East
    - (County Durham, Darlington, Gateshead, Hartlepool, Middlesbrough, Newcastle upon Tyne, North Tyneside, Northumberland, Redcar and Cleveland, South Tyneside, Stockton-on-Tees, Sunderland)
2. North West
    - (Allerdale, Barrow-in-Furness, Blackburn with Darwen, Blackpool, Bolton, Burnley, Bury, Carlisle, Cheshire East, Cheshire West and Chester, Chorley, Copeland, Eden, Fylde, Halton, Hyndburn, Knowsley, Lancaster, Liverpool, Manchester, Oldham, Pendle, Preston, Ribble Valley, Rochdale, Rossendale, Salford, Sefton, South Lakeland, South Ribble, St. Helens, Stockport, Tameside, Trafford, Warrington, West Lancashire, Wigan, Wirral, Wyre)
3. Yorkshire and Humber
    - (Barnsley, Bradford, Calderdale, Craven, Doncaster, East Riding of Yorkshire, Hambleton, Harrogate, Kingston Upon Hull, Kirklees, Leeds, North East Lincolnshire, North Lincolnshire, Richmondshire, Rotherham, Ryedale, Scarborough, Selby, Sheffield, Wakefield, York)
4. I do not live in any of these areas

[Skip logic, option 4 taken to thank you and exit page]

Q2. Did you have contact with health visiting services during the height of the COVID-19 pandemic (March 2020 – May 2023)?

This could include telephone or video calls for yourself or any of your child or children's check-ups, which may include, but is not limited to, an antenatal visit, a new birth visit, a visit at 6-8 weeks, a 9–12-month check and a 2-2 ½ year check or any groups led by your health visiting service or you contacting the service for help and/or advice.

1. Yes
2. No

[Skip logic, option 2 taken to thank you and exit page]

Q3 How old are you?

- Under 18
- 18– 24
- 25 – 29
- 30 – 34
- 35 – 39
- 40 – 44
- 45 – 49
- 50 – 54
- 55 – 59
- 60 – 64
- 65 and over +

[Skip logic, option 1 taken to thank you and exit page]

Q4. How are you completing this questionnaire

1. By myself
2. With the help of someone
3.

Q5. How would you describe yourself?

1. Mother
2. Father
3. Birthing parent
4. Partner of birthing parent
5. Second parent
6. Foster parent
7. Adoptive parent
8. Guardian
9. Other (please describe)

Q6. How many children do you have?

[Select from drop down]

Q7. How many of your children were you expecting, or were aged 0 years to 5 years, between March 2020 and May 2023?

[Select from drop down]

Q8. Prior to COVID-19 had you had contact with a health visitor team member?

1. Yes, face to face
2. Yes, over telephone and/or video call

3. Yes, face to face and telephone and/or video call
4. No
5. I don't know/ I can't remember

Q9. How were you in contact with the health visiting team during the COVID-19 pandemic?

Type of appointment	Face-to-face in my home	Face-to-face in a community setting	Telephone	Video Call	I did not have this appointment	Don't remember
Antenatal appointment organised by the health visiting team						
New baby appointment organised by the health visiting team						
6–8-week check appointment organised by the health visiting team						
Child's 9–12-month developmental review organised by the health visiting team						
Child's 2-year developmental review organised by the health visiting team						
Additional appointment(s) arranged by the health visiting team						
I contacted the health visiting service for advice						
I attended a group organised by the health visiting team						

Q10 Did you have a telephone contact with the health visiting team?

Yes

No (skip logic)

Q10.1 Did your **telephone** contact with the health visiting practitioner provide

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Don't remember	Not Applicable
An accessible way to have contact with the health visiting team							
An affordable way to have contact with the health visiting team							
A suitable way to get the information you needed							
A suitable way to discuss what you wanted							
A way to build a relationship with the health visiting team practitioner							
A way that you felt heard and understood							
A way that you felt confident talking to the health visiting practitioner							
A suitable way to access care for your baby/child							

Q11 Did you have a video call or video contact with the health visiting team?

Yes

No (skip logic)

Q11.1 Did your **video** contact with the health visiting practitioner provide

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Don't remember	Not Applicable
An accessible way to have contact with the health visiting team							
An affordable way to have contact with the health visiting team							
A suitable way to get the information you needed							
A suitable way to discuss what you wanted							
A way to build a relationship with the health visiting team practitioner							
A way that you felt heard and understood							
A way that you felt confident talking to the health visiting practitioner							
A suitable way to access care for your baby/child							

Q12. If you were to be in contact with health visiting services in the future, how would you like these contacts to take place?

Type of contact	Face-to-face in my home	Face-to-face in a community setting	Telephone	Video Call	No preference
Antenatal appointment organised by the health visiting team					
New baby appointment organised by the health visiting team					
6–8-week check appointment organised by the health visiting team					
Child's 9–12-month developmental review organised by the health visiting team					
Child's 2-year developmental review organised by the health visiting team					
If I wanted to contact the health visiting service for advice					
If I wanted to attend a group organised by the health visiting team					

We would now like to ask some questions about you. These are being asked because we want to ensure we have the views of many different people to understand more about equity in health and experiences of health services. Some of these questions might feel a bit personal, but we are asking them to understand more about how these things can impact on experiences of using health visiting services. You do not have to answer these questions if you do not want to, you have a 'prefer not to say' option for each question.

Q13 Would you consider yourself to have an impairment or condition that has a substantial or long-term impact on your ability to carry out day-to-day activities?

- Yes
- No
- Prefer not to say

Q14 How would you describe your ethnicity or ethnic background?

Arab

+ Arab.

Asian, or Asian British

+ Bangladeshi or Bangladeshi British

+ Chinese or Chinese British

+ Indian or Indian British

+ Pakistani or Pakistani British

+ Any other Asian background.

Black

+ African or African British

+ Caribbean or Caribbean British

+ Any other Black background.

Mixed or multiple ethnic groups

+ White or White British and Asian or Asian British

+ White or White British and Black African or Black African British

+ White or White British and Black Caribbean or Black Caribbean British

+ Any other mixed or multiple ethnic background.

White

+ English, Scottish, Welsh, Northern Irish or British

+ Gypsy or Irish Traveller

+ Irish

+ Roma

+ Any other white background

Any other ethnic background

Not known

Prefer not to say.

Q15 Are you currently? (Select all that apply)

- Co-habiting or living with a partner
- Married or in a civil partnership

- Separated, divorced or civil partnership dissolved
- Single
- Widowed or a surviving partner from a civil partnership
- Other (specify, if you wish):
- Prefer not to say.
-

Q16 What is your religion or belief? (Select all that apply)

- No religion (including atheist)
- Buddhist
- Christian
- Hindu
- Jewish
- Muslim
- Sikh
- Any other religion or belief (specify, if you wish):
- Prefer not to say.
-

Q17 Which one of the following best describes your gender?

- Male
- Female
- In another way (please describe if you would like to)
- Prefer not to say

Q18 Do you consider yourself to be a trans person?

- Yes
- No
- Prefer not to say

Q19 Which of the following best describes your sexual orientation?

- Heterosexual/straight
- Bi/bisexual
- Gay/lesbian
- In another way (please describe if you would like to)
- Prefer not to say

Q20 Please indicate highest level of education you have completed

- No formal schooling
- Primary education

- Secondary education
- Tertiary/professional/technical
- University or equivalent
- Prefer not to say

Q21 Are you currently:

- Student
- Employed
- Freelance/self-employed
- Unemployed
- Other (please describe if you would like to)
- Prefer not to say

Q22 Compared to most people in this country, I think my standard of life is

- Much worse
- Below Average
- Average
- Above average
- Much better
- Prefer not to say

Q23 Does your household have access to the internet? (please select all that apply)

- Yes, have access to broadband/Wi-Fi
- Yes access to mobile data
- Yes, but the data/Wi-Fi is intermittent or unreliable
- Don’t have access now but have had in the past
- No, never had access
- Prefer not to say

Q24 What devices do you have access to (tick all that apply)

- A mobile phone
- A desktop
- A laptop
- A tablet
- Something else (please specify)
- I do not own any of these devices
- Prefer not to say

Q25 Overall, how would you rate your ability to use the internet?

- Excellent
- Good
- Fair
- Poor
- Bad
- Prefer not to say

Q26 Overall, how confident are you as an internet user?

- Very confident
- Fairly confident
- Neither confident or not confident
- Not very confident
- Not at all confident
- Prefer not to say

You have now reached the end of the questionnaire, thank you for taking the time to complete this study, we are very grateful for you completing it.

We would like to contact some people to find out more about their experiences of health visiting during COVID-19, by inviting them to take part in an interview over the telephone or video call. This would last about 1 hour, and you would receive a £20 Love2Shop voucher for your time. If you would like to be considered for one of these interviews please complete the contact details below.

Name

Telephone

Email

Preferred method of contact (Email/ phone call/ text)

If you would like to be entered into the prize draw for a chance to win one of 10 £20 vouchers, please leave your name and/or telephone number or email address below. These will be drawn when the questionnaire closes in December 2023.The answer to this will be stored separately to your survey responses.

Name

Telephone Number

Email

Preferred method of contact (Email/ phone call/ text)

Thank you for your completing the survey. Please click the next arrow to finish the survey and save your answers.

We thank you for your time spent taking this survey.
Your response has been recorded.

Appendix 9 – Interview guide for parent's experiences of telehealth and health visiting during COVID-19

Qualitative Interview Guide

Title of Research Project: The PARENT Study (**PAR**ent Experie**N**ces of **T**elehealth and health visiting)

Name of researcher(s): Professor Soo Downe, Bethany Gill

Introduction

Thank you for making the time to talk to me. I would like to hear your experiences about telephone and/or video contacts with a health visiting service during the Covid-19 pandemic. I want to find out what it was like for you, what you liked and what you didn't. I will also ask what your preferences would be if you were to use health visiting services in the future.

I will use some of the things we discuss as part of my PhD thesis, I may also use some of the information to share the overall findings of the study with the health visiting service, and with the wider public. I will make sure that no-one will be able to tell which words are yours. I am hoping that the findings, including your words, will help to improve the way telehealth in health visiting is done in future.

I am going to ask you some questions about you and your family, then about your experiences of health visiting during COVID-19. We can use the timeline document to help guide this conversation if it is helpful. The questions I will ask are just a guide so please do jump in with anything you think is important for me to know throughout the interview. We will also have some time at the end if there is anything you would like to add.

Before we begin can I check

- Have you read the participant information sheet? Do you have any questions?
    - Just to remind you;
    - I will be recording the interview and transcribing it
    - You don't have to take part, you can leave the interview at any time, and you don't have to answer any questions you are not happy with
    - After the interview, if you think that you don't want your information to be included in the study, I can take your information out for up to two weeks. After that, I won't be able to tell which words are yours and which are from other people
- Do you have any questions about anything before we begin?

We expect this interview to last between about 45 and 70 minutes. Are you comfortable to start? Do you need a break/get a drink before we start? Please let me know if you need a break or want to stop the interview at any point.

We will first go through the consent form and record your consent and then we will start the interview.

Demographic Information and context

- **Please can you tell me if you are a mother/father/birthing parent/partner of birthing parent/second parent/ adoptive parent/ foster parent/guardian/ or someone else?**
- **Can you tell me a bit about your family?**
    - How many children do you have?
    - How old are your children? When were they born?
    - How many of your children were you in contact with the health visiting service about during the pandemic?
    - During COVID-19 was the contact with the health visiting service for your first child or other children?
    - Have you had experience of health visiting before COVID-19 for any of your children?
    - Who lives in your house with you?
- **What was the COVID-19 pandemic like for you?**
    - What was happening for you? What effect did it have?

Five mandated visits

(Can introduce the timeline document again here, and can use as a guide if helpful)

- **Five visits include antenatal appointment, new baby appointment, 6–8-week appointment, 9–12-month appointment and 2 – 2 ½ year appointment.**
- **Lets go through each visit one at a time ,can you tell me**
- **How, if at all, did the appointment take place? (telephone, virtual, face to face, did not have, don't remember)**
- **When did it take place? (Before or during or after pandemic?)**
- **What was the experience like?**
    - How did the person introduce themselves?
    - Do you know who the person was? (Did you feel you could trust them? Did the appointment feel private/secure? Were you able to form a relationship with them? Did you feel heard and understood?)
    - Was it the same person for each visit?
    - What, if anything, did you like about it?
    - What, if anything, did you not like about it?
    - Was it easy to access? What were the challenges to access?

- What technology did they use? Did yourself or the practitioner have any challenges?
- Did the contact feel private? Safe? Secure?
- Was there any effect in having the telephone/video? (did it affect how confident you were in speaking/discussing concerns/asking advice?)
- Did you have the appointment alone? Was your partner present? Were they able to be involved if they wanted to be?
- Did you have enough time to discuss what you wanted?
- Were you able to access care this way for yourself/child/partner/family?

Service contact and access

- **Apart from the appointments above, did you see anyone from the health visiting team at any other point?**
- **What were you in contact with your health visiting service for?**
- **How, if at all, did it take place? (telephone, virtual, face to face, did not have, don't remember)**
- **When did it take place? (Before or during or after pandemic?)**
- **What was the experience like?**
  - Did you seek advice outside the visits above?
  - Any additional support? (including infant feeding, mental health, sleeping or behaviour advice, weaning advice?)
  - Any online groups?
  - Alongside any other services?
  - Were you able to contact the service when you wanted it? (Did you have any difficulty getting in touch with the service? Did you know who to contact and how to contact them?)

Other questions

- **Did the telephone/video contact with the health visitor impact your relationship with the person from the health visiting team?**
  - Why do you think it had this effect or no effect?
- **How accessible was the telephone/video contacts for you?**
  - Or the services more widely? What was helpful? What was not helpful?
- **Did the telephone/video contacts effect how you feel about health visiting services?**
  - Why do you think it had this effect or no effect?

Preferences for the service

- **If you were to use health visiting again in the future, what would your preferred method of contact be and why? (For routine visits? For advice seeking? For groups?)**
- **If you were to use the service again, during a pandemic like COVID-19, what would your preferred method of contact be and why? (For routine visits? For advice seeking? For groups?)**

Additional questions (if time)

Health visiting aims to support families with certain areas, can you tell me about how, if at all you felt supported in the things below

- becoming a parent, and the early weeks with the baby
- maternal and infant mental health
- breastfeeding (initiation and duration)
- healthy weight and eating well
- understanding healthy lifestyles; reducing accidents and minor illnesses
- health, wellbeing and development
- If you had both face to face/telephone/video meetings, did the way you, what if any was the effect of this?

Is there anything we haven't talked about that you would like to share about your experience of telephone/video calling with health visiting services during COVID-19?

End of interview

Thank you for this, I will stop the recording now and tell you a bit about what happens next.

Remind participant about data analysis and two-week window to withdraw.

Ask For their address for the voucher.

Ask Would you like to receive a summary of the results of this study when they become available?

Appendix 10 – Ethics approval for study of parents experiences of telehealth and health visiting

University of Central Lancashire
UCLan

University of Central Lancashire
Preston PR1 2HE
01772 201201
uclan.ac.uk

18th September 2023

Soo Downe / Bethany Gill
School of Nursing
University of Central Lancashire

Dear Soo / Bethany,

Re: HEALTH Ethics Panel Application
Unique Reference Number: HEALTH 0381 FR Project_2

The HEALTH Ethics Review Panel has granted approval of your proposal application, 'A mixed-methods exploration of parents' experiences of telehealth and health visiting services during the COVID-19 pandemic'.

The CONDITION relating to the approval is: To obtain gatekeeper permissions (where appropriate) to post adverts to any closed social media groups or to go through the gatekeeper who may post to the group themselves on your behalf. You do not need to send the permissions to EthicsInfo. Approval is granted up to the end of project date*.

It is your responsibility to ensure that

- the project is carried out in line with the information provided in the forms you have submitted
- you regularly re-consider the ethical issues that may be raised in generating and analysing your data
- any proposed amendments/changes to the project are raised with, and approved, by Committee
- you notify ethicsinfo@uclan.ac.uk if the end date changes or the project does not start
- serious adverse events that occur from the project are reported to Panel
- a closure report is submitted to complete the ethics governance procedures (Existing paperwork can be used for this purpose e.g. funder's end of grant report; abstract for student award or NRES final report. If none of these are available use e-Ethics Closure Report Proforma).

Yours sincerely,

Lucy Hives, Deputy Vice-Chair **HEALTH Ethics Panel**

* for research degree students this will be the final lapse date
NB - Ethical approval is contingent on any health and safety checklists having been completed, and necessary approvals gained.

Appendix 11 – Cross Tabulations from parents experiences data

For the Cross Tabs, demographics were condensed into age (condensed to three groups, under 30 years old, 30-39 years old or 40 years old and over), if the person considered themselves to have an impairment (yes or no), standard of living (condensed to three groups – above average and much better, average, below average and much worse), Ethnicity (condensed to two groups, English, Scottish, Welsh, Northern Irish or British and other white background, or Asian and Asian British), marital status (condensed to two groups, Cohabiting or living with partner and Married or in a civil partnership or Separated, divorced or civil partnership dissolved and single) and level of education (Secondary education or Tertiary Education of University/equivalent). The experience of appointments was dichotomised for those with a good experience (Strongly Agree and Agree) and those who did not (Neither Agree or Disagree, Disagree, Strongly Disagree).

Table 25

Results for Fisher's exact test for experiences of telephone appointments and demographics. N and % for agreement (Strongly agree and Agree), p showing result of Fisher's Exact test.

Demographic Characteristics	An accessible way to have contact with the health visiting team			An affordable way to have contact with the health visiting team			A suitable way to get the information you needed			A suitable way to discuss what you wanted			A way to build a relationship with the health visiting team practitioner			A way that you felt heard and understood			A way that you felt confident talking to the health visiting practitioner			A suitable way to access care for your baby/child		
	n	*%*	*p*	*n*	*%*	*p*	*n*	*%*	*p*	*n*	*%*	*p*	*n*	*%*	*p*	*n*	*%*	*p*	*n*	*%*	*p*	*n*	*%*	*p*
Age	42	70	.188	50	84.7	.033	34	56.7	.547	32	54.2	1.00	14	23.3	.270	19	32.2	.678	22	36.7	.361	23	38.3	.769
Impairment	40	67	1.00	48	84.2	1.00	32	55.2	1.00	30	52.6	.740	13	22.4	.696	18	31.6	1.00	21	36.2	.729	22	38	1.00
Standard of Living	41	69.5	.059	49	84.5	.129	33	55.9	.455	31	53.4	.676	14	23.7	.897	19	32.8	.702	22	37.3	.784	23	39	.786
Ethnicity or Ethnic Background	41	69.5	.310	49	84.5	1.00	33	55.9	.061	31	53.4	.359	14	23.7	.081	19	32.8	.318	22	37.3	.351	23	39	.070
Marital Status	40	69	.641	48	84.2	.173	32	55.2	1.00	30	52.6	.179	13	22.4	.577	18	31.6	1.00	22	37.9	1.00	22	37.9	1.00
Education Level	39	68.4	.358	47	83.9	.840	31	54.4	.420	29	51.8	.908	12	21.1	.417	17	30.4	.070	21	36.8	.387	21	36.8	.387

Table 26

Results for Fisher's exact test for experiences of video appointments and demographics. N and % for agreement (Strongly agree and Agree), p showing result of Fisher's Exact test.

Demographic Characteristics	An accessible way to have contact with the health visiting team			An affordable way to have contact with the health visiting team			A suitable way to get the information you needed			A suitable way to discuss what you wanted			A way to build a relationship with the health visiting team practitioner			A way that you felt heard and understood			A way that you felt confident talking to the health visiting practitioner			A suitable way to access care for your baby/child		
	n	*%*	*p*	*n*	*%*	*p*	*n*	*%*	*p*	*n*	*%*	*p*	*n*	*%*	*p*	*n*	*%*	*p*	*n*	*%*	*p*	*n*	*%*	*p*
Age	14	58.3	.573	17	70.8	.546	10	43.5	.288	10	41.7	.337	5	20.8	.186	8	33.3	.541	10	41.7	.337	6	26.1	.373
Impairment	13	56.5	.486	16	69.6	1.00	9	40.9	.409	9	39.1	1.00	4	17.4	.324	7	30.4	.526	9	39.1	.142	6	26.1	.462
Standard of Living	13	56.5	.179	16	69.6	.830	9	40.9	1.00	9	39.1	.837	4	17.4	.300	7	30.4	.680	9	39.1	.364	6	26.1	.680
Ethnicity or Ethnic Background	13	56.5	.486	16	69.6	1.00	9	40.9	1.00	9	39.1	.502	4	17.4	1.00	7	30.4	1.00	9	39.1	.502	6	26.1	1.00
Marital Status	12	54.5	.455	15	68.2	.318	8	38.1	1.00	8	36.4	1.00	3	13.6	1.00	6	27.3	1.00	8	36.4	1.00	5	22.7	1.00
Education Level	12	54.5	.562	15	68.2	1.00	8	38.1	1.00	8	36.4	1.00	3	13.6	1.00	6	27.3	.799	8	36.4	1.00	5	22.7	.603

Appendix 12 – Access to Editorial

Link to editorial piece available on UCLan CLoK

Greater support, recognition, and research for health visiting post-pandemic. - CLOK - Central Lancashire Online Knowledge (uclan.ac.uk)

Appendix 13 – Distress Protocol for study of parent experiences