A thematic analysis of system wide learning from first wave Covid-19 in the East of England

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Abstract

Background: The Covid-19 pandemic has created an unprecedented challenge for health and social care systems globally. There is an urgent need for research on experiences of COVID-19 at different levels of health systems, including lessons from professional, organisational and local system responses, that can be used to inform managerial and policy responses.

Methods: This paper presents the findings from a thematic analysis of front-line staff experiences working across the Norfolk and Waveney integrated care system (ICS) in the East of England during April and October 2020 to address the question “What are the experiences and perceptions of partner organisations and practitioners at multiple levels of the health system in responding to COVID-19 during the first wave of the pandemic?” This question was posed to learn from how practitioners, interdependent partner organisations and the system experienced the pandemic and responded. 176 interview transcripts derived from one to one and focus group interviews, meeting notes and feedback from a “We Care Together” Instagram campaign were submitted for qualitative thematic analysis to an external research team at a regional University commissioned to undertake an independent evaluation. Three phases of qualitative analysis were systematically undertaken to derive the findings.

Findings: Thirty-one themes were distilled highlighting lessons learned from things that went well compared with those that did not; challenges compared with the celebrations and outcomes; learning and insights gained; impact on role; and system headlines. The analysis supported the ICS to inform and capitalise on system wide learning for integration, improvement and innovations in patient and care home resident safety, and staff wellbeing to deal with successive waves of the pandemic as well as prioritising workforce development priorities as part of its People Plan.

Conclusions: The findings contribute to a growing body of knowledge about what impact the pandemic has had on health and social care systems and front-line practitioners globally. It is important to understand the impact at all three levels of the system (micro, meso and macro) as it is the meso and macro system levels that ultimately impact front line staff experiences and the ability to deliver person centered safe and effective care in any context. The paper presents implications for future workforce and health services policy, practice innovation and research.

Keywords: Integrated care systems, System transformation, Covid-19, Thematic analysis, System wide learning

Introduction

The COVID-19 pandemic has posed an unprecedented threat to health systems internationally [1]. Whilst researchers worldwide have begun to publish findings from the experiences of healthcare providers, the capacity and adaptability of health systems, and the challenges presented to health systems [2], this evidence is still consolidating and there are significant limitations to
the research methods being used [3]. Whilst published reviews have assessed risk factors and the development of the disease [1, 4] and treatments developed worldwide [5, 6], there remains a need for research on experiences of COVID-19 at different levels of health systems, including lessons from professional, organisational and local system responses, that can be used to inform managerial and policy responses [7]. A call for action at different levels of health systems has been made, especially towards hospital managers and other leaders, to identify ways of mitigating the fear and distress among the healthcare workforce involved in responding to COVID-19 over a sustained period [8].

This paper offers a contribution to the body of emergent knowledge about the impact of the pandemic at micro-meso and macro levels of a health system in the East of England. It presents the findings from a thematic analysis of interviews conducted by the Norfolk and Waveney Integrated Care System (ICS)1 during April and October 2020 to address the question “What are the experiences and perceptions of partner organisations and practitioners at multiple levels of the health system in responding to COVID-19 during the first wave of the pandemic?” This question was posed to learn how front-line practitioners, health and social care organisations and the Integrated Care System experienced and responded to the pandemic. The aim of the project was thus focused on:

a) identify lessons to be learned from the oral history of front-line staff.
b) provide a baseline for transformation across the Norfolk and Waveney ICS.
c) Generate insights for informing future workforce and service sustainability linked to the strategies that appear to work, the reasons for this and subsequent outcomes.

It is important to look at impact through these three lenses because integrated care systems (ICS) are a policy priority in England [9, 10] and require significant reorganisation of the way in which services are delivered. The pandemic provides an opportunity to identify learning and insights for workforce development, service redesign and systems integration to ensure services are safe effective and people centred.

Methods

Qualitative approach and research paradigm

In the first phase of this evaluation, reported here, the research team used a qualitative interpretive approach to analysing interview transcripts gathered by Norfolk and Waveney ICS as part of their “We Care Together” Campaign established to capture a living history of the pandemic across the health and social care system in the East of England. The #WeCareTogether People Plan is core to the Norfolk and Waveney five year workforce strategy. The strategy describes how the ICS will ensure Norfolk & Waveney is the best place to work, in Health and Social Care. It provided a photo campaign and case study shown on BBC news, Norfolk magazine and within the NHS People Plan and was put forwards for a Health Services Journal Award in September 2020 (https://wecaretogethernw.co.uk/our-visions/our-strategy/).

Sampling strategy, settings and participants

All staff working in the Norfolk and Waveney ICS in health and social care were invited to be involved in the “We Care Together” campaign. Invitations were circulated by internal newsletters, email and advertisements. The ICS deliberately sought a wide range of participants, including different professional groups, career stages and geographical locations, to access a diverse range of experiences and views. Participants were self-selecting and could work in any setting in primary, community or secondary care in any role. Staff from three Acute NHS Trusts, Community, Social Care and Care Home providers, Ambulance Services, Mental Health Services, Pharmacies, Primary Care and Volunteers participated. The sample included front line practitioners, managers, specialists, logistics, infection control, engineers, maintenance and ground staff, domestic and cleaning operatives, and kitchen staff. Full details of the sample are provided as a supplementary document.

Data collection methods and instruments

Self-selecting staff were invited to attend either a one to one or focus group interview and/or contribute to the “We Care Together” Instagram photographic campaign. Interviews were arranged at a mutually convenient time between the interviewer and the participant and took place over a 15-30 minute period2 by telephone or online video call and an electronic consent was sought. The interviewing team was drawn from staff who volunteered from the workforce transformation and communications

1 Integrated Care System (ICS) - an integrated care system enabling closer collaboration with NHS organisations, in partnership with local councils and others, taking collective responsibility for managing resources, delivering NHS standards, and improving the health of the population they serve (NHS England https://www.england.nhs.uk/integratedcare/ctps/faqs/) (accessed 29/10/2020)

2 The interviews were kept brief in recognition of the pressures that front line staff were working under given the demands of the pandemic on their time.
team in the ICS. Seven questions informed the interview process (Fig. 1). All the interviews were audio recorded and then transcribed verbatim by volunteers employed by the ICS and then anonymised in respect of each participant’s name but place of work and post were identifiable. This was intentional as many staff were redeployed during the pandemic to provide vital services and it was important to understand the impact of this on their roles and workload as well as wellbeing.

The wellbeing of participants was of paramount importance during data collection and if any participant reported significant distress, they were signposted by the ICS to local and National sources of psychological support.

Interview transcripts, meeting notes and Instagram quotations from the media campaign were anonymised and then made available to the independent University research team conducting the thematic analysis, under a data sharing agreement which complied with General Data Protection Regulations (GDPR) for the NHS.

Researcher characteristics and reflexivity
Reflexivity is an important component of all qualitative research, enabling the reader to consider the validity of the analysis by better understanding the research team who have produced it [11]. As a team we brought a range of different perspectives and experiences to this topic. The team comprised four research professors with expertise in health systems and workforce transformation research. Professor Kim Manley has over forty years of international expertise in large scale qualitative evaluations of culture change associated with system and workforce transformation. Professor Jonathan Webster has over thirty years of national expertise in research associated with commissioning services and with a particular interest in older people. Professor Sally Hardy has thirty years of international expertise in mental health and learning disability research. Associate Professor Carolyn Jackson has twenty-five years of expertise in research of health and social care systems, leadership and culture change in a wide range of settings and contexts. Collectively the team is working to support systems transformation at regional and national levels in the UK through a wide range of embedded research and knowledge translation projects.

Data analysis
One hundred and seventy-six anonymised transcripts/datasets provided were analysed, of which 168 comprised individual contributions (160 written transcripts, 8 voice recordings) and 8 from groups (a grand round; 2 Instagram accounts including one duplicate, analysed twice by two different researchers; and 4 sets of minutes from meetings). Five corrupted files (voice recordings) were unable to be analysed.

The evaluation comprised three levels of analysis (Fig 2).

Firstly, each anonymised transcript was coded, randomised, divided and apportioned to each research team member. We followed the principles of reflexive thematic analysis [12, 13] seeking immersion in the data by reading and re-reading all the transcripts, reflecting on them and discussing emerging themes in research team meetings. We agreed to analyse the content of each transcript using seven colour coded areas for interrogation linked to the original questions asked in the interviews. Content analysis is a general term for different strategies used to analyse text [14]. It is a coding and categorizing approach used for exploring large amounts of textual information to determine patterns of words used, their frequency, relationships, and the structures and discourses of communication [14–16]. We decided to do this manually as this would enable us to immerse ourselves in the experiences of staff to enable us to look at the data through the micro-meso and macro level of the system. Each transcript was assigned the researcher’s initials and read several times before being colour coded and aligned to the...
appropriate theme in the analytical template developed by the team (Table 1).

In the second level of analysis, transcript statements were synthesized into a thematic table utilising the same headings guiding the initial analysis, an illustrative example of this process is provided in Table 2. Thematic analysis is described as "a method for identifying, analysing and reporting patterns (themes) within data" [17]. Transcripts were highlighted for quotes that illustrated the theme particularly well, and consideration was given to which stakeholder group these most related to, for determining the level of impact experienced - system, staff and teams through to individual level. Themes were also labelled for data relating to patients, residents, families, citizens and the wider public.

In the final level of analysis, we generated overarching themes across all data sets for each of the seven
Table 2: Illustrative example of second level analysis of transcripts with theming applied

| QUESTIONS GUIDING ANALYSIS | THEMES | DATA SET REF | For Whom the theme relates? |
|-----------------------------|--------|-------------|-----------------------------|
| What has worked?            | Maintaining a sense of normality | CJ1 | Staff |
| Actions/interventions/initiatives/ideas | Seeing the Patient as a ‘person’ not just a number in which there was greater ‘care’ and ‘patience’ | JWT2 | Staff, patients, self |
| What has not worked?        | Panic leading to avoidable admission | CJT14 | System, Family, team |
| Something tried that did not work | Caring for others but not always self, including breaks and time away. | JWT1 | Team, patients, self |
| What have been the challenges? | Coming back to work post-COVID infection is worrying | CJT6 | Staff |
| New challenges faced | Coping with a spectrum of emotions – attitudes and values related to behaviours | JWT6 | Team, self |
| Outcome/celebrations?       | Pride in achievements | CJ21 | System, staff, Individual |
| Positive outcomes that can be celebrated | The importance of Community Spirit | JW2 | Society |
| Learning/Opportunity?       | Treat everyone the same with respect | SHT18 | System, staff, patients, citizens |
| More formal than insights that guide future implementation | The use of IT to support new ways of working and communication | JWT8 | Team, patients, self, organisation |
| Insights?                   | Looking to the future, the ‘new normal’ | JW64 | Society |
| New insights at individual/team/system level | Positive and negative impact of lockdown on staff | KM3 | Staff, system, society |
| Impact on roles?            | Resilience of self and the team | KT1 | Team, self, patients |
| Anything Influencing roles  | Focusing more on safety and teaching others to be safe | KT2 | Staff, patients, residents |

questions. An example of this process for Question 1 “What has worked?” is presented in Table 3.

The team met regularly to sense check the processes used ensuring a consistent approach and that we had achieved a consensus in the emergent themes. Consideration was given to emerging themes, key messages and early headlines. All transcripts were destroyed once thematic analysis had taken place with the sole responsibility for data control lying with the ICS.

In total there were 31 themes identified across the seven questions in this third stage of analysis summarised in Table 4. These were also used to provide the commissioners with an early headlines report to enable them to focus on system priorities to support front line staff in successive waves of the pandemic (Table 5).

Quality and validity

We have been systematic in our approach to conducting and writing up the approach taken, recognising the limitations and have drawn on existing frameworks for quality in qualitative research: including the Standards for Reporting Qualitative Research Framework (SRQR) [18] and specific guidance for quality practice in reflexive thematic analysis [19].

As this is qualitative research, we are less concerned with reliability and generalisability but attend more to validity, transferability and trustworthiness [20]. To increase the validity of our results, we included multiple researchers in the processes of data coding and analysis; challenging our own assumptions and identifying potential ‘blind spots’ that any one of us might have had with regards to this topic. We met regularly throughout the course of the research to discuss emerging observations and all members of the research team were actively involved in developing the written report of this study. We also presented our preliminary findings to the workforce transformation and communications team at the ICS to discuss the face validity of our emerging themes at two key points in the analysis. They in turn provided an early draft of our analysis to a group of six healthcare workers who took part in the interviews as a form of member checking. This process validated the themes generated that made sense to the health care workers and no alterations needed to be made.

In this study, we have had no control over the sampling of participants, and therefore we are not able to generalise our results to all workers in the UK. However, the three lenses used to explore the impact of the pandemic at different levels of the system represent the diversity of experiences and views of support during the pandemic. This approach should increase the potential transferability of our findings. As more systematic reviews of evidence are gathered, and we hope our findings will resonate and strengthen strategies to support front line staff particularly in terms of macro and meso-system enablers.

To increase the trustworthiness of our interpretations, we have sought to be transparent about the research team conducting the study and the lenses through which we have viewed this data. In the “Findings” section we provide a detailed audit trail of the inductive processes used to illustrate and evidence our analyses.
Table 3  Example of the themes arising from the third level analysis for Question 1

Numbers in brackets indicate the number of datasets contributing to the theme derived from the secondary analysis. This gives a tentative impression of the strength of each theme, but caution needs to be applied in its interpretation as although many datasets were from individual informants, a small number were from groups of informants, through grand rounds, Instagram accounts and meetings. The asterisks indicate where responses included data from groups. Each overarching theme comprises the themes derived from the second level analysis which were undertaken by four different analysers, thus accounting for the different colours enabling an audit trail to be established back to the original data.

What has worked?

Theme 1: Collaborative, resilient, flexible teams who mutually support each other, cascade information and have risen to the challenge (72***)
• Leadership, commitment to team working and support for self, each other and the wider interdisciplinary team (24)
• Collaborative, resilient, flexible and effective teams who pull together support each other (18**)
• Positive atmosphere in which the whole team were communicating, rising to the challenge and adapting to working in a new way (5)
• Support from managers and availability of supervision and debriefs (4)
• Keep laughing and joking (4*)
• Support with equipment, information and processes around Covid, including time to work on workforce plans, funding (5)
• Cascading information via WhatsApp across teams (3)
• Regular meetings to enhance team work and communication (1)
• Training to help others used to working in a ward environment (1)
• Resilience of self and the team (3)
• Jobs not getting done- being handed over to team/next shift (1)

Theme 2: Cross-boundary working with, shared priorities, improved relationships, pooled resources, streamlined processes enabled new services (24******)
• Collaborative planning, improved and faster working for pooled resources to implement new services (98*)
• Cross boundary working and partnerships about shared priorities for care has improved working relationships across the system (7*)
• Ability to cross team work and initiate new projects (5*)
• Streamlined processes focussed on delivering the task/ outcome (2)
• Building strong relationships with suppliers and contacting them directly to get PPE deliveries (2)

Sub-theme 2.1: Ideas implemented have spanned technical innovations and standard passports for volunteers in acute settings to sharing medications in short supply and adapting new ways of working in the community (5*)
• Ideas implemented in acute hospitals included: reverse laminar flow in theatres and creating parallel departments, and standard passports for volunteers, Medical-air dependent ventilators rather than Oxygen dependent (3)
• Ideas implemented in community settings included sharing medications in short supply for EoL, easy read material for residents, taking services into people’s homes, using photographic evidence for DN consultations (5*)

Theme 3: Seeing the person in the patient, and with care and patience working with or for family members across the spectrum of care from recovery to death (24*****)
• Experiencing and learning from the spectrum of care from recovery to death (9)
• Seeing the Patient as a ‘person’ not just a number in which there was greater ‘care’ and ‘patience’ (7*)
• Different ways of working as an extended family to deliver the best service to patients (5*)
• Worried families know residents are in good hands (2*)
• Encouraging patients to take more responsibility and use family and community support (1)
• Leadership, commitment to team working and support for self, each other and the wider interdisciplinary team (24)

Theme 4: Technology has contributed to normality and innovation through patient consultation/decision making, improved response times, EoL experiences, team communication, remote working, staff wellbeing, and recruitment. (20***)
• Technology’s role in connecting to and supporting patient consultation, triaging and rapid decision-making (6)
• Technology’s role in contributing to normality and innovation through patient consultation/decision making, improved response times, EoL experiences, team communication, remote working, staff wellbeing, and recruitment (5*)
• Technology’s role in contributing to normality and innovation through patient consultation/decision making, improved response times, EoL experiences, team communication, remote working, staff wellbeing, and recruitment (3**)
• Technology’s role in thinking outside the box, training, and recruitment (2)
• Technology’s role in contributing to normality and innovation through patient consultation/decision making, improved response times, EoL experiences, team communication, remote working, staff wellbeing, and recruitment (1)
• Technology’s role in promoting weekly webinars to enable staff to keep up to date with what is going on (1)

Findings

Thirty-one overarching themes (T1-T31) and number of responses for each were identified across the seven colour coded questions (Table 4).

The 31 themes are presented in relation to the seven question topics, their relationship to each other and the headlines they informed in Tables 6, 7, 8 and 9 to illustrate:

I. things that went well compared with those that did not (Table 6).
II. challenges compared with celebrations and outcomes (Table 7).
III. learning and insights gained (Table 8).
IV. impact on role (Table 9).
V. headlines distilled from the analysis informed by the 31 themes (Table 10).
Table 4  31 Themes derived from thematic analysis in phase 3 of data analysis for the 7 interview questions

| Interview Questions | Themes Derived from Analysis                                                                                                                                                                                                 | Number of data sets identified in the second level analysis showing strength of the theme |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Q1. What has worked?| Theme 1: Collaborative, resilient, flexible teams who mutually support each other, cascade information and have risen to the challenge.                                                                                                 | 72                                          |
|                     | Theme 2: Cross-boundary working with, shared priorities, improved relationships, pooled resources, streamlined processes enabled new services                                                                                           | 24                                          |
|                     | *Sub-theme 2.1: Ideas implemented have spanned technical innovations and standard passports for volunteers in acute settings to sharing medications in short supply and adapting new ways of working in the community* |                                             |
|                     | Theme 3: Seeing the person in the patient, and with care and patience working with or for family members across the spectrum of care from recovery to death                                                                                | 24                                          |
|                     | Theme 4: Technology has contributed to normality and innovation through patient consultation/decision making, improved response times, EoL experiences, team communication, remote working, staff wellbeing, and recruitment | 20                                          |
| Q2. What has not worked? | Theme 5: The correct use and dehumanising impact of PPE and obtaining consistent supplies within a changing context                                                                                                      | 33                                          |
|                     | Theme 6: Confusing messages, not knowing what is happening with impact on: mental health assessments, hospital admissions and discharge, university programmes and conspiracy theories                                             | 15                                          |
|                     | Theme 7: System not joined up or resilient impacting negatively on patient flow, social care, use of volunteer potential, tracking and trace or redeployment                                                                               | 9*                                          |
|                     | Theme 8: Unrequired actions in acute care yet social care left high and dry                                                                                                                                               | 2                                           |
| Q3. What have been the challenges? | Theme 9: Managing emotional impact of the pandemic on people (staff, patients, residents, students) but keeping them hopeful and safe                                                                                           | 45****                                      |
|                     | Theme 10: Caring for self and each other when anxious about passing virus onto others, suffering fatigue and stress with no end in sight                                                                                                                                 | 41****                                      |
|                     | Theme 11: Supporting residents/patients with the impact of social isolation and their understanding of social distancing whilst also not seeing own families                                                                 | 42*******                                   |
|                     | Theme 12: Inconsistent policy and guidelines, and discontinuity across the system impacting on other parts of the system, pace of change and uncertainty about when it will end - the new normal                                           | 28******                                   |
|                     | Theme 13: Not knowing who has the virus, worrying about the risks to others (own families, patients, vulnerable others) and being more vigilant about safety.                                                                       | 19**                                        |
|                     | Theme 14: Exposure to increased number of people dying and impact of Covid related EoL care                                                                                                                                 | 9*                                          |
### Table 4 (continued)

| Interview Questions | Themes Derived from Analysis | Number of data sets identified in the second level analysis showing strength of the theme |
|---------------------|------------------------------|-----------------------------------------------------------------------------------|
| **Q4. What have been the key challenges?** | | |
| Theme 15: An amazing workforce – kind caring, supportive, strong teamwork and spirit has created a sense of pride, joy and feeling valued | 85****** |
| Theme 16: Everyone worked and learned together with a can-do attitude, supported by community spirit, everyone playing their part and the role of social care highlighted | 41****** |
| Theme 17: Feeling valued and appreciated by so many – will it continue | 29**** |
| Theme 18: Strengthened relationships with own neighbours, family and relatives, spending quality time with them and better work-life balance | 21** |
| Theme 19: Technology a success story for treatment, communication, virtual visiting, connecting and communicating with people, system efficiency, productivity and carbon footprint | 13*** |
| **Q5. Learning Opportunities** | | |
| Theme 20: Appreciate learning across the NHS and society to do things better or differently, enabling all parts to feel empowered to make a difference | 30******* |
| Theme 21: Increase understanding for vigilance and keeping people safe and funding | 14**** |
| Theme 22: Continuing new ways of working – system focused integrating health and social care with good business planning to protect key supplies and human resources | 15****** |
| **Subtheme 22.1:** Wider recruitment across health and care economy, with reservists and volunteers and shorter recruitment processes to support permanent staff | 7**** |
| **Subtheme 22.2:** Ensure the right skills are in the right place at the right time | 5* |
| **Subtheme 22.3:** System requirements to support high numbers of people requiring rehabilitation and needs of vulnerable people and those with mental health challenges | 3* |
| Theme 23: Support for staff wellbeing | 14** |
| Theme 24: Keep IT enhanced initiatives, recognising the need for good broadband connectivity | 13***** |
| **Q6. New insights** | | |
| Theme 25: Consistent and clearer messages on role of testing, applying social distancing sooner | 4* |
| Theme 26: Developed greater recognition of own strengths, the importance of balancing support for self and others, maintaining wellbeing and appreciating the little things e.g. a job I enjoy. | 50********* |
| Theme 27: Sustaining new ways of working, community spirit and cohesion | 20** |
| Theme 28: Looking to the future, the new normal will be different worst need big offices, more flexible and home working, services will change what they can offer | 15 |
| Theme 29: Learning readily to work differently, adapting flexibly, making adjustments, supporting others in new roles or taking on new roles whilst coping with increased workload | 89****** |
| Theme 30: More prepared for safety, stricter infection control, safeguarding so people feel safe | 33*** |
| Theme 31: Communicating more to get the right message across | 5* |

NB * indicates the number of groups in addition to individual participants that identified the themes indicating the strength of each theme
The paper presents a brief summary of the findings by each of three themes below.

Lessons learned
Things that went well compared with those that did not

Table 6 illustrates that more things have worked than have not. 4 Main themes and 1 subtheme were generated from 145 statements across the 176 transcripts analysed of strategies that have worked.

A willingness and resilience of the workforce and teams to be flexible, working together to find solutions for care that are person centred and safe identified by themes presented in Table 6 and 7 (Table 6: T1, T2, T3, Table 7: T15, T16).

‘The best thing I have noticed is that people are willing to help out where they would normally not have helped and it has been the team working together as a team.’ (IT Worker, Acute Care Provider)

“Change can happen quickly when it needs to which is good for service development in the future, sometimes you might want to make a change and it can take a lot of years. You have to keep high spirits and keep morale up. Together we are stronger.” (Senior Clinical Coordinator, Community Provider)
Table 6  Themes describing what has worked and not worked across the system (* indicates where datasets comprise one or more groups)

| What has worked?                                                                 | No of datasets with theme | What has not worked?                                                                 | No of datasets with theme |
|---------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------|----------------------------|
| T1: Collaborative, resilient, flexible teams who mutually support each other, cascade information and have risen to the challenge | 72*                       | T5: The correct use and dehumanising impact of PPE and obtaining consistent supplies within a changing context | 33*                       |
| T2: Cross-boundary working with, shared priorities, improved relationships, pooled resources, streamlined processes enabled new services | 24*                       | T6: Confusing messages, not knowing what is happening with impact on: mental health assessments, hospital admissions and attendance, university programmes and conspiracy theories | 15                       |
| Sub-Theme 2.1: Ideas implemented have spanned technical innovations and standard passports for volunteers in acute settings to sharing medications in short supply and adapting new ways of working in the community | 5*                        |                                                                                     |                            |
| T3: Seeing the person in the patient, and with care and patience working with or for family members across the spectrum of care from recovery to death | 24*                       | T7: System not joined up or resilient impacting negatively on patient flow, social care, use of volunteer potential, track and trace and redeployment | 9*                        |
| T4: Technology has contributed to normality and innovation through patient consultation/decision making, improved response times, Eol. experiences, team communication, remote working, staff wellbeing, and recruitment | 20*                       | T8: Unrequired action in acute care yet social care left high and dry               | 2                          |

NB (* indicates the number of datasets informing the theme comprise one or more groups in addition to individual participants e.g. 33 participants and *one group)
### Table 7: Themes describing challenges and celebrations/outcomes across the system

| Challenges?                                                                 | No of datasets with theme | Celebrations/Outcomes? | No of datasets with theme |
|---------------------------------------------------------------------------|----------------------------|------------------------|----------------------------|
| T9: Managing emotional impact of the pandemic on people (staff, patients, residents, students) but keeping them hopeful and safe | 45*                        | T15: An amazing workforce – kind caring, supportive, strong teamwork and spirit has created a sense of pride, joy and feeling valued | 85*                        |
| T10: Caring for self and each other when anxious about passing virus onto others, suffering fatigue and stress, with no end in sight | 41*                        | T16: Everyone worked and learned together with a can-do attitude, supported by community spirit, everyone playing their part and the role of social care highlighted | 41*                        |
| T11: Supporting residents/patients with the impact of social isolation and their understanding of social distancing whilst also not seeing own families | 42*                        | T17: Feeling valued and appreciated by so many – will it continue? | 29*                        |
| T12: Inconsistent policy and guidelines, and discontinuity across the system impacting on other parts of the system, pace of change and uncertainty about when it will end - the new normal | 28*                        | T18: Strengthened relationships with own neighbours, family and relatives, spending quality time with them and better work-life balance | 21*                        |
| T13: Not knowing who has the virus, worrying about the risks to others (own families, patients, vulnerable others) and being more vigilant about safety. | 19*                        | T19: Technology a success story for treatment, communication, virtual visiting, connecting and communicating with people, system efficiency, productivity and carbon footprint | 13*                        |
| T14: Exposure to increased number of people dying and impact of Covid related EoL care | 9*                         |                         |                            |

NB: (* indicates where some responses included groups rather as well as individuals, so the actual number of informants identifying the theme will be higher than the number identified e.g. 28 participants plus *one group)
Individuals and teams were enabled to find innovative solutions to ‘problems’ without becoming stifled by ‘poor’ governance (Table 6: T2, ST2.1, Table 8: T22).

“There has been really good cross-team working, so there are projects that we have been trying to get off the ground for years, that now suddenly because the decision-making process has become so slick that we have been able to do things that we have been wanting to do for a long time” (Clinical Operations Manager, Community Provider).

“We have been able to change the way we work so we have been able to use different resources like that” (OT, Acute Care Provider).

Use of IT was widely recognised as being beneficial, needing to be retained and further grown in relation to:

a. Supporting virtual visiting and End of life connections.
b. Clinical consultations.
c. Patient, team and stakeholder consultations.
d. Emotional support for staff wellbeing.
e. More efficient and collaborative ways of working with greater productivity.
f. Learning, development and induction.
g. Speeding up recruitment processes.
h. Environmental benefits: reducing the carbon footprint. (Table 6:T4, Table 7:T19, Table 8:T24).

Good broadband infrastructure was recognised a necessity to support the above (T24, Table 8).

Areas that did not work so well were associated with national and system factors such as communication of key messages and system integrity in terms of maintaining PPE supplies which impacted on staff in their interaction with patients and residents; the mental

| Table 8 Themes generated for Learning and Insights across the system |
|---------------------------------------------------------------|
| **Formal Learning?** | **No of datasets with theme** | **Insights?** | **No of datasets with theme** |
| T20: Appreciate learning across the NHS and society to do things better or differently, enabling all parts to feel empowered to make a difference | 30* | T26: Developed greater recognition of own strengths, the importance of balancing support for self and others, maintaining wellbeing and appreciating the little things e.g. a job I enjoy. | 50* |
| T21: Increase understanding for vigilance and keeping people safe and funding | 14* | T27: Sustaining new ways of working, community spirit and cohesion | 20 |
| T 22: Continuing new ways of working – system focused integrating health and social care with good business planning to protect key supplies and human resources | 15* | T28: Looking to the future, the new normal will be different they won’t need big offices, more flexible and home working, services will change what they can offer | 15 |
| Subtheme 22.1: Wider recruitment across health and care economy, with reservists and volunteers and shorter recruitment processes to support permanent staff | 7* | | |
| Subtheme 22.2: Ensure the right skills are in the right place at the right time | 5* | | |
| Subtheme 22.3: System requirements to support high numbers of people requiring rehabilitation and needs of vulnerable people and those with mental health challenges | 3* | | |
| T23: Support for staff wellbeing | 14* | | |
| T24: Keep IT enhanced initiatives, recognising the need for good broadband connectivity | 13* | | |
| T25: Consistent and clearer messages on role of testing, applying social distancing sooner | 4* | | |
| | | | |
health of people; and the flow of patients through the system (Table 6: T5,T6,T7).

“We had to quickly get used to wearing PPE for every patient and trying to get comfortable with that and in the beginning that was quite challenging because it was such a different way of working for us.” (Community Nurse)

ii. Challenges compared with celebrations and outcomes

Table 7 illustrates themes that staff identified as the key challenges and celebrations from their experiences of working through the pandemic.

The greatest challenges focused on the human elements of care, specifically managing emotions (positive and negative), keeping hopeful, and caring for self and others as the implications of COVID-19 impacted the lives of staff, patients, residents (T9,T10). Living with the uncertainty, exposure to many more deaths than usual, and the impact on family raised anxiety levels (T11, T12, T14).

“I’m worried about having COVID and not knowing I’m having it and then going on the ward and working with vulnerable people for whom it may be fatal. That’s the scary thing isn’t it?” (Approved Mental Health Professional, Community Care Provider).

“The hardest thing was the deaths because some of them happened very quickly and very suddenly. So, someone appeared ok one minute but not the next”. (Health Care Assistant Acute Care Provider)

“It just feels completely dehumanising, and I just found that whole period of PPE and not getting to know patients just really stressful” (Senior Physiotherapist Acute Care Provider)
Another key challenge for staff resulted from inconsistent and constantly changing key messages from central government and the wider system.

“Lots of changes, often daily changes to keep aligned with the government advice and policies – so it has been hard on the staff” (Senior Clinical Coordinator, Acute Care Provider)

This had implications for ICS functioning with each part impacting on other parts (Table 7: T12). One example included the lack of consistent approaches by different GP practices across the system, and the impact that GP closure had on pharmacy demand.

“The closure of GP practices had a big impact on the number of patients being referred to pharmacies. Lots more patients coming through the door. We didn’t realise how much responsibility would be on us as a team….I had to be a bit more dynamic and make sure we could accommodate everyone and keep people safe” (Pharmacist, Primary Care Network team).

However, this infection control practitioner highlights how teamwork and working things out together helped to overcome these challenges.

“There were a few issues at the very beginning where communication would sometimes breakdown and we all worked through things so even that negatives could be turned into a positive” (Infection Control Practitioner, Covid Response Team Community Care Provider)

Five themes were identified from 189 statements illustrating celebrations that staff wanted to share (Table 7). These included statements recognizing that staff have been amazing (T15), which contributed to a reported sense of pride and joy. The experience of learning and working together engendered a community spirit and can-do approach across the system (T16), with many staff reporting feeling valued (T17).

“It has proved that we can be adaptable and resilient and change ourselves and the service to meet the needs of the general public” (Care Home Manager)

“It’s unifying and unifying to know that actually we are not on your own and everybody feels vulnerable because it is a vulnerable situation and it is for us, our patients and families” (Community Nurse)

“It has really taught me to appreciate my family and friends more and the time that you get to spend with them” (Integrated Care Coordinator, Community Care Provider)

The contribution of technology for enabling remote Covid-secure access to services for patients through virtual consultations was recognised as a key success factor (T19). It also helped to maintain connections between staff and teams delivering services, and for enabling system efficiencies to be made particularly in relation to Virtual Discharge Hubs, community care continuity and GP consultations. Other celebrations and outcomes included: better relationships personally (T18) and professionally (T16); strengthened relationships with neighbours, families and relatives (T18); spending quality time with family when not working; and a feeling that working from home created a sense of flexibility and focus (T3). However, there were strong themes around practitioners not being able to see family during lockdown and the impact of social isolation and social distancing (T11), fears about passing on the virus to family (T13) and an increase in staff sickness linked to emotional fatigue and work (T10). The feeling that there was no end in sight at that time and trying to meet the demands of work with the anxieties associated with passing the virus onto others was a strong theme with 41 statements identifying this as a real challenge for them personally and professionally.

**Learning and insights gained**

Table 8 summarises the learning and insights gained from staff working in acute, community and care home settings. There were three themes generated.

Greater recognition emerged about the role and value of learning as a pre-requisite to doing things differently, with the need for all parts of the system to feel empowered to contribute and make a difference (T20). This was associated with continuing new ways of working (T21) and good business planning (T22). Key learning was that business planning linked to workforce development needs to:

1) Embrace both speedier and more comprehensive approaches to recruitment for supporting permanent staff, including better use of reservists and volunteers (T22.1).

2) Ensure the right skills were in the right place at the right time (T22.2), to particularly address the wellbeing of staff (T23) and the vulnerability of people with mental health needs (T22.3); and

3) Recognise the need for increased vigilance and understanding about how to keep people safe (T21).

In contrast to the key learning themes that were predominately systems focused, personal insights for staff identified greater recognition of their own strengths, the importance of balancing support for self and others, maintaining wellbeing, and appreciating the little things e.g., ‘a job I enjoy’ (T26). Other insights focused on sustaining new ways of working, community spirit and
cohesion (T27), looking to the future and recognising that the ‘new normal’ will be different (T28).

“The experience has created a bit of appreciation for one another and the world we are in and not take things for granted. I think that can really change and I hope that is something here to stay and this experience has taught me is that it is all about team and it is not about ‘I’ – you’re nothing without a team and nothing without colleagues” (Community Health Care Assistant, Community Provider Organisation).

iv. Impact on role

Finally, three themes were generated from 127 statements that illustrated the impact of the pandemic on staff roles (Table 9).

The greatest impact was associated with learning readily to work differently, for example, making adjustments, supporting others in new roles, or taking on new roles whilst coping with increased workload (T29), combined with a much stricter focus on infection control and safety (T30), and to a lesser extent, the need to communicate more to get the right messages across (T31). There were a wide range of examples of staff moving from their normal area of work to support teams in other services to cope with the changes needed to deal with the steady flow of Covid positive patients in all settings. This extended to porters, cleaning operatives and catering staff mucking in to support teams, and gardeners tending to outside spaces to give patients something positive to look at par to support teams, and gardeners tending to outside spaces to give patients something positive to look at in to support teams, and gardeners tending to outside spaces to give patients something positive to look at particularly in care home settings for residents. This quotation summarises the individual impact on roles:

“I think it has meant that you don’t get safety so much more. How people are feeling and the emotional toll on people, residents and staff. I would also say (about) camaraderie – we have really come together – there has been times when it has been really stressful, emotional and upsetting but we have all been there for each other mostly for the residents, so we come together and been stronger. But still at times, (we remember) that it is an uncertain time, listening to the government updates you can get really confused but I still say that we work together and it really shows” (Team Leader, Care Home).

For some staff, working remotely had its benefits whilst for others, particularly newly qualified staff and students, not being able to work with their usual team was stressful as this example illustrates.

“I came into the Trust as a Nursing Degree Apprentice working previously in the Trust as a Healthcare Assis-

tant – so to come into a new job, with a new role and then to have this all thrown in on top has been quite difficult”(Nursing Degree Apprenticeship Student)

“The hardest thing is not working with my normal colleagues – teams have been jumbled up so working in a micro-team so you are not working with usual peers” (OT Community Social Care).

Team working and the need for a cohesive supportive team was seen as vital to staff resilience and wellbeing:

“I’ve found that my role has really changed and the most important thing at the moment is staff health and wellbeing and this is my focus 24/7, and it’s important to me and my colleagues to cover everyone’s wants and needs in this really challenging time” (Staff Engagement management, Physiotherapist Community Provider Organisation).

xxii. Headline findings from the analysis

The 31 overarching themes capture the key findings and inform the synthesis of headlines for commissioners (Table 8, 10) and learning for the system, national policy and the individual (Table 11).

Overall, the pandemic has shown how interdependent every aspect of health and social care is strengthening the imperative to take a whole systems approach by acting as a catalyst for health and social care transformation. Covid-19 has enabled green shoots towards genuine integration and joint working to support this transformation at many levels if momentum can be maintained (T1, T2, T3, ST 2.1).

Discussion

Key findings and comparison with the literature

The themes identified in this study echo those uncovered by the first published systematic review of primary qualitative studies to assess the experiences and perceptions of organisations and practitioners at multiple levels of health systems internationally in responding to COVID-19 [3]. Whilst our findings present a snapshot of experiences during the first wave of the pandemic in one ICS in the East of England, they show how responses to COVID-19 have been negotiated and implemented in a context of ‘crisis’ which deviates from ‘usual care’ planning and its improvement [21]. Our main headline study finding is highlighted below.

“The pandemic has shown how interdependent every aspect of health and social care is and has strengthened the imperative to take a whole systems approach to enable this by acting as a catalyst for health and social care integrated transformation.”
Strengths and limitations

It is important to note that this paper is not making any specific knowledge claims because the findings relate to one ICS as the context in which the evaluation of frontline staff experiences of the first wave of the pandemic was conducted. It is a strength and testimony to the workforce in the East of England that they were able to spearhead the ‘We Care Together’ campaign to support staff at a time when an unprecedented crisis was occurring. Further, as a newly formed ICS, to undertake measures to want to learn from front line staff across a wide range of settings in order to future proof and support its workforce, is commendable. The ICS has used the insights generated from this piece of work to...

Table 11 Learning headlines for system, national policy and individuals

| At systems level need:                                                                                           | T5-11, T14, T20, T22, T23, T25, T27, T28 Subthemes: 22.1-22.3. |
|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| • Consistent approaches across and within sectors.                                                               |                                                                  |
| • Consistent clear messages about what is expected from staff and the public.                                     |                                                                  |
| • Good business relationships and continuity planning to ensure staffing, supply chains, continuing other health priorities is critical e.g. people with cancer, maintaining adequate stocks and supply of PPE. |                                                                  |
| • Embedded (systematic) support systems for staff.                                                               |                                                                  |
| • Integrated volunteer systems across boundaries, passport for volunteers inclusive of DBS and shielding arrangements. |                                                                  |
| • Continued learning and development support with safe working in the workplace, quality improvement, infection control. |                                                                  |
| • Enabling teams to be empowered to make a difference as interdependent partners across the system                  |                                                                  |

For national policy, need:

- Consistent and clear messages in a timely manner.
- Whole system planning (business continuity, supply chains, relationships with suppliers specifically relevant to PPE).
- Consideration of and planning for impact on vulnerable people.
- Introduction of one national capacity tracker system for recording Covid tests

At individual level learning resonated with:

- Re-igniting individual strengths and recognising those they didn’t know they had.
- The importance of appreciating the ‘little’ taken for granted things.
- Family and home, hobbies and interests.
- Having a job, they loved.
- Appreciating the support of the public and others.
- Humanitarian values - Valuing every person as a person and their contribution, be that colleague, patient, resident, relative, volunteer, friend, citizen.

Table 12 ICS Immediate and Medium to Long Term Response and Planning

| Immediate Response                                                                 | Medium to Long Term                                                                 |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Flexible approaches to working                                                      | Embed workforce development plans into People Plan and key strategic priorities of the People Board which provides strategic governance and oversight of impact. |
| • Empowering teams to lead & innovate                                              | • Continue to listen and learn from staff through continued evaluation of the We Care Together Campaign. |
| • Redeployment of staff                                                             | • Continue to work with research partners to identify strategic priorities for evaluation of front-line staff experiences. |
| • Balancing home & family life                                                     | • Embed digital innovation into service delivery plans to free up staff and streamline services to provide effective, safe and person centered care in range of contexts. |
| Use of IT and digital solutions                                                     |                                                                                     |
| • MS Teams, Zoom                                                                   |                                                                                     |
| • Education & training                                                              |                                                                                     |
| • Home working                                                                     |                                                                                     |
| • Virtual consultations & patient engagement                                       |                                                                                     |
| • Upskilling staff                                                                  |                                                                                     |
| Health and wellbeing of our people                                                 |                                                                                     |
| • Networks – Health and Wellbeing, Quality Diversity and Inclusion – strategies for change |                                                                                     |
| • Physical, mental, social, economic, wellbeing                                    |                                                                                     |
| • Shared resources for all – local, national                                        |                                                                                     |
| • MH hub, enhanced access health, trauma- based coaching, bitesize WebEx            |                                                                                     |
| • Enhanced support for partners                                                    |                                                                                     |
| Enhanced and streamlined recruitment                                                |                                                                                     |
| • Systemwide Health and Social Care Workforce recruitment 200 people                |                                                                                     |
| • Reservists 45 and counting                                                        |                                                                                     |
| • Collaborative working with Local Resilience Forums for staff wellbeing            |                                                                                     |
|                                                                                     | Embedding workforce development plans into People Plan and key strategic priorities of the People Board which provides strategic governance and oversight of impact. |
|                                                                                     | • Continue to listen and learn from staff through continued evaluation of the We Care Together Campaign. |
|                                                                                     | • Continue to work with research partners to identify strategic priorities for evaluation of front-line staff experiences. |
|                                                                                     | • Embed digital innovation into service delivery plans to free up staff and streamline services to provide effective, safe and person centered care in range of contexts. |

Strengths and limitations

It is important to note that this paper is not making any specific knowledge claims because the findings relate to one ICS as the context in which the evaluation of frontline staff experiences of the first wave of the pandemic was conducted. It is a strength and testimony to the workforce in the East of England that they were able to spearhead the ‘We Care Together’ campaign to support staff at a time when an unprecedented crisis was occurring. Further, as a newly formed ICS, to undertake measures to want to learn from front line staff across a wide range of settings in order to future proof and support its workforce, is commendable. The ICS has used the insights generated from this piece of work to...
strengthen its approach to supporting front line staff in all contexts through its People Plan in four key areas (Table 12).

This thematic analysis has three limitations:

i) the evaluation team became involved after interviews were conducted with staff, so staff who volunteered are not a randomised sample, although the range of roles captured enabled a breadth of representation across the ICS.

ii) data collection methods from interviews, audio files and Instagram accounts varied in format with some of the files corrupted therefore reducing access to the complete dataset. The data sent to the University research team was challenging to catalogue as it was not always clear what role or setting the interviewee was sharing.

iii) it presents a snapshot at one moment in time during the first wave of the pandemic in one ICS in the East of England. Further research needs to be undertaken to identify what strategies work for whom, why and under what circumstances in order to really maximise the opportunities for system wide learning, development and improvement. To this end we are currently engaged in a realist evaluation study to gather this data to present in a further publication.

**Implications for policy, practice and future research**

As time progresses, and more is known about the impact of successive waves of the pandemic, it is really important to place emphasis on sharing best practice in system-wide approaches to workforce development, service planning and delivery. This will be important in England as the Integrated Care System population health-based model is gradually forming, and health and social care organisations learn to work together to meet citizens’ needs. From a policy perspective, investment in all health and social care sectors informed by evidence of the impact of the pandemic on unmet care needs in communities will be important to address.

These policies should be informed by active inclusion of and collaboration with citizens, communities and the workforce, they are to make a meaningful and sustainable difference. This requires investment in the current and future workforce to address the wellbeing impacts and challenges that the pandemic has created, and ensuring that services are supported by appropriately qualified staff with the right skills to deliver the right care in the right place. Addressing the current workforce shortages across all sectors is an imperative policy priority to aid system recovery.

In responding to COVID-19, provider organisations have faced common challenges that include supporting the important role of community workers in primary care, clarifying the division of roles between community and primary care practitioners and support their coordination [22]; the development of new technology, directing financial investment and developing the capacity of the health care workforce [23]; as well as securing access to PPE and other COVID-related medical equipment [24]. It is imperative to address these and related challenges through a system-wide approach; focusing on the underpinning organisational arrangements that will support horizontal and vertical coordination where this can help to address common challenges. System-wide decision-making about service planning and delivery should involve strong representation from the front-line workforce who have carried the challenge of responding to COVID-19. Ensuring that staff well-being is at the forefront of system wide recovery from the pandemic is crucial if we are to have a resilient workforce fit for the future. The implementation of rapid service innovations carries COVID-19 [2], including telemedicine, will need to be re-evaluated as to whether such changes in service planning, financing and delivery can or should be sustained to address the backlog of waiting lists for treatment. It is clear that there is a great deal of learning from the adaptations to services and ways of working that can be capitalised on from the emerging evidence of recent studies published if innovations are to be adopted at scale [3].

From a research perspective there is a need to ensure that there are robust research methodologies and study designs for understanding the system wide impacts of COVID-19 in the long term [3]. A strategic approach to funding multi-centre research would be beneficial to enable researchers with different skill sets to work together to develop richer insights into system wide impacts at all levels of the system. We are currently continuing to work with this and other organisations to gather ongoing evidence for a realist evaluation and have developed a Programme Theory for sustainable transformation to be published in the near future.

**Conclusions**

This thematic review has provided a ‘snapshot’ at a period when people, organisations and systems were needing to adapt to a radically ‘new’ normal. The impact (both positive and negative) cannot be underestimated on people’s lives. Stories from front line staff illustrate what transformation really feels like for those working in teams to deliver person centered safe and effective care and support services. The challenges and the setbacks are as much a part of their stories as the successes. They illustrate that the process of transformation is not a tidy or linear one. This paper has highlighted the importance of providing resource, clarity, stability and infrastructure across the STP to maximise staff wellbeing.
Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12913-022-07797-7.

Additional file 1.

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Authors’ contributions

CJ lead author developing the format and content of the paper. KM, JW, SH contributed to data analysis of the transcripts and review of the content of the paper. EW contributed to the overall review of the paper. All authors have read and approved the manuscript.

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Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

Norfolk and Waveney STP as part of ongoing evaluation of the We Care Together national campaign, conducted interviews with 25 front-line staff collecting photographic and narrative images shared with the public on Instagram and through a national twitter campaign. Front-line staff were invited by the STP to participate following explanation that shared public stories would be thematically analysed by an external research group to share findings for the annual HSJ awards. Consent was provided by participants to this research group and destroyed immediately post analysis. The report commissioned by the STP was prepared with the Director of Workforce for the STP. We confirm that all methods were carried out in accordance with relevant guidelines and regulations of the University. The study did not involve any experimental protocol requiring approval by a named institution and/or licensing committee. We confirm that informed consent was obtained from all subjects by Norfolk and Waveney STP and that all subjects were over the age of 18 years.

Consent for publication

Not applicable

Competing interests

The authors declare that they have no competing interests.

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References

1. Gao Z, Xu Y, Sun C, Wang X, Guo Y, Qiu S, et al. A systematic review of asymptomatic infections with COVID-19. J Microbiol Immunol Infect. 2021;54(1):1–6. https://doi.org/10.1016/j.jmiij.2020.05.001.
2. Liu Y-E, Zhai Z-C, Han Y-H, Liu Y-L, Liu F-P, Hu D-Y. Experiences and insights of frontline nurses combating coronavirus disease-2019 in China: a qualitative analysis. Public Health Nurs. 2020;37(5):757–63. https://doi.org/10.1111/phn.12768.
3. Turner S, Botero-Tovar N, Herrera MA, et al. Systematic review of experiences and perceptions of key actors and organisations at multiple levels within health systems internationally in responding to COVID-19. Implement Sci. 2021;16(50). https://doi.org/10.1186/s13012-021-01114-2.
4. Huang Y, Liu Y, Huang Y-M, Wang M, Zhou X. Characterisation of Obesity in patients with COVID-19: a systematic review and network meta-analysis. 2020;113:154378. https://doi.org/10.1016/j.ptsr.2020.154378.
5. Siemieniuk RA, Bartoszko J, Zeraatkar D, Iezovich A, Kum E, et al. Drug treatments for COVID-19: a systematic review and network meta-analysis. BMJ. 2020;370:m2980. https://doi.org/10.1136/bmj.m2980.
6. Juul S, Nielsen K, Bente K, P. Veroniki AA, Thabane L, Linder A, et al. Intervention for management of COVID-19: a protocol for a living systematic review with network meta-analysis including individual patient data (The LISING Project). Rev. 2020;9(1):108. https://doi.org/10.1186/s13643-020-1970-9.
7. Turner S. How to write a qualitative analysis of the coordination of major system change within the Colombian health system in response to COVID-19: a study protocol. Implement Sci Commun. 2020;1(1):1–8. https://doi.org/10.1186/s43058-020-00063-z.
8. West R, Stya R, Gold WL. Mitigating the psychological effects of COVID-19 on health care workers. CMAJ. 2020;192(17):E459–60. https://doi.org/10.1503/cmaj.200519.
9. NHS England. The NHS long term plan. 2019. https://www.longtermplan.nhs.uk. Accessed 10 Feb 2021.
10. NHS England. We are the NHS: People Plan for 2020/21 – action for us all. July 2020. https://www.england.nhs.uk/publication/we-are-the-nhs-people-plan-for-2020-21-action-for-us-all. Accessed 10 Feb 2021.
11. Billings J, Seif N A, Hegarty S, et al. What support do frontline workers want? A qualitative study of health and social care workers’ experiences and views of psychosocial support during the COVID-19 pandemic. 2020. https://doi.org/10.1101/2020.05.22.2005122.
12. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77–101.
13. Braun V, Clarke V. Novel insights into patients’ life-worlds: the value of qualitative research. Lancet Psychiat. 2019;6(9):720–1.
14. Mayring P. Qualitative content analysis. A Companion Qual Res. 2004;1:159–76.
15. Pope C, Mays N. Qualitative methods in health research. Qual Health Res. 2006;3:1–11.
16. Gribbon C. An introduction: Qualitative data analysis. London: Sage; 2007.
17. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77–101.
18. O’Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. MHPE standards for reporting qualitative research. Acad Med. 2014;99(12):1245-51. https://doi.org/10.1097/ACM.0000000000000388.
19. Braun V, Clarke V. One size fits all? What counts as quality practice in (reflective) thematic analysis? Qual Res Psychol. 2020;17:1–25.
20. Noowell LS, Norris JM, White DE, Moules NJ. Thematic analysis: Striving to meet the trustworthiness criteria. Int J Qual Methods. 2017;16(1):1629403617733947.
21. Wensing M, Sales A, Armstrong R, Wilson P. Implementation science in times of COVID-19. Implement Sci. 2020;15(1):42. https://doi.org/10.1186/s11668-020-01006-x.
22. Xu Z, Ye Y, Wang Y, Qian Y, Pan J, Lu Y, et al. Primary care practitioners’ barriers to and experience of COVID-19 epidemic control in China: a qualitative study. J Gen Intern Med. 2020;35(11):3278–84. https://doi.org/10.1007/s11606-020-06107-3.
23. Daphna-Tekoah S, Megadasi Brikman T, Scheier E, Balla U. Listening to hospital personnel’s narratives during the COVID-19 outbreak. Int J Environ Res Public Health. 2020;17(17):6413. https://doi.org/10.3390/ijerph.17(17)6413.

24. Algunneeyn A, El-Dahiyat F, Altakhineh MM, Azab M, Babar Z-U-D. Understanding the factors influencing healthcare providers’ burnout during the outbreak of COVID-19 in Jordanian hospitals. J Pharm Policy Pract. 2020;13(1). https://doi.org/10.1186/s40545-020-00262-y.

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