

System wide learning from first wave Covid 19: A realist synthesis of what works?

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Abstract

Background

This paper presents a thematic analysis of 176 interview transcripts from front line staff working during the first wave of COVID-19 in the East of England.

Methods

Presented as a descriptive case study it reflects the complexity and numerous variables that influenced staff experiences of delivering care and support across the health and social care system between April and August 2020. Drawing upon the methodology of realist synthesis, it addresses the question "*What works for whom and in what contexts and why?*" to help illuminate real-world issues that people have faced.

Results

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. Four tentative theories of system transformation are presented to highlight support mechanisms that are needed to enable front line teams to be effective in further waves of the pandemic, capitalising on system wide learning, patient, resident and staff wellbeing.

Conclusions

This paper presents a unique insight into front line staff experiences of working during the first wave of the Covid-19 pandemic using realist synthesis methods to distil key themes and tentative theories about what strategies work to enable and empower front line teams to be effective and to support system wide learning and transformation.

Background

The Health Foundation state the COVID-19 pandemic '*represents an unprecedented challenge to health and care services, bringing intense pressure and radical change to systems, organisations and to all of us as individuals*'. Yet, the UK National Health Service (NHS) has a long history of responding effectively to emergencies and major incidents in which staff are renowned for their ability to respond and 'step-up', showing resourcefulness and resilience in order to continue to deliver care under pressure. The pandemic outbreak was declared by the World Health Organisation (WHO) on 12th March 2020 necessitating rapidly enforced changes to services, workforce configuration and altered working practices across health and social care systems. Evidence published to date about front line staff experiences of working through

the first wave of the pandemic have been reported by several national campaigns (Humans of Covid-19 project, COVID Stories from the Front Line). Additionally, published research papers have presented front line staff experiences from within organisations [1.2.3] as well as reporting the psychological impact on staff mental health and wellbeing [4.5].

This paper uses a realist approach to share insights from the 'We Care Together Campaign', led by Norfolk and Waveney Sustainable Transformation Partnership (STP), established to capture a living history of the pandemic across the health and social care system in the East of England. It presents a case study highlighting what went well; challenges, celebrations; learning and insights; and impact on staff roles working across acute, community and care home settings. The paper proposes four tentative theories and recommendations for supporting system wide transformation as a result of the lessons learned.

Methods

Study Aim

The aim of the evaluation was to identify:

- i. lessons to be learned, from the oral living history of front-line staff.
- ii. a baseline for transformation across the STP.
- iii. insights for informing future workforce and service sustainability.

Design

The thematic review is presented as a descriptive case study [6] reflecting the complexity and numerous variables that influenced participants' experiences of delivering care and support between April and August 2020. Realist synthesis, a theory driven process with a focus on addressing the question "*What works for whom and in what contexts and why?*" to help illuminate real-world issues that people have faced in complex health and social care practice contexts [7]. Realist synthesis bridges the gap between assumed ease of identifying factors that cause change and the practical challenges of recognizing change in frontline practice [8] It pursues a generative approach to explaining relationships about components that may produce change and the conditions pertinent to the functioning of these components [7]. The context and focus of this case study is on how the Norfolk and Waveney STP experienced the first wave of the pandemic.

Settings and Participants

A voluntary sample of staff were invited to talk about their personal experiences and recollections through one to one interviews and group meetings facilitated by the STP. Interviews were transcribed by volunteers employed by the STP. Data sources were provided from three Acute NHS Trusts, Community, Social Care and Care Home providers, Ambulance Services, Mental Health Services, Pharmacies, Primary Care and Volunteers. The sample included front line practitioners, managers, specialists, logistics,

infection control, engineers, maintenance and ground staff, domestic and cleaning operatives, and kitchen staff. Independent analysis of the transcripts was conducted by a research team commissioned for their expertise in realist evaluation methods and systems transformation.

Process of Data Analysis

Each transcript was coded to provide anonymity and randomised, divided and apportioned to each team member. The content of each transcript was analysed using seven colour coded areas for interrogation (Table 1). Content analysis is a general term for different strategies used to analyse text [9]. It is a systematic coding and categorizing approach used for exploring large amounts of textual information to determine trends and patterns of words used, their frequency, relationships, and the structures and discourses of communication [10, 11, 12]. In the first level analysis, 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.

In the second level analysis, themes arising from the first level were synthesized into a thematic table utilising the same headings guiding the initial analysis (Table 1). Thematic analysis is described as "*a method for identifying, analysing and reporting patterns (themes) within data*" [13]. 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. The final analysis generated overarching themes across all data sets. The team met regularly to sense check the processes used ensuring a consistent approach with no anomalies or outlying data. Consideration was given to emerging themes, key messages and early headlines for commissioners. All transcripts were destroyed once thematic analysis had taken place with the sole responsibility for data control lying with the STP.

176 transcripts/datasets 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 not analysed.

Following the thematic analysis, four propositions were developed to explain preliminary theoretical strategies for achieving system wide learning and sustainable transformation during and beyond the pandemic [14]. These tentative propositions identify the contexts and mechanisms that generated favourable outcomes. Mechanisms explain how different activities impact on behaviour and outcomes [15]. "*A mechanism is not a variable but an account of the behaviour and interrelationships of the processes that are responsible for the change. A mechanism is thus a theory*" [16]. Four theories are presented after the findings.

Results

31 overarching themes (T1-T31) and number of responses for each were identified across the seven colour coded questions. The number of responses provides a sense of theme strength based on the number of informants highlighting the point, but caution is required as some transcripts were from groups rather than individuals, so the number of informants contributing will be higher than stated. An asterisk denotes this in findings tables.

Themes are presented in relation to lessons learnt:

- i. things that went well compared with those that did not (Table 2);
- ii. challenges compared with celebrations and outcomes (Table 2);
- iii. learning and insights gained (Table 4);
- iv. impact on role (Table 5);
- v. headlines distilled from the analysis informed by the 31 themes (Table 6).

Lessons Learned

I. Things that went well compared with those that did not

Table 2 illustrates that more things have worked than have not with more than double the informants responding in the positive domain.

A significant strength was 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 (T3, T11, T15, T16). Individuals and teams were enabled to find innovative solutions to 'problems' without becoming stifled by 'poor' governance (T2, ST2.1, T22). The number of teams (new and existing) who are or have become effective in how they work together and support each other to provide services to patients, residents and communities was a notable finding (T1, T2, T16).

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. (T4, T19, T24).

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

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 health of people; and the flow of patients through the system (T5,T6,T7).

ii. Challenges compared with celebrations and outcomes

Table 3 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). Another key challenge resulted from experiencing inconsistent messages associated with the pace of change. This had implications for STP functioning with each part impacting on other parts (T12) e.g. the lack of consistent approaches by different GP practices across the system, and the impact that GP closure had on pharmacy demand.

In contrast, positives outweighed the challenges, with twice as many informants' responses identifying the top celebration than the top challenge. The contribution of technology was

recognised as a real success (T19). Recognition that staff have been amazing (T15) was unanimous, outstripping other celebrations and outcomes and contributing to a 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 feeling notably valued (T17). 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 not being able to see family because of lockdown (T11), fears about passing on the virus to family (T13) and an increase in staff sickness linked to emotional fatigue and work (T10).

iii. Learning and insights gained

Learning and insights from across acute, community and care home settings, reflect the experiences of staff working in every aspect of health and social care across the STP (Table 4).

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 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).

iv. Impact on role

Finally, several themes that illustrated the impact of the pandemic on staff roles (Table 5).

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 safety (T30), and to a lesser extent, the need to communicate more to get the right messages across (T31).

v. Headlines distilled from the analysis

The 31 overarching themes (Tables 2-5) capture the key findings and inform the synthesis of headlines for commissioners (Table 6) and learning for the system, national policy and the individual (Table 7).

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).

Theory development

Development of Four Tentative Theories of System Transformation

A key feature of the realist synthesis approach is identifying context, mechanism, outcome (CMO) relationships to describe what works, in what context, for whom and why. Context is differentiated from mechanism:

'Context must not be confused with locality. Depending on the nature of the intervention, what is contextually significant may not only relate to place but also to systems of interpersonal and social'

relationships, and even to biology, technology, economic conditions and so on'[15: p.8].

Mechanisms '*refer to the ways in which any one of the components or any set of them, or any step or series of steps brings about change. Mechanisms thus explicate the logic of an intervention; they trace the destiny of a programme theory, they pinpoint the ways in which the resources on offer may permeate into the reasoning of the subjects'* [15:p.7]

Drawing on the 31 themes, four theories are proposed to inform systems transformation by identifying tentative CMO relationships across one STP in relation to the pandemic (Table 8):

- Being person centred
- Teamwork and cross-boundary working
- System-wide guideline implementation and communication for safety
- System-wide learning and working

These theories identify the elements important to address, and the contexts combined with mechanisms that enable positive outcomes based on what has worked and has not worked. They highlight key system-wide features that can guide implementation as we 1) move forward with subsequent waves in the pandemic 2) prepare for integration of health and social care from a systems perspective, and 3) meet future unprecedented challenges.

Team-working across boundaries

Effective workplace contexts where good cross boundary relationships and team working, manifested through everyone working together, and respectfully learning from each other, results in ideas and innovations for change being implemented and everyone feeling valued. Investing in supporting teams to become effective and high performing so they can positively adapt to any challenges faced, before crises hit is vital.

Contexts that recognise the impact of different parts of the system on each other when facing unprecedented uncertainty and rapid change, will achieve safety with consistent implementation of effective policies and guidelines and clear communication, enabling staff to adapt quickly. A lack of joined up working impacts on other parts of the health and care system e.g. the rapid hospital discharge of older patients to care homes, which has occurred in significant numbers across the country [17]. Not having clear and consistent messaging augmented by pace of change and level of uncertainty leads to a range of unintended outcomes that influence effective knowledge translation and negatively impacts on staff anxiety and wellbeing.

System-wide learning and working

Contexts where there is appreciative learning from each other, people and teams in the system feel empowered to make a difference. Mechanisms such as integrated ways of working, system-wide

planning and workforce development enable everyone involved to feel empowered to make a difference to patients, staff, the system, citizens, communities and society. Sustaining learning from new ways of working will ensure that the workforce has the right skills for the right place to deliver the right care needed to meet population needs. This requires good business principles. Planning and effective resourcing of the workforce, using volunteers and reservists to support the permanent workforce is essential in meeting the high numbers of patients with long COVID, and the mental health and wellbeing of communities and staff. Providing resources are focused on the needs of the system, outcomes will be sustainable with cohesive ways of working that make the most of community spirit and resilience and adapt and flex ways of working and roles to meet the circumstances. In this study, examples included: theatres turned into Intensive Care Units, community services providing telehealth support to maintain GP and specialist appointments, Discharge Hubs modifying ways of working to enable improvements in planning for discharge to appropriate community support services. Pharmacists played a central role in supporting patients in the community to continue to access important services:

"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". (KM13).

Responsive learning systems across health and social care are vital so that lessons can be learned quickly to enable teams to adapt. The consequences of the system not working cohesively impacts on patient flow, track and trace, staff redeployment and much more.

Discussion

The tentative theories have identified contexts and mechanisms influential across one health and social care system experiencing the pandemic's first wave. They embrace person-centred values, high performing teams with cross boundary working, clear and consistent guidelines and communication for safety, continuing to learn, flex and adapt to challenges based on responsive learning systems. These insights are not new but endorse key messages in the literature that guide system transformation further accentuated through experiences of the pandemic.

Being person centred and compassionate are values that underpin systems transformation focusing on what matters to people to support those providing and experiencing services [18]. Practically and psychologically, staff support preserves health and wellbeing in the short and longer term, particularly when occupational stress levels are high [4]. Ensuring psychological well-being requires a layered response, with varied strategies aimed at prevention through to treatment at different levels - system, organisational and team, as well as individual self-care and peer support [4]. 'Well-being' and 'resilience' therefore needs to be viewed from a holistic person-centred context in which the 'professional' and 'personal' has equal balance. Psychological support strategies developed by Maben and Bridges [4] recognise staff need 'resilience', but responsibility for this is collective, organisational and system wide,

not just the individual. Applying reasoning to behaviours and responses in emotive scenarios through resilience-based clinical supervision is a valuable process for stress alleviation and prevention [19]. The need for ‘resilience’ is often identified as a prerequisite when considering workforce transformation, what is less well defined and understood are the elements that enable ‘resilience’ from a personal to system perspective, other than the emotional intelligence required for leadership that is hopeful, empowering and builds good relationships [20].

Strong working relationships, collective leadership and micro system cultures that support learning, development and cross boundary integrated working are the characteristics of high performing teams. Their development requires active investment across systems [21].

Effective teamwork is a core component for transformation [20, 21]. Recognised by notable cohesion, interprofessional teamwork and community collaboration resulting from a shared purpose and direction in the pandemic. Teams have used technology creatively to increase virtual ways of working enhancing communication. The powerful impact is demonstrated when people genuinely work together breaking down professional silos and barriers that often hinder effective collaborative decision making.

Enabling the development of high performing teams that are well-led, collectively enabling positive relationships to support everyone to flourish, is a priority. This requires a holistic view of work conditions and working schedules that are safe, which includes staffing levels, working patterns, workload and support, teamwork, workplace culture and leadership [18].

Enabling frontline staff to develop a positive focus with collaborative understanding of what works to support a safety culture, facilitates everyday work, supports team resilience to

anticipate developments and events, and maintain capacity to respond effectively to inevitable surprises [23, 24, 25] Hollnagel and colleagues [23] argue for moving from Safety 1 culture, preoccupied with management of risk, risk avoidance and blame, to Safety 2 culture that involves supporting teams across systems to join the dots between leading for excellence, safety culture and quality improvement [23, 26]. Safety culture emphasises safety values, creating positive conditions for change and safety practice, human factors, and increasingly a focus on what works across systems and how improvement can be achieved through the Safety 2 model [23]. This includes finding the conditions that enable psychological safety for staff to speak up about their concerns in a supportive environment.

Embedding an intentional holistic approach to safety, improvement and its integration with being person-centred goes beyond implementing clear and consistent policies, procedures and communication and investment in supply chains and IT/digital infrastructure.

Strategies recognised as optimising safe clinical decision making for patients and staff wellbeing include respectful interprofessional relationships formed through shared team values; clarity of purpose; clear communication and the ability to act on feedback for improvement, also listening to and valuing the contributions of team members [24].

Achieving change is more than the sum of what individuals know and learn, it is beyond individuals [27]. People learn as part of systems through playing the roles they are socialised to, often embedded in self-identity, self-esteem and workplace cultures. The pandemic represents a challenge to workplace cultures or "*the way things are done around here*" [28] because staff are required to work in new ways and new contexts, under immense pressure. System wide leadership, facilitation and support is therefore essential.

Best et al.'s [29] simple rules for system transformation include investing in distributed collective leadership at all levels of the system, attending to the history of what has worked and hasn't work. Building a collective commitment to safety and improvement with everyone involved, helps to create multiple problem-sensing systems, which can be used to inform action [30]. The need for double feedback loops that measures what is valued (ensuring the quality of the information infrastructure has capacity to provide useful and actionable guidance for clinicians and managers based on 'what good looks like'), enabling best practice or solutions to benefit all when shared in a timely way [31–33].

System change will be sustained through a holistic approach to facilitating learning, development and improvement to influence successful implementation of evidence into practice [34]. It is therefore vital that the system supports strategies that enable the workplace to be the main resource for learning, development and improvement [25, 35, 36]. This requires investment in transformational system and clinical leaders to enable staff to develop new insights into what works in real time and adapt to changing work patterns and roles, whilst living person centred values, holistic safety and ways of working. Facilitation expertise is an essential skill for addressing complexity, drawing on local knowledge, developing system

responsiveness for transformation, and creating learning environments [37] for local improvement. Facilitation work encourages people at all levels of the system to see their problems and possible solutions in light of the workplace context and wider health and social care system, including the roles they play, as possibilities to modify or solve challenges, rather than just "put up with them" [27: p. 6]. Manley and Jackson [21] argue that this needs to be complemented by skills in practice development, leadership, culture change, improvement and innovation.

System partners therefore play a significant role in enabling and supporting front line teams (microsystems) to be effective, as systems can only be as good as the Microsystems of which they are composed [38]. The system requires:

- 1) models of shared governance and ways of working that embrace learning actively and appreciatively with good feedback mechanisms to enable incremental improvement;

- 2) systems leaders who act as enablers of integrated governance to promote system-wide learning, as they connect micro- and macro-levels and enable people to connect; and
- 3) shared direction and vision to create a sense of collective competence across the system [30].

Limitations

This thematic review 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 STP;
- 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 evaluation team was challenging to catalogue as it was not always clear what role or setting the interviewee was sharing;
- iii. theories have been framed by our shared values informed by practice development research. These will therefore influence the relationships framed across CMOs, other lenses may view them differently. Whilst theories are always tentative, further testing across other systems will enable refinement and testing of utility.

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 individuals and how the pandemic has touched people’s lives. Stories from staff on the front line 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 set backs are as much a part of their stories as the successes. They illustrate that the process of transformation is not a tidy or linear. Supporting front line teams working through the pandemic is vital and this paper has highlighted the importance of providing resource, clarity, stability and infrastructure across the STP to maximise staff wellbeing.

Abbreviations

CMOs- Context, Mechanisms, Outcomes

STP- sustainable transformation partnership

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 front line staff collecting photographic and narratives which were 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 the STP for this purpose. Data was shared with this research group following a formal written data sharing agreement. All data shared was anonymised by the research group and destroyed immediately post analysis. The report commissioned by the STP was shared 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 protocols 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.

Consent for publication

Not applicable

Availability of data and materials

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

Competing interests

The authors declare that they have no competing interests.

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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.

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Tables

Table 1: Template for primary analysis with example themes from second level analysis.

QUESTIONS GUIDING ANALYSIS	THEMES	DATA SET REF	For Whom the theme relates?
What has worked? Actions/interventions/initiatives/ideas	Maintaining a sense of normality Seeing the Patient as a “person’ not just a number in which there was greater ‘care’ and ‘patience’	CJ1 JWT2	Staff Staff, patients, self
What has not worked? Something tried that did not work	Panic leading to avoidable admission Caring for others but not always self, including breaks and time away.	CJT14 JWT1	System, Family, team Team, patients, self
What have been the challenges? New challenges faced	Coming back to work post-COVID infection is worrying Coping with a spectrum of emotions – attitudes and values related to behaviours	CJT6 JWT6	Staff Team, self
Outcome/ celebrations? Positive outcomes that can be celebrated	Pride in achievements The importance of Community Spirit	CJ21 JW2	System, staff, Individual Self, society
Learning/ Opportunity? More formal than insights that guide future implementation	Treat everyone the same with respect The use of IT to support new ways of working and communication	SHT18 JWT8	System, staff, patients, citizens Team, patients, self, organisation
Insights? New insights at individual/team/system level	Looking to the future, the ‘new normal’	JWT4 KM3	Society Staff, system,

	Positive and negative Impact of lockdown on staff	society
Impact on roles?	Resilience of self and the team	JWT1
Anything Influencing roles	Focusing more on safety and teaching others to be safe	KM1 Staff, patients, residents

Table 2: Themes describing what has worked and not worked across the system (* indicates where datasets comprise one or more groups)

What has worked?	No of data sets with theme	What has not worked?	No of data sets 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 <i>Sub-Theme 2.1:</i> 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	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
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	5*	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.	24*		2

Table 3: Themes across Challenges and Celebrations/Outcomes

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?	
T12: Inconsistent policy and guidelines, and discontinuity across the system impacting on other parts of system, pace of change and uncertainty about when it will end - the new normal		T18: Strengthened relationships with own neighbours, family and relatives, spending quality time with them and better work-life balance	29*
T13: Not knowing who has the virus, worrying about the risks to others (own families, patients, vulnerable others) and being more vigilant about safety.	28*	T19: Technology a success story for treatment, communication, virtual visiting, connecting and communicating with people, system efficiency, productivity and carbon footprint	21*
T14: Exposure to increased number of people dying and impact of Covid related EoL care	19*		13*
	9*		

Table 4: Themes across Learning and Insights

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*		
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*	T27: Sustaining new ways of working, community spirit and cohesion	20*
<i>Subtheme 22.1:</i> Wider recruitment across health and care economy, with reservists and volunteers and shorter recruitment processes to support permanent staff	7*	T28: Looking to the future, the new normal will be different won't need big offices, more flexible and home working, services will change what they can offer	15
<i>Subtheme 22.2:</i> Ensure the right skills are in the right place at the right time			
<i>Subtheme 22.3:</i> System requirements to support high numbers of people requiring rehabilitation and needs of vulnerable people and those with mental health challenges	5*		
T23: Support for staff wellbeing	3*		
T24: Keep IT enhanced initiatives, recognising the need for good broadband connectivity	14*		

T25: Consistent and clearer messages on role of testing, applying social distancing sooner 13*

4*

Table 5: Themes illustrating impact on roles

Impact on Roles	No of datasets with theme
T29: Learning readily to work differently, adapting flexibly, adjusting, supporting others in new roles or taking on new roles whilst coping with increased workload	89*
T30: More prepared for safety, stricter infection control, safeguarding so people feel safe	33*
T31: Communicating more to get the right message across	5*

Table 6: General headlines from the level 3 thematic analysis

HEADLINE	Level 3 analysis Theme No
1. Covid-19 has acted as a catalyst for green shoots in genuine integration and joint working to enable transformation across health and social care at many levels to start as long as momentum is maintained	T1, T2, ST2.1, T3
2. The greatest strength has been the willingness and resilience of the workforce and its teams to be flexible and work together on finding solutions for care that are person centred and safe.	T 3, T 11, T15 T16
3. Individuals and teams being enabled to find innovative solutions to 'problems' without becoming stifled by 'poor' governance.	T2, ST2.1 T22
4. The number of teams (new and existing) who are or have become effective in how they work together and support each other to provide services to patients, residents and communities is humbling	T1, T2 ,T16
5. The use of IT is widely recognised as being beneficial and these benefits need to be retained and further grown specifically 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 and development and induction g. Speeding up recruitment processes. h. Environmental benefits- reducing the carbon footprint.	T4 T19 T24 T24
6. Good broadband infrastructure across communities is a necessity to support the above.	T24

Table 7: Learning headlines for system, national policy and individuals

At systems level need:

- Consistent approaches across and within sectors. T5-11, T14,
T20, T22, T23,
T25, T27, T28
- 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. Subthemes:
22.1-22.3.
- 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. T12, T13, T22,
T25, T27, T28
- 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. T9, T10, T17,
T18, T26
- 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 8: Four tentative theories for systems transformation

Tentative Theory	Context (C), Mechanisms (M) and Outcomes (O) <i>distilled from themes (T)</i>
1: Being person-centred	System wide cultures of appreciative learning with every part empowered to make a difference (C: <i>T20</i>) apply new ways of flexible and integrated working with good business planning across health and social care (M: <i>T22,ST22.1-22.3,T29</i>) to enable sustained cohesion, community spirit, patient flow and more flexible and effective use of resources (including workforce) (O: <i>T7-8;T27-28</i>).

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [SystemwidelearningfromfirstwaveCovid19ArealistsynthesisofwhatworksTablesandFigures.odt](#)