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Re-ordering connections: UK healthcare workers' experiences of emotion management during the COVID-19 pandemic

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Abstract

This paper examines the impact of disruptions to the organisation and delivery of healthcare services and efforts to re-order care through emotion management during the COVID-19 pandemic in the UK. Framing care as an affective practice, studying healthcare workers' (HCWs) experiences enables better understanding of how interactions between staff, patients and families changed as a result of the pandemic. Using a rapid qualitative research methodology, we conducted interviews with frontline HCWs in two London hospitals during the peak of the first wave of the pandemic and sourced public accounts of HCWs' experiences of the pandemic from social media (YouTube and Twitter). We conducted framework analysis to identify key factors disrupting caring interactions. Fear of infection and the barriers of physical distancing acted to separate staff from patients and families, requiring new affective practices to repair connections. Witnessing suffering was distressing for staff, and providing a 'good death'

Abbreviations: UK, United Kingdom; HCW, healthcare worker; COVID-19, coronavirus disease 2019; PPE, personal protective equipment.

[Correction added on 27 November, 2021, after first Online publication: The author name 'Sophie Mulachy Symmons' has been corrected to 'Sophie Mulcahy Symmons.']

for patients and communicating care to families was harder. In addition to caring for patients and families, HCWs cared for each other. Infection control measures were important for limiting the spread of COVID-19 but disrupted connections that were integral to care, generating new work to re-order interactions.

KEYWORDS

COVID-19, emotion management, emotional labour, healthcare workers, hospital, pandemic, UK

INTRODUCTION

The spread of the COVID-19 virus has transformed health systems worldwide. Care delivery in the United Kingdom (UK) during the first wave of the pandemic was reoriented to focus on infection control due to increasing pressure from limited hospital resources and rising patient numbers. As of September 2021, there have been nearly 7 million recorded infections and over 130,000 deaths in the UK (UK Government, 2021).

Disorder surfaces during crises, which is otherwise carefully contained by social and material ordering practices. Berg and Timmermans (2000: 36) contend that 'rather than an opposition, there is an intimate connection between the two', with order and disorder mutually co-constitutive. In this paper, we use reflections on disorder as an opportunity to learn from the efforts of healthcare workers (HCWs) to re-order care in response to the disruption of the COVID-19 pandemic. We examine emotion and affect, as the animating forces in these ordering practices, building from Monaghan's (2020: 1988) assertion that emotion provoked by the pandemic 'may be informative and productive of social collectives.' This approach to emotion moves analytical focus away from what emotions *are* towards what they *do* in different social contexts.

Drawing on interview accounts and social media data from Twitter and YouTube, we explore HCWs' reflections on changes in the organisation and performance of care during the early stages of the COVID-19 pandemic. We examine their professionalised capacity to affect others, commonly referred to as emotion management (Bolton & Boyd, 2003), to understand their role in the re-ordering of disordered social interactions during the pandemic.

BACKGROUND

Healthcare workers' experiences of pandemics

Pandemics disrupt established routines of care through rapid implementation of infection control measures. Previous research on HCWs' lived experiences of the H1N1, SARS and Ebola pandemics has explored their feelings regarding the disruption of care delivery (Fernandez et al., 2020; Imai et al., 2010; Ives et al., 2009; Koh et al., 2011; McMahon et al., 2016). Fear of infection and transmission, exacerbated by concern over access to personal protective equipment (PPE), is a reoccurring theme across studies. Staff reported conflicting emotions about working through pandemics, characterised by both a strong sense of personal duty as well as

anxiety about personal safety, appropriate staffing levels and the skill-mix of teams. Loss of connection with patients, in part because of infection control measures, which limit touch and prolonged interaction, led to staff dissatisfaction with the standard of care they provided. Equally, providing safe and effective care despite challenging conditions boosted morale. Emerging findings from UK and international studies exploring HCWs' experiences of the COVID-19 pandemic have reported similar results (Hoernke et al., 2021; Kackin et al., 2020; Liu et al., 2020).

While these studies add important descriptive detail of HCWs' experiences of pandemics, they miss an opportunity to learn from the perceived (dis)order of the social interactions out of which these feelings arise. We build from existing literature and use a sociological analysis of emotion as a constitutive force in the ordering of social relations.

Sociology of emotion

In this paper, we draw our understanding of emotion and affect from philosophical work undertaken by Spinoza, and later re-interpreted by Deleuze (Deleuze & Guattari, 1972), who focussed on the affective capabilities that human and non-human actors possess: their ability to affect or be affected by others. To use Deleuze's terminology, the capacity to affect is the generative force that binds components together in an assembled network of actors, with emotion being a productive effect of that binding. Affect is pre-cognitive, a potential that is realised in interaction, whereas emotion can be conceptualised as the felt realisation of these affective capabilities. For the purposes of this paper, we take *affect* to refer to relational actions (e.g. of HCWs towards patients, families, objects and each other) and *emotion* to refer to their embodied experiences of those actions.

While a comprehensive examination of the literature on the sociology of emotion and affect studies is beyond the scope of this paper (see Seyfert, 2012 and Wetherell, 2012 for detailed overviews), we provide a summary of the key points and debates to which this empirical study contributes. Interaction is broadly agreed as the generative force out of which emotion arises, but further theoretical examination of affect and emotion has foregrounded different aspects: the *ordering* of interaction and the *conditions* of interaction. We explore these ideas and present how they have been translated into studies of health and illness.

Ordering interaction

One strand of theoretical investigation into affect has focussed on the *ordering* of interaction, connecting with long-standing sociological interest in how individuals or groups of actors maintain order in social interactions (Goffman, 1959). Ahmed's (2004) work has been seminal in examining how emotion is constitutive of broader social orders. She examines how emotions shape boundaries between actors, arguing that ‘emotions do work to align some subjects with some others and against other others’ (Ahmed, 2004: 117).

Our interest is how these ideas about the ordering potential of emotion can be related to existing studies of professional service work, where employees are required to generate specific emotional outcomes in those they serve. Bolton and Boyd (2003) term this work *emotion management*, building from the pioneering work of Hochschild (1983). Through affective labour, workers actively shape emotion through their interactions. We interpret emotion

management as the professionalisation of actors' capacity to *affect* others. Linking to Ahmed's (2004) work, the study of professional emotion management draws attention to the agency and expertise of human actors attempting to generate emotion, thereby actively engaging in the ordering of assemblages.

Nurses are frequently used as an example in studies of emotion management. Bolton (2001), for instance, has demonstrated how nurses juggle multiple 'feeling rules' to achieve different goals, drawing on institutional instruction for generating 'happy customers', professional know-how about eliciting positive responses from patients, and broader social experience of operationalising humour to smooth awkwardness or disruption. Bolton's analysis presents nurses as knowledgeable agents, able to re-define interactions through skilled emotion work. Juggling refers to their capacity to perform multiple roles, or 'faces', simultaneously, having the potential to affect interactions in a range of ways depending on the form of emotion work they choose to engage in. This emphasis on staff agency contrasts with Hochschild's (1983) argument that dissonance between what is felt and what is performed causes harm. Similarly, Riley and Weiss (2016) argue that emotion work can be productive for workers as a form of resistance when staff choose to care more, or in different ways from what is organisationally mandated. This draws attention to how changes in the professional work of emotion management during the pandemic may give insight into HCWs' roles in the ordering of social interactions, particularly how they flexibly engage in different forms of emotion management to achieve outcomes in interactions.

The conditions of interaction

In contrast to studies on the ordering of interaction, examination of the *conditions* of interaction dislocates emotions from individual bodies and studies them within their cultural, historical and material contexts, demonstrating how bodies are recruited into feelings through a dynamic assembling of different actors. Emotions are characterised as 'fluid, relational and highly contextual in this formulation. They have histories, building on previous experiences and discussions with others or collective memories. They have cultures and are located within specific spaces' (Lupton, 2013: 638). Human experience is de-centred to enable investigation of 'affective atmospheres': the features of time, space and place that shape the production and expression of emotional states within assemblages (Anderson, 2009).

Improved understanding of the conditions out of which affect manifests has drawn attention to how materiality of space and place shape patients and practitioners' experiences of illness and care in clinical settings. Examples include how digital health technologies alter medical encounters (Lupton, 2017; Tucker & Goodings, 2017), and how interactions within medical spaces can both enable and inhibit mental health recovery (Duff, 2015). We have been encouraged by this literature to reflect on how the re-configuration of interactions across hospitals during the early stages of the pandemic influenced the work of emotion management.

Pandemic emotion work

In this study, we recognise emotion as circulating and shaping relations of care in healthcare settings. We take care as a form of ethically and politically charged *affective practice* (Puig de la Bellacasa, 2011) premised on the capacity of people (professionals, patients and families) and

medical technologies to affect and be affected by another. Further, we identify HCWs as skilled emotion workers with the agency to influence the circulation of emotion in healthcare settings.

Examining how staff account for disruption and disorder in care during the pandemic can give insight into the key sites of interaction that require re-ordering, and the practices required to achieve it. It also provides an opportunity to examine relationships between organisations and workers, positioning actors as active, knowledgeable agents who make choices to give more, or less, in ways that can resist rather than reinforce institutional logics.

In this study, we explored the work of emotion management that HCWs reported during the first wave of the COVID-19 pandemic in the UK. We traced connections between disruptions in the organisation and delivery of the care and reflections on the consequences for interaction, developing insight into the affective ordering of interactions within hospitals. The question directing our analysis was: 'how do HCWs account for the work of emotion management during the pandemic?'.

METHODOLOGY

Background

This work is part of a larger ongoing project (Vindrola-Padros et al., 2020). The main study was designed as a qualitative rapid appraisal analysing HCWs' experiences of delivering care during the COVID-19 pandemic in the UK. A detailed overview of the study methodology is reported elsewhere (Vindrola-Padros et al., 2020). This paper analyses the data from two sources: semi-structured telephone interviews with frontline HCWs, and social media data that described the experiences and perspectives of HCWs in the UK. The research team is composed of a diverse range of backgrounds, specialities and career stages, including anthropologists, sociologists, clinicians and public health researchers.

Methods

Studies of emotion management often employ ethnographic methods to observe interactions in situ. As this was not practical or ethical under pandemic conditions, we prioritised remote data collection (telephone interviews and social media posts) as key routes to accessing participant experiences.

Interviews

In-depth telephone interviews were carried out with frontline staff from two London hospitals between 19th March 2020 and 1st July 2020. These hospitals were chosen due to their connection with the research institutions of the team. The sampling approach for interviewing evolved as the pandemic progressed, aiming to generate a maximum variation sample of HCWs based on professional roles and levels of experience. Author 1 and Author 9 approached gatekeepers within two London hospitals to access contacts within different hospital departments. These contacts shared study information with colleagues in their teams. Individuals were self-selected to participate and were sent the participant information sheet and consent form ahead of the interview.

Telephone interviews were carried out by Authors 1, 2, 3 and 4. The semi-structured topic guide (detailed in Appendix 1) focussed on staff experiences and perceptions of patients, COVID-19 and healthcare delivery. The interviews were audio-recorded and transcribed verbatim, with additional notes taken to document key comments during the interviews. All personal identifiers from interview transcripts were removed and a unique code was applied (e.g. COV1). Data were kept on a secure server, and interviewees were grouped in generic role categories to maintain anonymity.

Of the one hundred and three interviews conducted between March and July, sixty-nine were selected for analysis within this study to prioritise staff who had experience of delivering direct inpatient care during the first wave of the pandemic. Table 1 presents participant characteristics. Sampling initially focussed on staff working in intensive care settings, resulting in an oversampling of anaesthetic staff which was adjusted for in later recruitment. The large number of unknowns regarding ethnicity is due to this characteristic being collected only from May onwards. White participants were over-represented in our interview sample.

Social media

Authors 6 and 7 collected HCW responses to the COVID-19 pandemic on Twitter and YouTube, concentrating on events in the UK from 1st December 2019 and 31st May 2020. The specific social media platforms of Twitter and YouTube were chosen based on the frequency of use and

TABLE 1 Interview participant characteristics

Participant characteristic	Count
Age	Range: 24–59 *Unknown: 2*
Gender	Female: 45 Male: 24
Ethnicity	White British: 20 White Other: 10 White Asian: 2 British Asian: 2 Black British: 1 *Unknown: 34*
Profession	Anaesthetist: 24 Nurse: 15 Doctor: 12 Service managers: 3 Surgeons: 5 Speech therapist: 2 Dietician: 2 Physiotherapist: 5 Occupational therapist: 1
Time in service:	Range: 1–36 years *Unknown: 2*

self-reporting by HCWs. Social media platforms are not used within a vacuum (Napoli, 2015). Where HCWs had accounts on both Twitter and YouTube, we looked across different social media platforms to understand users' multiple 'voices' (Marwick & Boyd, 2011).

A Boolean search term was used to filter out Tweets and YouTube posts (see Appendix 2) to capture posts by users identifying as HCWs, as well as keywords and hashtags likely to be used by HCWs when sharing their experiences. Semantic discourse and topic analysis were used to understand the most frequently used and weighted keywords or viral hashtags, to prioritise themes of discussion and clusters of topics. Overall, there were 29.9 thousand English language posts. Within these posts, topics relating to HCW emotions were mentioned an average of 164 times a day. Most Twitter mentions of emotion management were retweets (16.6k), followed by quoted (commented upon) tweets (8.25k) and 1.26k replies. This engagement centred around 16k original tweets. We aimed for a diverse ethnic sample within social media posts.

From the social media data, transcripts of 8 YouTube videos and details of 29.9 thousand tweets were included in the sample. The 8 YouTube videos were chosen as meeting our criteria as the focus of the content was on HCW experience of emotional management and care during COVID-19 pandemic, for example, a reflection on delivering bad news to a family member remotely (Table 2).

Data analysis

We sampled for emotion in two ways within the data. We identified moments in transcripts and tweets where staff used specific words to represent emotions (e.g. 'scared', 'stressed', 'upset' and 'proud'), then contextualised these within the relational practices or interactions being described. We also identified elements of accounts that we interpreted as describing emotion management, where they referred to work that involved managing their own feelings and those of others.

Interview analysis:

Stage 1: Out of the full set of sixty-nine interviews, we randomly selected thirty for in-depth framework analysis (Gale et al., 2013). We developed an analytical coding framework based on a preliminary scan of the data, which focussed on connecting how staff felt with the ways in which care had been disrupted. We inputted this into a Microsoft Excel matrix, with codes in the columns and interviews entered as individual cases in the rows. The framework was refined during team discussions, and all researchers were asked to apply the same framework across their assigned interview transcripts. Authors 1, 4, 5 and 6 cross-checked the data during the coding process to ensure consistency. After indexing was completed, the themes developed were tested for consistency against the remaining thirty-nine interviews in the sample and adjusted as necessary.

Stage 2: During stage one analysis, we interpreted that caring interactions were contextualised within three specific groups of relationships: staff–patient, staff–family and staff–staff. We synthesised the key topics from stage one and interpreted them separately in the aforementioned groups of relationships to develop specific themes relating to each group. The team selected and agreed on quotes from the interview transcripts that exemplified these themes.

Social Media Analysis:

Stage 1: Social media data were collected (by authors 6 and 7) using media monitoring software Meltwater™ (2020). Posts were collected where there were mentions of emotions and emotion management experienced by HCWs using Boolean search terms (see Appendix 2).

Sentiment analysis was used to measure the range of positive, negative and neutral feelings expressed by HCWs (Appendix 3). The software TalkWalker™ (2020) was used to conduct discourse

TABLE 2 Rapid qualitative appraisal design

Data source	Method of data collection	Sample	Method of data analysis
Interviews	In-depth, semi-structured telephone interviews with a purposive sample of staff	69 participants delivering direct care to COVID-19 patients were selected from a sample of 103	Rapid Assessment Procedure sheets were used to synthesise findings on an ongoing basis and aid familiarisation. Selected transcripts were analysed using framework analysis to identify themes relating to boundaries of care. Five researchers collected and analysed the data
Social media	Social Media: Data were selected using the software Meltwater and sorted into pre-established categories	29.9k social media posts were gathered from Twitter between 1st Dec 2019 and 31st May 2020. From 8 relevant YouTube videos identified	Two researchers coded selected tweets and five researchers coded YouTube videos

and emoji analysis of tweets, as well as measure emotional themes and patterns occurring in discussions engaged in by HCWs. This analysis involved understanding how language was used and to what effect. We were interested in the terms used, emotions conveyed and the responses to these tweets. We also identified the most common topics related to emotions. Our approach differs from a Foucauldian discourse analysis (Arribas-Ayllon & Walkerdine, 2008) as we were less interested in the power relations at play and instead focussed on the expression of emotion through language and the behaviours discussed in the social media interactions.

Based on previous research (Kummervold et al., 2021; Martin et al., 2020), the authors aimed to mitigate the challenges of using market analytical software to assess sentiment by creating a 'manual sentiment framework' focussed on HCWs experiences of emotion management (Appendix 3) (Wouter van Atteveldt et al., 2021). We set up our own emotion management framework based on insights from interview transcript analysis, using the framework to 're-annotate' social media posts and videos.

Stage 2: Once key themes were identified; individual posts and YouTube videos were selected for textual and visual analysis to draw out specific issues for deeper qualitative analysis of key themes. These were analysed using the same framework as the interview data. The analysis team selected quotes from YouTube transcripts and Tweets that could exemplify these themes, categorising them as YT- or T- plus a number.

Ethics

This study was approved by the Health Research Authority (HRA) in the UK *(IRAS*: *282069)* and the local Research and Development Offices where the study took place. All participants provided written informed consent via email before taking part. Consent was reconfirmed verbally at the beginning of the interview. All Tweets and YouTube transcripts were taken from publicly available data and anonymised.

FINDINGS

Interacting with patients

Barriers to connection

Connecting through PPE

A fundamental difference in care during the pandemic was the introduction of a material barrier to interactions through PPE. Staff were required to wear PPE when caring for patients who had suspected or confirmed COVID-19. It was a 'physical barrier' (COV49: A&E nurse) to communication, and the equipment was 'restrictive from a sensory and practical perspective' (COV24, Anaesthetist). Full-length gowns were hot, and goggles could be painful. It was also hard to hear and be heard, which meant that staff were 'constantly screaming inside the mask' (COV74, Anaesthetist).

While the physical discomfort of wearing PPE was challenging, staff were more troubled that it disrupted their ability to interact with patients and colleagues. Staff recognised that part of their work was to allay the concerns of patients, who were 'absolutely petrified when they come to you' (COV49, A&E nurse). However, their ability to do this was impeded as patients could not easily see or hear them.

> "A lot of what we do in terms of patient communication and empathy is related to touch and eye contact and non-verbal communication, and distancing and the masks and the muffling of the sound and all of that does interfere with [the] patient's ability to recognise their doctors."
>
> COV85: Surgeon

The work of becoming *recognisable* as caregivers was made more difficult by PPE. Staff improvised solutions, describing their hidden facial expression to make themselves visible and relatable – 'I tend to apologise for the get-up and say, "I'm smiley beneath this mask"' (YTCOV4: A&E doctor). They also customised PPE with images to display their faces 'so at least, you know, patients could see our face, albeit through a photograph'. (COV97: Speech Therapist).

Staff improvised solutions to mitigate barriers to everyday emotion management that PPE imposed and enrolled a range of technologies to support communication. They used pen and paper, whiteboards, laminated signs and tablets to help interaction. From outside rooms, they extended their reach, using walkie-talkies and baby monitors to communicate safely at a distance.

While adaptations for sight and sound could be made, connection through touch was the hardest to replace. HCWs grieved this loss. The absence of touch was felt to remove a central humanising aspect of the medical encounter.

> "Not just holding a patient's hand to console them, but laying on hands to examine a patient is part of the whole ritual of going to a doctor, rather than just standing at the end of the bed and ordering a CT scan - I guess you could say some of the humanity has already been lost."
>
> YTCOV1 cardiologist

Separating because of fear

Further disruption to interaction was caused by mutual fear of infection. Patients became wary of staff – 'it was like the way they treated you, as though "you're infected, so don't come near me"'

(COV74: Anaesthetist) – and staff became wary of patients – 'subconsciously you tend to come out of the room as soon as you can' (COV49: A&E nurse).

Though staff were aware that 'theoretically wearing the right PPE [should mean], you should be protected' (COV49: A&E nurse), exposure to COVID-19 patients provoked significant anxiety:

> "I remember going to see these patients and, you know, putting on all your PPE... just feeling so anxious about making sure that seal around the mask was good enough."
>
> COV86: Speech Therapist

On Twitter, HCWs shared worries about effectiveness of PPE and personal safety. They felt scared, especially when they could not physically distance themselves from situations where close care was needed. Effective PPE was positioned as sealing staff off from both infection and unwanted negative emotion. However, the desire to separate was held in tension with a longing to connect:

> "Tough day today. First time when giving bad news I was unable to reach out and physically touch a person (often hold hand or similar) as they were worried about me giving them coronavirus and also if they would give it to me."
>
> TCOV1: Geriatrician

The new ordering rules of the pandemic, in which fear dictated that bodies remain separate, contradicted alternative logics in which grief could be softened through physical connection. This was emphasised by one participant who reported hugging a bereaved woman, despite risk, to restore something missing in their interaction.

> "I had to tell somebody that her husband had died, he'd died on the table. This lady stood up to give me a hug and then kind of pulled back and said, 'oh you don't want to hug me, do you?'
>
> ... it took me a few seconds to realize she was referring to social distancing and the advice people are getting to avoid physical contact. And it was just a really strange thing to hear. And obviously the Sister in charge of the ward was there with me and we both gave her a big hug, and we had a normal human interaction."
>
> YTCOV1: Cardiology Doctor

This encounter brought the disorder, or *strangeness*, of the shift towards separation into view. In choosing to actively resist fear, the participant and nurse were seeking to recreate an alternative order to their interaction, instead of following rules for responding to grief.

Changes in the organisation of care

Space and pace of care

The organisation of spaces of care and workflows within hospitals contribute to how staff manage and shape patient experiences. Infection control strategies disrupted usual work practices, and strategies for reinstating order involved a clear division of space into the care of

COVID-19 patients and care of other patients. These included *dirty and clean* areas. However, the rapid spread of COVID-19, coupled with inadequate PPE, made it difficult to maintain this separation. Staff were unsettled by their impotence in relation to the movement of the virus:

> "When I came in and I saw all the results were positive, that was a moment when I really felt an impending sense of doom. Despite everything we did, we as hospital doctors were just not able to control this. That was the scariest day of the whole thing. We didn't know anything about the disease, and everyone on a ward that was nominally meant to be "clean" had the virus."
>
> COV47: Geriatrician

A further source of disorder was the fast deterioration of patients with COVID-19. This made it challenging to separate care tasks *within* areas. Staff described how patients with different care needs had to be attended to simultaneously.

> "We had that spectrum of patients where someone was end of life and you really didn't want to leave them for very long, to make sure someone was with them, they were supported, reassured, you assessing their comfort. To another ... to the other spectrum of patients where they needed to be monitored so acutely, and nurses were typically having both within their allocation."
>
> COV36: Intensive Care Nurse

This participant indicates that different types of care require different emotion management techniques, but moreover that these techniques can involve incompatible tempos for managing emotions and care. Staff were simultaneously responsible for both easing patients at the end of life and supporting those fighting to survive. Switching speeds – from consistent, peaceful reassurance to rapid monitoring and response – pushed at the limits of staff's ability to juggle and move between emotion management strategies. The usual practices of selectively allocating patients requiring similar care within individual workloads were confounded by COVID-19, where possibilities of recovery or deterioration were difficult to predict.

Managing a 'good death'

An important consequence of the challenges of separating different caring practices was that the work teams usually did to provide a 'good death' was compromised. The sheer volume of patients meant that people with differing illness trajectories were occupying the same spaces. This meant that staff were sometimes unable to provide privacy to patients at the end of life and to prevent other patients from witnessing death.

> "For the people that were already scared because they have this virus, everyone is dying, seeing people dying in front of you in the bay... it creates... Spaces in a bay aren't ready for 4 [patients]. It doesn't allow you to have the privacy that you normally have when you are dying."
>
> COV63: Intensive Care Nurse

Recognising that patients were already fearful, it was felt to be a further indication of disorder and being unable to offer privacy in death had an impact on the person dying, other patients and staff.

In addition to the challenges of spatially facilitating a 'good death', the uncertain progression of the disease and limited knowledge about how to alleviate symptoms meant that enabling a comfortable process of death was more difficult.

> "Even if you can't fix someone's illness and it was inevitable they were going to die, you would always, or almost always feel in control of that process, and make sure that somebody would have a good death, which is really important. And sometimes in this crisis we were just not able to do that as well."
>
> COV47: Geriatrician

All participants expressed distress at the volume of severely ill patients and high mortality rate. Few staff felt that their professional training had prepared them for what they were facing. While some specialities had more exposure to severe illness and death as part of their routine work, staff who were redeployed from other areas into intensive care found the experience of end of life particularly challenging, as 'many have never cared for a dying person' (COV64: Palliative Care Nurse). All HCWs felt that it was 'difficult to witness someone in that level of respiratory distress' (COV64: Palliative Care Nurse). Material constraints in providing the conditions out of which a 'good death' could take place, teamed with inexperience in working alongside death, exacerbated staff's own feelings of grief.

Interacting with families

Maintaining connection with families

Patients and families were separated, with visitors restricted from hospitals to limit the spread of infection. This made visible the usually unseen and informal work of managing families' concerns, which previously often took place while families were visiting. Simultaneously caring for both patients and families posed a challenge.

> "We were often very aware that we had these frightened relatives who couldn't visit and needed that proximity, which we would normally encourage. They couldn't come. Sometimes a relative calls and we [have to say], 'we really appreciate you're worried but we really, at this time, need to get back to the patients'."
>
> COV36: Charge Nurse

Staff recognised that recreating lost *proximity* was central to managing the emotions of concerned relatives. Communication teams were established with the sole purpose of sharing regular telephone updates with families. Techniques for minimising distress were harder to enact over the phone as 'so much communication we do is non-verbal, [and] face to face' (COV80: Palliative Care Doctor), and HCWs felt this acutely when delivering bad news.

Interactions over the phone felt depersonalised and reduced to 'just hearing raw information, which is just noise or just sound' (COV63: Intensive Care Nurse). A focus of HCW activity on Twitter was sharing resources about how to compassionately interact over the phone, as staff felt that 'COVID-19 has made breaking bad news harder than ever' (TCOV4: Respiratory Doctor).

Bridging and substituting

In addition to managing family concerns, visiting restrictions created novel work bridging interactions between patients and families. HCWs introduced video-calling technology to create opportunities for families to 'visit' patients remotely.

> "I looked after an elderly gentleman on the ward during lockdown who spent most of his last weeks alone because of the COVID restrictions. I helped him make a phone call to his wife for one of the last times as he was near end of life."
>
> TCOV3: Palliative Care Nurse

Arranging these calls successfully required planning times with family members and negotiating access to video-calling technology with other staff, work which usually fell to the nursing team.

As well as making efforts to bridge interactions, staff felt increased responsibility in their own interactions with patients. Some participants reflected that their roles had changed to become an extended family member.

> "I am their only point of contact with the human world, if that makes sense. You need to make sure those conversations count, you're like an extended family member to them."
>
> COV46: Infectious Disease Nurse

If patients were dying, staff would sometimes attempt to support a family member to visit. More often, staff members took responsibility for sitting with patients as they died. While they took pride in offering this support – 'we made sure nobody died alone' (COV46: Infectious Disease Nurse) – the absence of touch, such as holding a patient's hand, was difficult – 'sitting there in all the PPE felt very unsatisfactory, and it really, really upset a lot of people' (COV47: Geriatrician).

Caring for each other

The challenges of connecting with patients and families, witnessing increased suffering and death, and rapidly adjusting to changing team structures had a profound impact on staff. One of their most pervasive concerns was 'how we get out of this and get back to normal life' (COV08: Anaesthetist), recognising that the pandemic cofounded the normal order of their work. HCWs discussed exhaustion from both the physical and emotional aspects of work, feeling 'really weary of the sadness of it all' (COV73: Palliative Care Nurse).

While hospitals increased the provision of formal psychological support available to staff, some participants perceived a paradox, with implicit institutional rules that they should conceal feelings that would enable them access to this support:

> "They used to do this [traffic] light system, like "amber" and "red", for how you were feeling, and you were encouraged to put your hand up in front of a hundred people to say how you were feeling. I think the pressure was for everyone to be "green" at the beginning of a shift. It's the wider feeling right now, to feel either amber or red every day when you come to work. But no one was amber or red. In a hundred people. I found it very weird."
>
> COV63: Intensive care nurse

Despite typically feeling *amber or red*, staff perceived pressure to formally present a neutral, or *green*, front in formal organisational performances. In contrast, HCWs were comfortable sharing how they felt informally within teams. Support was achieved in part by enabling each other to *get away* from the spaces that demanded emotion management:

> "A few staff were very emotionally affected by it. It was about supporting them maybe to say 'oh, let me take over so you can get away for a bit'. Or be able to sit down and have a chat with people."
>
> COV36: Intensive Care Nurse

The rapid reorganisation of teams and roles, while stressful, destabilised existing hierarchies. Separation from their own families and friends, as well as from patients and visitors, led them to feel a greater affinity with each other:

> "You feel that you're kind of one big family in this together, um, and that was quite encouraging. You just end up looking out for each other that little bit more."
>
> COV98: Speech therapist

As the pandemic progressed, staff prioritised 'sharing the burden' (YTCOV4, A&E Doctor) of both physical risk and the anxiety of potential infection. Those in charge of rotas worked to balance exposure for different team members, recognising that *clean* and *dirty* wards provoked different feelings in staff:

> "I made a conscious effort to make sure that no one was being over-exposed... or just to get, you know, not only exposure-wise to coronavirus but also a bit of a mental break to know that if I go to a clean ward I don't necessarily have to have the same level of anxiety."
>
> COV86: Speech therapist

HCWs described *taking over*, *looking out for* and *checking in* on each other. This manifested in: making time for conversations about difficult shifts; providing physical comfort through touch and hugs; sharing information on social media and via WhatsApp; relieving each other of tasks to enable breaks and distance from feared spaces; and dancing and laughing together. Caring and being cared for by each other enabled them moments of respite from the tiring disorder of pandemic interactions.

DISCUSSION

This study aimed to learn from HCWs' experiences of emotion management during the pandemic, analysing their efforts to address disruptions in interactions with patients, families and colleagues. Our analysis contributes insights about how care, as a form of affective practice, shapes and orders interactions in healthcare settings. We offer a novel avenue for exploring how healthcare interactions produce social orders by framing emotion management as a professionalisation of staff capacity to affect and be affected through care. This connects investigation of the interactional work that staff undertake to generate emotional outcomes in those they care for (Bolton, 2001; Riley & Weiss, 2016), with the wider production of social orders (Ahmed, 2004).

In studying how staff talked about extending and improvising their affective practices, we gain insight into the re-ordering of relations they thought valuable to preserve, as well as the work required to produce these ways of relating in times of crisis.

Through examining how staff tried, and at times failed, to manipulate the environment of care, we show how the ordering of space and tasks within hospitals is imagined to impact emotion management. The pandemic fundamentally changed the materiality of hospitals as an assembled network of relationships between people and things, with the virus and infection control measures reconfiguring possibilities of interaction while delivering care. Efforts were made to address fear flowing through hospitals, by containing it within spaces designated as *dirty*. The virus regularly confounded infection control practices, with fear leaking into spaces nominally understood as *clean*. Spaces of care were stretched, with families needing remote support, and also contracted in that 'clean' spaces were minimised and the separation of those recovering and dying was limited. Order in the routine tasks of patient care was similarly confounded by the unpredictable deterioration of patients.

A central challenge emphasised by staff throughout this study was how to successfully enact their roles in minimising patient and family distress. Building from Bolton's (2001) analysis of the work of 'juggling' different roles, this study provides insight into how the pandemic altered and extended the work of emotion management.

Participants in this study were themselves both frightened of the virus and frightening as a potential vector of disease to others, meaning the work of alleviating distress was harder to perform. Wearing PPE in interactions with patients necessitated that they find new ways of making their performance of care-giving visible. As well as being materially constrained in their ability to perform care, they were stretched across a wider network of interactions within and beyond the hospital. Where other studies have emphasised that HCWs feel an increased responsibility to provide emotional support to isolated patients (Liu et al., 2020; Sheng et al., 2020), we highlight that this was compounded by challenge of juggling the needs of distressed family members who also required attention.

Staff also undertook new roles addressing disruption to the practices of enacted a 'good' death. It was often in these moments that staff philanthropically cared more for patients and families (Bolton, 2001; Bolton & Boyd, 2003). Boundaries blurred as staff chose to act the role of absent family members with patients as they died and to offer comfort to grieving relatives. Fear was resisted to facilitate prolonged or close interaction, resonating with Park and Akello's (2017) examination of how family members continued providing personal care to sick relatives despite fear of contagion during the Ebola crisis.

We argue that these acts of exposure to risk reveal what is at stake for staff. They represent a new role adopted by staff as stewarding the 'humanity' of care, particularly at the end of life. Through affective practices which aim to connect with, rather than distance from those they cared for, they enact a social order which centres compassion. These were acts of resistance against alternative ordering practices which centred infection control measures. These examples show how staff went to exceptional lengths in their performances of emotion management, juggling expanded and new roles in attempts to re-order care. Moreover, the emphasis on physical proximity within this particular form of resistance reinforces emotion management as a form of 'body-work' (Dyer et al., 2008), echoing McMahon et al.'s (2016) analysis of the Ebola pandemic where they argued that the absence of touch compounded HCWs' experiences of grief.

A further role undertaken by staff was in caring for each other, sharing the burden of additional emotion management and dedicating time to 'off-stage' interaction. With successful 'front-stage' roles caring for patients and families harder to perform, 'off-stage' spaces acquired greater

significance. They were important for collectively mourning failed performances of care and lost interactions, using humour to buoy spirits, and enacting alternative forms of collective care. An important part of how staff navigated challenges of caring despite disruptions to the hospital assemblage was in collectively learning new techniques for emotion management and sharing them within teams and through social media. This mirrors other studies examining the importance of the backstage for emotion work (Bolton & Boyd, 2003) and we contend that social media may now form an additional backstage space.

There are important practical implications of this work. The focus of pandemic response to date has been on infection prevention, with the nuances of how this affects interactions between staff, families and patients neglected. We provide learning that can be used to inform approaches to infection control that prioritise caring interactions. Our findings indicate that fear of infection creates distance, which in turn increases the burden of emotion management. This could be reduced through consistent access to well-fitted PPE and testing policies, as well as effective communication technologies and innovative solutions for addressing the loss of touch, sight and sound through PPE.

STRENGTHS AND LIMITATIONS

A significant strength of this work is that we were able to conduct rapid research in time-sensitive circumstances during the peak of the first wave of the pandemic. Due to the rapid analysis process used in this study, we did not integrate a member checking phase but relied on multiple internal cross-checking strategies. We generated novel insights into emotion management during a pandemic and developed learning and action points which can help inform policy, particularly regarding how staff can be supported to care well during crises.

There were inherent limitations in our methodological approaches of studying emotion management. Our findings could have been enriched through ethnographic observation of care in situ, whereas we were limited in our ability to collect data beyond telephone interviews and social media data due to distancing constraints. While the challenges of self-reported data are well-established (Silverman, 2017), Lamont and Swidler (2014) contend that interviews offer insights into parts of actors' lives that are not available for observation. We have produced valuable insights as to how the work of emotion management was presented through talk, and further research in this area could usefully explore the lived practices of affective labour during pandemics. This approach enables consideration of the affordances of different affective atmospheres for patient and practitioner experiences (Gibson, 1977; Ingold, 2018).

Another important limitation of this work is the representativeness of the interview sample. It includes a higher proportion of women, doctors, staff in positions of seniority, anaesthetists and participants of White ethnicity in London hospitals. This leaves perspectives from other groups unexplored, particular those from racially minoritised communities. The social media data informing this study to some degree mitigate this as it constituted a more representative sample from Black, Asian and Minority Ethnic (BAME) groups, but further work examining the experiences of junior and minoritised staff is needed.

CONCLUSION

Disruptions to the organisation and delivery of healthcare services during the pandemic changed experiences of care between staff, patients and families. By connecting the routine practices of

emotion management with theoretical perspectives on the role of affect in ordering interactions, we identified emotion management as central to HCWs' efforts to re-order disrupted care. Infection control measures impeded staff's ability to engage in minimising patient and family distress. They expressed agency through resisting institutional logics by caring more and in different ways. This analysis also reveals the material limits of their ability to shape interaction, as their efforts to reconfigure the spaces of interaction were only partially successful. In turn, this enables reflection on how organisations can support HCWs to maintain affectively productive interactions with patients and families during crises.

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AUTHOR CONTRIBUTIONS

Anna Dowrick: Conceptualization (lead); Formal analysis (lead); Investigation (equal); Validation (equal); Writing-original draft (lead). **Lucy Mitchinson:** Formal analysis (supporting); Investigation (equal); Writing-review & editing (equal). **Katarina Hoernke:** Formal analysis (supporting); Investigation (equal); Writing-review & editing (equal). **Sophie Mulcahy Symmons:** Formal analysis (supporting); Investigation (equal); Writing-review & editing (equal). **Silvie Cooper:** Formal analysis (supporting); Investigation (equal); Writing-review & editing (equal). **Sam Martin:** Data curation (equal); Formal analysis (lead); Investigation (equal); Software (equal); Writing-review & editing (equal). **Samantha Vanderslott:** Data curation (equal); Formal analysis (lead); Software (equal); Writing-review & editing (equal). **Norha Vera San Juan:** Investigation (equal); Writing-review & editing (supporting). **Cecilia Vindrola-Padros:** Methodology (lead); Resources (lead); Supervision (lead); Writing-review & editing (supporting).

DATA AVAILABILITY STATEMENT

Authors elect not to share data. Research data are not shared.

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APPENDIX 1

Summary of interview topic guide

Main question	Summary of topics covered by probing questions
• Respondent information	Gender; age; time in service; education level; role; ethnicity; sector and type of facility; location of facility
• Can you tell me about your role?	Daily tasks; department; responsibilities
• Have you been in contact with patients who had suspected and/or confirmed COVID-19?	In what capacity staff had been in contact with COVID-19 patients; how they found working with them; emotional and psychological effects; the effects of PPE on delivering care
• How has the COVID-19 outbreak affected health services in your department?	Effect on staff daily tasks and ability to deliver care; cancellation of elective surgeries; isolation of suspected and confirmed cases; impact on the supply of drugs and equipment; redeployment of staff
• What were the preparedness strategies implemented locally?	Whether they felt these strategies were enough; what was successful; what should have been prepared differently; training; guidance
• Do you currently have any concerns or fears?	In relation to the national effort; in relation to their own work (response efforts, PPE, services)
• Over the past months, have you experienced any problems with aspects of your daily life?	Sleeping; eating; concentration; additional worries or anxiety
• Have you been provided with mental health support?	Are they aware of support available; have they had the opportunity to speak about their mental health; worrying experiences; interactions between colleagues
• Have you been involved in caring for patients who are dying or expected to die soon?	Tasks and responsibilities related to advanced care planning, symptom management, comfort, end-of-life decision-making, communicating with families; difficulties and challenges; emotional impact on staff; training and support available; communicating with family members; differences to normal palliative care; how much choice patients had; rules and policies
• What do you feel is most important to offer COVID-19 patients at end of life and their families?	What was working well; what can be improved; what support needed to be offered to staff delivering palliative care; bereavement support to families
• How have health services been strengthened, or how could they be strengthened during the outbreak?	Support to staff from health system and partners; capacity for rapid response; policies and emergency protocols; maintaining normal services; general practice health promotion and community engagement; linkage to support organisations
• Is there anything you feel should be changed to make health services more effective in future emergencies?	Support to staff from other sources; coordination and official guidance of COVID−19 response; early detection and reporting; volunteers; disease outbreak control activities; testing public and staff
• Specific questions related to other sub-analyses	Experiences in relation to gender, race, ethnicity; home life; caring responsibilities, pregnancy

APPENDIX 2

Boolean search term for emotion management

((bio:"healthcare professional" OR bio:"healthcare worker" OR bio:"doctor" OR bio:"NHS" OR bio:"nurse" OR bio:"physio*" OR bio:"Paramedic" OR bio:"Ambulance work*" OR bio:"Ambulance driver*" OR bio:"Occupational Therapist") AND ("coronavirus" OR "#coronavirus" OR “corona” OR "COVID-19" OR "COVID 19" OR "COVID19" OR "#COVID19" OR "COVID_19" OR "COVID" OR "severe acute respiratory syndrome coronavirus 2" OR "severe acute respiratory syndrome coronavirus 2" OR "2019-nCoV" OR "SARS-CoV-2" OR "2019nCoV") AND ("redeploy*" OR "stress" OR "anxious" OR "face-to-face" OR "face to face" OR "anxiet*" OR "scared" OR "afraid" OR "tired" OR "burn* out" OR "burnout" OR "not able" OR "phone*" OR "hug" OR "bad news")).

APPENDIX 3

Sentiment analysis criteria for emotion management

HCW experience of emotion management and care during COVID-19 pandemic.

Definition and context

We aim to gather accounts of the experiences of healthcare workers (HCWs) in the challenges and constraints they might have to administer care during the COVID-19 pandemic.

Definition of emotion management: practices used by staff to deal with and use emotion as part of care.

Examples of emotions described: Fear, Stress, Anxiety, Hope, Confidence and Calmness.

Sentiment analysis of emotion management

Ambiguous (A)

- Post contains indecision, uncertainty on the risks or benefits of COVID-19 treatment/guidelines/support/emotion management and changes structure and redeployment. Post contains both disapproving and approving information.

Positive (P)

- Post communicating overall trust and satisfaction with public health guidelines and support for emotion management in the context of the COVID-19 pandemic
- Posts are affirming of emotion management delivery and experiences of staff delivering emotion management
- Post describes the importance of emotion management.

Negative (N)

- Post contains negative attitude/arguments against current COVID-19 treatment/guidelines/support/emotion management.
- Post discourages the following of recommended treatment/guidelines/support related to emotion management.
- Post shares bad staff experiences of working and the effect of this on emotion management. Problems with increased deaths, infection control, challenges to advance planning, symptom management, use of life support technologies, on effectiveness of emotion management.

Neutral (NT)

- Post contains no elements of uncertainty, positive or negative content.
- Post contains general statement(s) or link(s) to item(s) (e.g. news articles/papers) with no expression of sentiment.
- Post includes factual statements/recommendations about COVID-19 and emotion management, but no other sentiment.