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# Sensemaking through Crisis: Critical Care Pharmacist (CCP) Leadership during COVID-19



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# Sensemaking through Crisis: Critical Care Pharmacist (CCP) Leadership during COVID-19


## Abstract

**Purpose** - The purpose of this study is to understand how Critical Care Pharmacist's (CCP) coped during the COVID-19 crisis by investigating what sense-making and leadership processes were evident during the crisis.

**Design/Methodology/Approach -** Data from ten semi-structured interviews of Lead CCP's across different NHS organisations in the UK was analysed through a thematic process.

**Findings -** The findings identified that strong pre-existing relationships and high levels of trust play a significant role in successfully navigating a crisis. Four sense-making processes seem important to building and maintaining these relationships and trust – *1) Identifying cues for change; 2) Authoring and labelling; 3) Interpretation and storytelling;* and *4) Negotiation and deliberation.*

**Originality/ Value -** The research also highlights the need for organisations to acknowledge the leadership roles undertaken by CCP teams and to leverage this role by investment in leadership training, thereby increasing resilience and preparedness for future storms or crises on the horizon.


**Keywords –** Leadership, pharmacists, crisis, sense-making

**Paper Type –** Research paper

## Introduction

This study explored leadership dynamics within the healthcare sector as displayed by Lead CCP's who were at the very forefront of the COVID-19 pandemic. The global crisis presented by the COVID-19 pandemic provided a unique opportunity to study leadership as the crisis unfolded. As the world experienced the unfolding global COVID-19 pandemic it

became obvious that one of the key requirements for organisational survival is good leadership as each sector navigated through the effects of the pandemic (Hailey, 2021; Maak et al., 2021; Musbahi et al., 2022; Pless and Wohlgezogen, 2021; Stephens et al., 2020). For example, Hailey (2021) highlights the importance of trust in crisis leadership, suggesting that staff are more willing to take risks, to commit to change and take leaps of faith when they believe their leaders have their best interests at heart. Crisis leadership at national and international level during COVID 19 has been criticised (see Okoli et al., 2022). Similarly, Maak, et al. (2021) discusses the 'fault lines' of leadership that may not be obvious under normal circumstances but could cause leadership to fail stakeholders and society at large in a defining moment such as a global pandemic. The response of leaders to the unfolding crisis provided a unique opportunity to observe leadership in action, deriving a greater knowledge and insight into the leadership process for Lead CCPs. Following a reflexive review of the COVID-19 pandemic on academia, Stephens et al (2020), has highlighted the need for future research work in the wake of the global crisis, suggesting various organisational research topics evoked by the COVID-19 pandemic, many of which are closely linked to the dynamics of leadership during the crisis. These aspects of leadership and crisis were the influence for this piece of research.

**The Leadership Role of CCP's during COVID-19**

Since the advent of the COVID-19 pandemic there have been an increasing number of attempts to identify the leadership behaviours required to successfully navigate the pandemic, particularly in the healthcare sector (e.g., Hailey, 2021; Keen et al., 2020; Maak et al., 2021; Mushabi et al., 2022; Okoli et al., 2022). Keen and colleagues (2020), for example, emphasise the need for leaders to define their current situation and reality, both within their organisation and externally, using what they know to be fact, and their assumptions of truth. Mushabi and colleagues (2022) add to this by highlighting the need for ethical leadership, particularly in times of crisis. It is this emphasis on ethical leadership that resonates with our research sample.

Clinical Pharmacists working within hospital based multidisciplinary teams play an important role in leadership terms by reducing patient safety risks, optimising the safe function of medication management systems and aligning pharmacy services with national initiatives that

measure and reward quality performance (Burgess, et al., 2010). For example, pharmacists have been recognised as key players in addressing the global threat of antimicrobial resistance by reducing inappropriate antimicrobial use in hospitals due to their drug expertise and leadership (Traynor, 2014). Furthermore, Ismail and colleagues (2018) describe pharmacists as pharmacotherapy experts who possess pivotal skills which qualify them for playing active leadership roles in the process of designing, developing and implementing clinical pathways thereby improving patient-centred outcomes through interprofessional collaboration. The use of medication to support patients and optimise outcomes is a fundamental element of care. CCPs work within the Intensive Care Units (ICU) to provide a key role of managing medication within the complexity of various routes of administration, severe and rapidly shifting pharmacokinetic and pharmacodynamic parameters, and extremes of physiology in critical illness. CCPs intercept and resolve medication errors, optimise medication therapy and undertake broader professional activities within the job role that contribute to the smooth running of ICU, improved quality of patient care, reduced mortality and reduced costs (Borthwick, 2019). CCPs work on ICUs can be grouped into three broad areas (Borthwick *et al.*, 2018). First, the traditional clinical pharmacy role of undertaking independent reviews of drug charts, clinical data, performing medicines reconciliation. Second, the active participation in the daily multidisciplinary team (MDT) round, where alongside the team of doctors, nurses, and other relevant allied healthcare professionals, the patients are reviewed, and plans are drawn up for the day's activities and for longer term planning. This is where CCPs make the most contributions (Shulman et al., 2015). The third area is broadly grouped as professional support activity and includes guideline development, drug formulary applications, governance and medicines incident reviews, financial reporting and forecasting, teaching, audit and research (Borthwick, 2019). In his reflection on the height of the COVID-19 experience at one of the hardest hit NHS trusts, Barton (2021) highlights his 2 main objectives; First, to ensure sufficient medicines stock to cope with the ever-growing predicted number of patients who would require level 3 care (ventilation) and second, to train enough pharmacists to look after these ventilated patients as it is very different from usual care. Similarly, Sowah (2020) during the pandemic, described increased recognition of her role as a vital member of the multidisciplinary team (MDT), providing professional advice and guidance on prescribing, dosing and administration of highly specialised medicines.

Apart from providing a leadership role in optimising the use of medicines within ICUs, senior CCPs in larger hospitals are responsible for the delivery of a clinical pharmacy service to the ICU via a team of CCPs and pharmacy technicians (Hemsley, 2018). This role is usually described as a Lead ICU or Lead Critical Care Pharmacist. The scope of leadership required by the Lead CCP is captured in the 'sandwiched' nature of the middle manager within organisational hierarchy (Gjerde and Alvesson, 2020; Gutberg and Berta, 2017). In the case of Lead CCPs, the term sandwiched portrays a simplified picture of their complex multi-relational positioning, as the Lead CCP role requires influencing the medicines related behaviours of varying professional groups within varying levels of seniority as well as the traditional positioning between the Pharmacy department top managers and the 'subordinate' CCP team (see figure 1). Furthermore, the leadership requirements from the Lead CCP includes implementation of national, NHS Trust and hospital policies on medicines which are not always popular with the key stakeholders within the ICU. It is this complex positioning of Lead CCPs that sets the scene for examining how the role was enacted during the COVID-19 pandemic.

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Insert Figure 1 here

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Given the critical and complex nature of the COVID-19 pandemic, we felt that investigating leadership through the lens of sense-making was merited and provides a new conceptual lens by which to think about leadership in a health services context.

**Sense-making as Leadership**

Although there is no single agreed definition of 'sensemaking' (Brown et al., 2015), there is a consensus that sensemaking refers to those processes by which people seek plausibly to understand ambiguous, equivocal or confusing issues or events (Colville et al., 2012). According to Weick (1995), sensemaking is a cognitive activity by which a chaotic event is framed using three interrelated processes: 1) creating and discovering ways to gain control over crisis; 2) authoring and interpreting to comprehend; and 3) enacting, where people bring

events and structures into existence and set them in motion. This definition suggests that people aim to gain clarity and reduce ambiguity by negotiating meaning socially (Brown, et al., 2015). A further description of sensemaking is the ongoing retrospective development of plausible images that rationalise what people are doing (Weick et al., 2005). Managers actively engage in sensemaking at times of uncertainty to interpret and create an order for occurrences (Sharma and Good, 2013). The process of sensemaking, as encapsulated by Weick et al., (2005), starts from an undifferentiated flux of fleeting sense impressions (Chia, 2000) which then progress to the stages of noticing, bracketing which is characterised by inventing a new meaning or interpretation for something that has occurred but doesn't yet have a name or is yet to be recognised as a separate autonomous process, object, or event. (Malaga, 1997), and functional deployment where a diagnostic label is imposed suggesting a plausible treatment (Chia, 2000).

In her introduction of sense-making to the notion of leadership, Annie Pye (2005) promotes the analysis of lead*ing*, rather than the more static notion of leader*ship* which is based on personal qualities or competencies. Pye suggests that the analysis of leading presents a more complex challenge of exploring the process of enacting, organising, managing, and shaping collective movement, thereby suggesting a focus on sensemaking in action which captures the daily doing of leading. Pye (2005) describes the power of leaders to define meaning and acknowledges the part of followers in the dialectical process that leads to a shared definition of reality, generating ownership and commitment to the definition, because of shared sensemaking. Pye (2005) posits that leaders lead by performing an explanatory function for others who in turn exemplify these explanations (to some greater or lesser extent) in their responses, thereby transforming systems of shared meaning. The social aspect of sensemaking reinforces Pondy's (1978) observation of leadership as a social influence that is hard to differentiate from many other influences in relationships between people.

Sensemaking through communication across hierarchical boundaries is a key feature of middle manager role (Sharma and Good, 2013; Rouleau and Balogun, 2011; Balogun and Johnson, 2004) and this fact reinforces Pye's (2005) case for the analysis of sensemaking as being more important than that of leadership because it is more inclusive and draws in other crucial elements of everyday life in organisations which are overlooked by much of the leadership literature. It is this sensemaking process that is researched further within this article as we examine the role of the Lead CCP during the COVID-19 pandemic.

## Methodology

### *Data Collection*

We identified suitable interview candidates by contacting Lead Critical Care Pharmacists (CCPs) in large NHS organisations. This led to an introduction to a forum of consultant CCPs from various NHS Trusts. As a result, 10 respondents agreed to participate anonymously in the research. Consent for the interview and the agreement for anonymity was achieved as part of the initial questionnaire and during the interview. Ethical considerations were achieved by completing the University of West England Faculty of Law ethical check list and obtaining advice from the RBHFT Information Governance department. To acquire a descriptive account of the research topic, we followed a semi-structured interview approach as part of our phenomenological study. This approach is focused on the meanings people attach to phenomena (Gray, 2017). In preparation, we created a pre-interview questionnaire which contained a list of topics and questions (see Appendix 1). Following the timeline suggested by Gray (2017), we distributed the pre-interview questionnaire three weeks prior to the interview dates. The interviews were conducted using Microsoft Teams video conferencing and were recorded with the interviewees' consent. During the interview, we flexibly explored and discussed a list of questions (see Appendix 2).

### *Analysis*

The objective of the qualitative data analysis was to provide coherence and structure to the interview recordings while retaining the original accounts and observations, hence picking up on the daily doing of leadership (Pye, 2005). As suggested by Ritchie and Spencer (2002) qualitative data analysis is about detection, defining, categorising, theorising, explaining, exploring and mapping. The framework by Seers (2012) was used in the analysis as it aligned with the qualitative data analysis goals suggested by Ritchie and Spencer (2002). We adapted the Seers (2012) framework by reading through the transcript, identifying and labelling or coding paragraphs of note, categorising codes into themes. Seers (2012) also suggests using quotations to illustrate categories and themes as this helps keep the analysis firmly grounded in the data. Hence, transcribing software was used to obtain verbatim written notes of each Microsoft Teams recorded interview videos, and time was taken to carefully review the

accuracy of the notes against the recorded video. Watching the videos whilst reviewing the text enabled phrases or statements of interest that had significant relevance to the research to be highlighted.

A table of the key phrases which captured the sensemaking aspect of leadership through the pandemic for each of the ten respondents was prepared and then analysed to identify the themes that emerged from exploration of the individual narratives. By assigning labels to the contextual themes identified in each of the key phrases, we identified 11 emerging themes (see table 1 below). Additionally, we assigned labels describing the part within the sensemaking process that the phrase of interest depicted. Finally, we assigned a label that described the scope of leadership (Pharmacy team, Trust level or National level). The findings from this analysis were used to inform the examination of the leadership experience of the lead CCPs through the Sensemaking process (Weick, 2005) lens and to explore how this unfolded on the different scopes of leadership that took place during the pandemic.

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Insert Table 1 here

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**Findings**

*Crisis leadership within local teams/departments*

In this section we discuss the themes that emerged from my exploration into the perceived support and engagement from the pharmacy team as well as the communication around wellbeing within the smaller ICU pharmacy team. The issue of speed of engagement of the senior pharmacy team was a key theme in all the interviews. All the respondents described a lag time before the senior team realised the severity of the COVID-19 pandemic, although there was a significant difference in the lag time reported as seen in the quotes below.

*"And at the beginning, I think one of my biggest challenges was…getting the point across to my director of pharmacy and my Leads that actually this is a real problem… and I do not think at the beginning they truly got it. Especially around drug supply."*

*"I think from a senior management point of view there was a lack of understanding and a lack of awareness of the scale of the problem. And I think it took quite a long time for them to get on board with how bad it was, which was quite difficult."*

*"One of my lowest points was when we got to less than a day of fluids. I had 14 people on the filter. I had them say to me, I just can't get any fluids. And I'm saying,. I'm half an hour away of going to my clinical director and saying, make the decision who gets filtered and who doesn't."*

The above quotes are in reference to the very beginning of the pandemic in February 2020. The lead CCPs had received information via the CCP networks of the scale of the imminent problem and patients had started to arrive on the ICUs, however a national pandemic status had not been declared. All the CCPs expressed their immediate response of ensuring the hospital was stocked with sufficient drugs to match the unfolding situation only to be "blocked" or accused of exaggerating by the senior managers who were not as close to the unfolding crisis and had also been warned against "stockpiling".

In all cases there is a point at which the pharmacy senior management "saw the light" and came on board, but each case there was a specific action of articulation where the Lead CCP had to exert intentional upward influence (Floyd and Wooldridge, 1997) to facilitate accurate interpretations of emerging issues and elicit the required action. The quotes below express the individual Lead CCPs attempts in establishing this upward influence.

*"I sat him down (the director of pharmacy). I went through a slide that showed what the attack rate was, what was going to happen. One of my bosses was there and she just sat there wide eyed as I said, we are going to be completely outgunned by this."*

*"And I remember my Lead say, okay, so how many ampoules if we wanted to keep six months' supply of fentanyl for 80 patients? And I said, well, that would be 146,000 amps. And she said we know you made a mistake and, go look at the figures… And then they went,*

*Oh, my goodness, you're right. But once they grasped that, I mean, they ran with it and they were much more supportive."*

*"So, for example, I did get one of the senior managers to sit with me in the critical care network call so they could be aware of what the projections were in terms of how many patients would be coming and so on. So, I did try and share the information and pre-empt the situation… And then thankfully, by the end of the week, senior management kind of got on board and they did ask, what can we do to help?"*

The requirement for support from the wider pharmacy team was not limited to acquisition of stock but also required multiple aspects such as reinforced staffing within the pharmacy ICU team, technical support for drug "top-up" service, and clinical trial management. With each of these themes, there was a similar pattern where the Lead CCP had to exert upward influence to obtain the required intervention from the senior management team. These events demonstrate key aspects of the process of sense making (Weick et al., 2005). The events started with the filtering of information through the Critical Care Networks and ICUs for which the Lead CCP had the responsibility of organising the flux of information and interpreting what this meant to the wider pharmacy team. In some cases, the senior pharmacy team response was overwhelmingly positive as depicted in the quotes below:

*"And suddenly to work in an atmosphere where whatever you needed, you know you would get it the next day and you could develop a new service and then change it and improve it and develop it… It was actually quite liberating and a great experience."*

*"I just think the whole department pitched in and the senior management got behind us and we were able to deliver a really comprehensive service and utilize the abilities and talents from around the department."*

Through the articulation and upward influence of the Lead CCPs the senior pharmacy management became increasingly aware of the required actions to address the unfolding pandemic. The sensemaking role of middle managers in interpreting and creating order for occurrences at times of uncertainty (Sharma and Good, 2013) became apparent with the requirement for the Lead CCPs to address the anxiety experienced by the work force on safety concerns of the COVID-19 infection as they bore the responsibility of providing

clarity for further action (Corley and Gioia, 2004). The staff anxiety for individual safety was expressed in the following quotes.

*"It was quite difficult at the beginning as nobody knew who was most at risk and who wasn't, and people were very nervous. And then if you had family at home who you know were at risk, you wouldn't want to go to the wards. And it raises a lot of fear... And obviously in the first wave we had no vaccines as well."*

*"One of my team came to me and said, I can't deal with this, I'm going to resign…And obviously it was very stressful, particularly in the first couple of weeks."*

The staff within the ICU pharmacy team as well as the wider pharmacy team had valid concerns about their own physical health and the genuine fear of catching as well as the concern of passing on the infection to loved ones at home. Within the wider pharmacy team there was a reluctance to attend wards with COVID-19 patients, resulting in a fear of going to the ICUs, which were over-spilling with COVID-19 patients. Weick's definition of sensemaking as the ongoing retrospective development of plausible images that rationalise what people are doing is applicable to the role of the Lead CCPs in this instance as they led the interpretation of the unfolding events, and through a series of approximations and attempts, arrived at an "appropriate" response (Weick et al., 2005). The findings show that the "appropriate" response depended on the Lead CCPs interpretation of the unfolding events as not all the ICU leads arrived at the same response to the physical well-being concern. Whilst most decided it was in the best interest of the ICU team for the pharmacy team to remain present on the ward, some concluded that the risk of all the team members becoming unwell was more of a risk to the ICU patients due to the loss of expertise and specialist knowledge, and therefore encouraged the team to stay away from the wards. This is captured in the quotes below:

*"So, I remember having a heated discussion with the leadership team because I made a decision to split the team in half and have half of the team work remotely offsite and the other half onsite from the pharmacy office."*

*"Myself and another senior colleague approached the management team and we basically said, this is crazy, we have to go to the ward. And so that was resolved fairly quickly then."*

*"But I just don't think you can be in it with them (the ICU team) unless you've seen it and lived it. There were so many more things that we could help with that you didn't know you needed to help with until you were there."*

It is interesting to note the conflict of perceptions of appropriate response between senior management as in two of the instances there is an exchange of "heated" discussions on the "appropriate" course of action.

*Crisis leadership within the wider organisation*

In this section we discuss the themes that emerged from an exploration into the pre-existing social and systemic networks that underpinned the organisational leadership. Communication has been described as the key area where middle managers influence change in organisations (Gutberg and Berta, 2017) and is referred to as the central component of sensemaking (Weick et al., 2005). Due to their expert knowledge on medicines, Lead CCPs bore the responsibility of leading the course of action in treatment choices and guideline development which underpinned the clinical response to COVID-19 across the organisation. This resulted in the Lead CCPs finding themselves in organisational leadership environments they were previously unaccustomed to as captured on the quotes below.

*"And I'd never stepped into a forum that had people with so many senior job titles, so I guess from a leadership perspective, initially imposter syndrome became real because I thought, oh. I'm not sure I'm qualified to be in this room with all the big names, but actually, what transpired is my knowledge of how critical care works is exactly what they needed as opposed to the big titles."*

*"So, we had the whole organisation gold, silver and bronze command, and quite early on they acknowledged that we needed to be involved and I would try and attend every day. So, we had quite a lot of input into lots of things."*

On exploring how the CCP's leadership on the use of medicines played out amongst the various respondents, the findings show varying levels of experienced consensus and resistance on the decisions around the use of medicines within the ICUs. The quotes below depict the interplay between the intensive care consultant doctors and the lead CCPs where there were differing views.

*"Having put this protocol in place and then finding it didn't work and then having to go back to the drawing board and come up with something that the consultants were happy with as well."*

*"But yeah, we clashed loads over therapies because he (the consultant) just wouldn't listen and wasn't really bothered about evidence base, and we ended up just agreeing to disagree."*

*"In normal practice, I think there is time for those discussions to develop and gain different insights, so it may be that there was more compromise in the conflicting views rather than finding a mutually, agreeable way through, but I think everyone was open to that and everyone was open to compromise."*

The experience of the CCPs brings into focus Weick et al.'s (2005) question about the necessity for shared beliefs or understanding as pre-requisite for organisational action and works towards a notion of shared sensemaking (see Pye, 2005). Weick and colleagues observe that when information is distributed amongst numerous parties, each with a different impression of what is happening the cost of reconciling these disparate views is high. In the case of the COVID-19 pandemic, the cost of reconciling the disparate views would have been time, but this luxury was not available on the ICUs within the acute, life-threatening situation presented by the pandemic. This resulted in "*compromise on the conflicting views rather than finding a mutually, agreeable way through".* In most cases, however, the CCPs report that they were trusted to make the major decisions on medicines use during the pandemic as depicted in the quotes below:

*Particularly when we interface between critical care and anaesthesia, to make sure that we provide the best guidance on how we could use medicines."*

*"And also, because they knew that we were kind of driving a lot of the patient medicines management and protocol development, we were trying to have a consistent approach to keep things fairly simple and straightforward."*

*"That is where the track record and relationships are really important before you have a crisis. We had a very strong leadership of medicines use within our critical care areas so there's a degree of trust and it wasn't like all of a sudden, we were going to tell them how to use medicines. That was our relationship with them anyway."*

In her discourse on the role of organisational trust in leadership through COVID-19 pandemic Hailey (2021) highlights the benefits of faster decision-making, greater efficiency, information-sharing and innovation in organisations with high levels of trust in their leaders. This high level of trust for the lead CCPs on their expertise on medicines was demonstrated with all the respondents, enabling effective decision making and efficient information sharing which was essential for the management of critical care medicines during the pandemic. Weick et al., (2005) describe how sensemaking relies on presumptions, whilst Hemmer and Elliff (2020) acknowledge the fact that leaders may not have as much information as they need before taking action in a crisis, and are required them to act without complete information. This appears to be the case with the Lead CCPs. We now turn to look at the data through the lens of national leadership.

*National Leadership*

In this section we explore the experience of those Lead CCPs who were required to step up to a national platform to deliver leading roles in critical care medicines management due to their expert knowledge. Our analysis explores the pre-existing networks that led to the involvement of CCPs at this level as well as the proactive measures taken to ensure effective articulation. The quotes below depict the various areas in which the CCPs provided leadership on a national level, delivering expert advice to inform an appropriate response to the unfolding crisis.

*"I was very quickly involved from a national planning perspective, because I was contacted by NHS England to be part of the EPRR, which is the emergency preparedness, resilience and response that was being put together by NHS England in planning for how we would respond to this emergency situation of COVID-19 as it wasn't a pandemic at that stage. They wanted an intensive care pharmacist input."*

*"It soon became apparent that this wasn't something that could be managed at a local level. We had to support all of our critical care units as much as possible and our pharmacy teams centrally. We were relatively fortunate that CCPis a specialty that has established networks and we have nationally recognised leaders."*

*"So, Department of Health had sent a letter to the trusts listing the type of expertise that they were looking for and asking trusts to suggest people that would serve this role which*

*included critical care pharmacists. Obviously, they wanted someone who knew or understood critical care pharmacy, because they were going to try and build a (Nightingale) critical care unit from scratch"*

This is not the usual remit of CCPs as observed by one of the respondents quoted below.

*"So, there were opportunities to sort of lead beyond authority, you know, to influence areas beyond your local team."*

One of the older respondents traced the significant role played by CCPs back to the networks built during the Swine flu pandemic, thereby alluding to the retrospective nature of sensemaking. He suggested that the significant involvement of CCPs in 2009 paved the way for acceptance of CCPs at the national stage during the COVID-19 pandemic.

*"So I had played an active role in the Swine flu pandemic and it meant that some of the work we had done then around planning for what sort of drugs we're going to need and how much, had been done on a spreadsheet which was adjustable for different clinical attack rates and stuff and you can adjust it according to individual hospitals."*

*"I basically had a planning spreadsheet which eventually got used around the UK and that got us into the sort of working out how are we going to get drug supplied across the UK. We shared this at the NHS England level, which was kind of like a great open for myself and 2 other consultant CCPs and we ended up talking to NHS England about drug supplies, drug shortages and how to manage them and what was needed. And as you know, you can trace the groundwork of that right back to the previous pandemic."*

Despite the general sense of CCPs being invited to national leadership on the use of critical care medicines, there were instances where the CCPs had to take proactive steps to be included in decision making forums and exert their influence to ensure the optimisation of critical care medicines during the COVID-19 pandemic as shown in the quotes below.

*"And then there's a faculty of intensive care society guidelines that are like an ongoing COVID-19 therapeutic guidelines. I sit on the group now, but there was initially no pharmacist on the group, so I invited myself."*

*"So, it was quite clear from the beginning that I thought we had to get involved in a clinical trial of some sort. And then along comes the RECOVERY trial. The trust approached me to be the principal investigator for the trial, and they needed a quick turnaround and somebody that would say yes straight away. So, I jumped at that."*

Rouleau and Balogun, (2011), highlight the role of middle managers in strategic sensemaking through their ability to craft and share a message by referring to a complex mosaic of underlying knowledge in a manner that makes the message meaningful within the context. The above quotes demonstrate how the middle manager in question proactively positions him/herself to gain strategic audience for his pertinent message of the use of critical care medicines during the pandemic. Our findings highlight daily shared sensemaking activities (c.f. Pye, 2005) that underlie activity that is often missed in leadership terms and hence we shine a light on it here in an extreme crisis context.

## Discussion

In the discussion below we highlight four key sense-making-sense-giving processes that appear to be important in the crisis leadership exhibited by CCPs.

### *Identifying cues for change*

Managers in organisations constantly engage in making sense of the changing situations they face (Weick, 1995) This was the case with the Lead CCPs as they identified the cues for change and the threat of the COVID-19 infection before it became a pandemic. The Lead CCPs were required to determine the meaning of the cues for the organisation once identified, which in the case of COVID-19 had multifactorial consequences such as stock shortages, ICU bed shortages, lack of treatment evidence, ICU trained staff shortages to mention a few. The extraction of meaning from the cues was undertaken collaboratively as the more experienced consultant CCPs recognised the need for support by Lead CCPs across the country and leveraged existing networks to communicate the most plausible meaning of the cues. This collaborative approach to meaning making of the unfolding cues provided a sense of preparedness to Lead CCPs across the UK, providing an opportunity for the CCPs to exert upward influence on the organisational managers to elicit a response to the impending

crisis. This collaborative approach speaks to what Pye (2005) highlights as shared sense-making. It was the responsibility of the Lead CCP to turn the influx of circumstances into a situation that can be comprehended explicitly in words and serve as a springboard to action (Weick et al., 2005). Fink (1986) highlights the critical value in an organisations ability to recognise and respond to risk indicators in order to successfully navigate a crisis. This significant role was undertaken by the Lead CCPs in their role as middle managers where they framed and enriched the interpretation of the unusual unfolding events as the COVID-19 pandemic approached. This adds further to research looking at health professionals leading in a middle management role (see Adunola, 2023; Al-Hussami et al., 2017; Santra and Alat, 2022). Furthermore, Huy, (2002) identifies the role of middle managers in emotional balancing through sense-giving to "subordinates". It is interesting to see this role being directed at the higher levels of management, where the Lead CCPs sought to instil a sense of urgency to the department managers who were yet to recognise or interpret the cues and impending threat. Using Coomb's (2014) three stage crisis life cycle which included the Pre-crisis, Crisis event and Post crisis stages, it becomes obvious that the lead CCPs actively engaged in sensemaking during the pre-crisis period by identifying the potential crisis and initiation of steps for prevention or preparation (Hemmer and Elliff, 2020).

*Authoring and Labelling*

Hemmer and Elliff (2020) describe sensemaking as an interpretative process asking the question "what is going on? Why? What may happen next? and what to do about it? The answer to the question "what is going on?" requires a process of functional deployment in which a diagnostic label is imposed suggesting a plausible treatment (Weick et al., 2005). After recognising the cues and threats, the CCPs were responsible for deploying labels that predisposed the key stakeholders to find common ground, deploying cognitive representations that are able to generate recurring behaviours, providing actors with a given set of cognitive categories and a typology of actions (Weick et al., 2005). Use of the label "medicines shortage" immediately required the deployment of the pharmacy stores manager, the label "trained staff shortage" deployed the support of the education and training lead, the label "top-up service" deployed the support of management to re-direct technical staff, and so on. Through the categorisation and labelling of the chaotic flux of information presented by the unfolding pandemic, the lead CCPs were able to facilitate teamwork across the various sections within the pharmacy department as each section was able to identify their unique

role and contribution due to the clear labelling of the situation and the ability to draw on previous responses to similarly labelled situations.

*Interpretation and storytelling*

Weick et al., (2005) describes sensemaking as being thrown into an ongoing, unknowable, unpredictable streaming experience in search of the answer to the question "what is the story?" This resonates with the experience of the Lead CCPs who were at the centre of the unfolding chaos in the ICUs and were being relied upon to provide a narrative of "the story" to the rest of the pharmacy team and to provide clarity on the subsequent question "what should I do next?" An area of great concern was the physical wellbeing of the pharmacy staff who would have normally provided a ward-based service. The research findings demonstrate that the varying narratives around the safety of the ward-based service and the consequence of this led to completely different courses of actions across different organisations. Whilst one set of Lead CCPs provided a narrative which emphasised the essential requirement for pharmacy ward-based service on the ICU during the pandemic, there were others who expressed great concern about losing the limited number of staff with ICU experience to COVID-19 related illnesses and therefore provided a remote service. Each group provided a plausible story based on their presumptive understanding of the unfolding situation. Weick et al (2005) suggests that sensemaking is not about truth and getting it right but continued redrafting of an emerging story so that it becomes more comprehensive, incorporating more of the observed data. In either side of the CCP's interpretation and storytelling, it was clear that there was no right or wrong approach and that each CCPs story could be seen as plausible when viewed within the ongoing context of their current climate. Sutcliffe (2000) highlights the importance of plausible stories as they generate action-taking, generating new data, creating opportunity for dialogue, bargaining, negotiation and persuasion that enriches the sense of what is going on. The value of plausible stories was demonstrated in the CCP's leadership journey as there were clear examples of the dialogue and bargaining which enabled further assessment of beliefs, new actions resulting in increased clarity.

*Negotiation and deliberation*

Once the question "what is going on?" is answered, the next question is "what should I do next?" (Weick et al., 2005). The observation of the Lead CCPs story narration, linked directly to the action taken in regard to ward presence highlights the inseparable link between talk and

action, where communication is considered to be the central component of sensemaking (Weick et al., 2005). In all the levels of leadership observed, the ability of the lead CCP to generate the required action depended on the pre-existing networks and the articulation by the CCPs in the form of discursive competence (Rouleau and Balogun, 2011). On a national level, effective communication occurred between the consultant CCPs who highlighted the unfolding threats and cues for change to the Lead CCPs across the UK before the pandemic arrived, providing a platform for national preparedness. This was then cascaded to the individual NHS organisations, where the Lead CCP were able to engage with the pharmacy management to elicit advance action in preparation for the unfolding pandemic. Furthermore, communication with the national stake holders on the use of critical care medicines was instrumental in determining actions to optimise the use of medicines across the UK, avoiding unnecessary harm to patients. The social and systemic nature of sensemaking (Weick et al., 2005) is evident in all levels of leadership displayed by the lead CCPs as the multi-relational positioning of their role required negotiation and deliberation with multiple stake-holders to achieve a compromise or mutual agreement where possible in developing further actions.

*Limitations of the Research*

We have chosen to take a sensemaking approach to leadership in this research to help to see more clearly what is goes on in organisations during crisis, but we also accept that there are many other ways of approaching leadership as a concept. Hence, in further research we wish to explore differing notions of leadership and how they may provide other important reflections on CCP leadership practice. The leadership content of the interviews was full of important themes which we have not been able to explore including the psychodynamics of crisis leadership which focuses on the feelings experienced by the respondents and the emotional burden of leadership during crisis. Examining the psychodynamics of crisis leadership highlights a crucial element in the sensemaking process and would provide great value to the understanding crisis leadership. Additionally, the dynamics of leadership in the context of the Lead CCPs could have been more thoroughly understood if there was an opportunity to interview other actors within each organisation represented in the study. Furthermore, we would recommend that a similar exercise is undertaken for various professions within the NHS and other organisations directly affected by the Covid-19 pandemic to ensure that all relevant learning on crisis leadership is captured.

*Implications for Practice*

The subject of this research was on the process of leadership rather than on the leader, examining leadership in action. Where there has been a major drive to strengthen leadership in the public sector through leadership training, we would recommend the examination of the leadership process to be a key part of training packages, avoiding the sole focus on leadership attributes. We would like to echo Stephen et al.'s (2020) call for further studies on the process of leadership during the Covid 19 pandemic to ensure that all the available lessons and learning opportunities are derived from the experience. Furthermore, we recommend that Crisis Leadership becomes a standard part of all leadership training programmes to increase the preparedness of leaders for future global crisis.

## Conclusion

This research set out to explore the role of CCP teams with a particular focus on the key research question – 'What sense-making processes are undertaken in order to reach team decisions in response to a crisis?' The research findings have demonstrated the pivotal role played by the Lead CCPs as NHS middle managers, functioning within complex, multi-relational hierarchical structures as the organisation navigated the COVID-19 pandemic. The study contributes to knowledge by highlighting how, by virtue of the expert knowledge which resides within the middle management organisational hierarchy, it can be expected that middle managers will be relied upon to lead the way on specific salient issues of their expertise in times of crisis.

We also believe we contribute to this area of study by highlighting how sense-making is a pivotal part of understanding leadership in action and drawing in the work of Pye (2005), Weick et al. (2005), and others, into this area of health leadership. We also provide four sense-making processes that seem important to building and maintaining these relationships and trust – *1) Identifying cues for change; 2) Authoring and labelling; 3) Interpretation and storytelling;* and *4) Negotiation and deliberation.*

Whilst the Lead CCPs stepped up to the challenge and delivered excellent leadership on the use of critical care medicines during the pandemic, there was a sense of "impostor syndrome"

or "leading beyond authority". This highlights the need for organisations to acknowledge the leadership roles undertaken by middle managers and to leverage this role by investment in leadership training, thereby increasing resilience and preparedness for future storms or crises on the horizon. Apart from highlighting benefits of investing in leadership training for middle managers for resilience against crisis, our research acknowledges the value of developed pre-existing networks of trust in facilitating effective decision-making and efficient communication. Prior to the pandemic, the CCP had a very strong network between NHS organisations in the UK and between relevant NHS England and clinical specialty groups as well as within their local organisations as part of the multidisciplinary team. This reinforces the social and systemic nature of sensemaking which was pivotal to successful navigation and the collaborative interpretive effort that followed. The continual development of increasingly strong networks of trust appears to be a key component for success within future crisis situations.

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## Appendices

### Appendix 1: Pre-Interview Questionnaire

| Pre-Interview Questionnaire | |
|---|---|
| Name | |
| Email address | |
| What is your job title? | |
| Which specialty best describes your ICU? | |
| Please specify the number of staff members within the pharmacy critical care team (Include WTE information if staff are not full time) | |
| Please specify number of Pharmacy Technicians or technical support staff within the pharmacy critical care team. | |
| Please specify the maximum number of staff members within your critical care team during the height of the pandemic? | |
| Please specify the usual bed capacity of your ICU? | |
| Please specify the maximum number of ICU beds occupied during the height of the Covid 19 pandemic? | |
| What would you consider to be your top 3 challenges during the height of the pandemic? | |

| | |
|---|---|
| (Please choose 3 options and/or enter comments below). | |
| If selected other in the previous question, please specify other challenges in the freetext box below. | |
| Please follow the link below to indicate your availability between the 31st of January and the 4th of February 2022. Please specify an alternative date below if the dates within the poll are unsuitable | |
| The recordings of the video interview will be used for research processes only and will not be shared with any other party.<br>Do you give consent for the interview to be recorded? | |

**Appendix 2: Semi-structured Interview Agenda**

| **Semi-structured Interview Agenda** |
|---|
| What would you consider to be the 3 biggest challenges that you faced during the height of the pandemic? |
| 1) |
| 2) |
| 3) |
| Explore for each challenge: |

- How did you come to realise that this was a problem?
- Was there something in your previous experience to compare it to?
- How was your processing of the situation influenced by the people and systems around you?
- What was the main action taken to mitigate the problem?
- How did you communicate to your team?
- How was the communication across multidisciplinary teams?
- How was the communication within the pharmacy department teams?
- How was the communication with the pharmacy senior management?

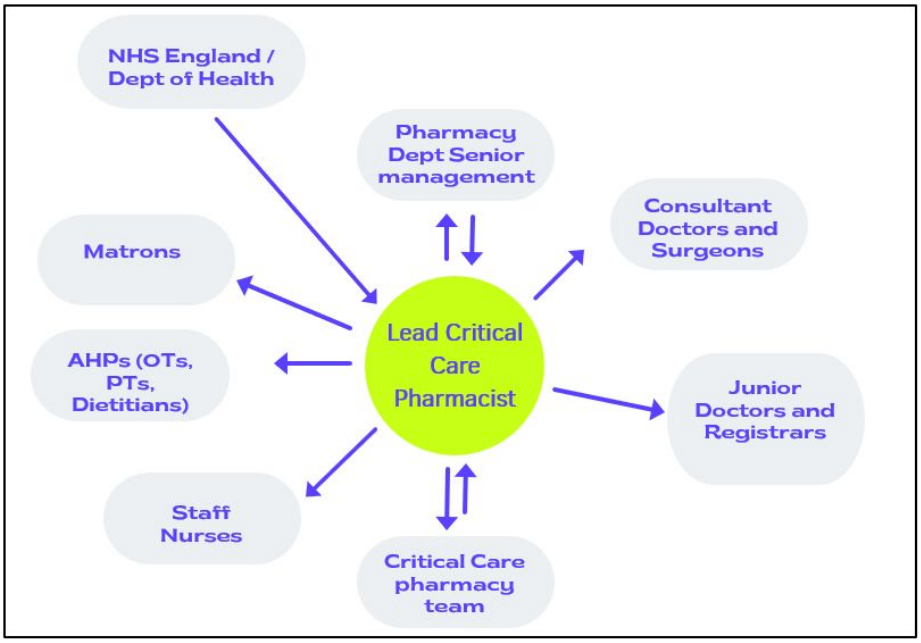


Figure 1 - Multi-relational hierarchical positioning of Lead CCPs

| | Local Pharmacy Team leadership | Organisational leadership | National leadership |
|---|---|---|---|
| Silo working | 2 | 0 | |
| Delegation | 4 | 0 | 2 |
| Safety - Catching Covid | 4 | 0 | |
| **Pharmacy team engagement** | **17** | 0 | |
| Stepping up (Leading beyond authority) | 0 | **15** | **22** |
| Management support | 13 | **5** | 1 |
| **Pharmacy presence** | **8** | 11 | |
| Pre-existing networks | 12 | **9** | **9** |
| **Wellbeing** | **21** | 12 | 1 |
| Articulation | | 6 | 1 |
| Swine flu | 0 | 0 | **5** |

Table 1 - Data categorisation

**Sensemaking through Crisis – Response to Reviewers**

This is an interesting paper and I enjoyed reading it. However, in my view, the paper requires significant improvements before it can be considered for publication in addressing some central issues:

1.The notion of a sensemaking in a crisis such as the covid-19 pandemic and the leadership role played by the Critical Care Pharmacist (CCP) within the healthcare setting is an interesting one but I would have liked to see a more structured analysis of the literature about the current debates on the issue, including the key dimensions/attributes of the leadership demonstrated by the lead CCPs in discharging their duties and how this study adds to the body of knowledge. There is a fairly developed body of work but the coverage in the paper is presumptive in assigning the 'leadership' aspect to their normal day-to-day role without making a clear distinction about what was different and how it is manifested within this study.

Thank you for the useful prompt here, we have looked again at our literature review and our concern is that there is so much literature on leadership that it would be difficult to cover it all. We have therefore chosen to take a sense-making approach which to us seems to be the most relevant aspect of the leadership literature to enable a meaningful investigation of the situation. Having said this, we have highlighted in the limitations of the research how the investigation could be widened to include other dimensions/attributes of leadership (see page 17).

Moreover, the literature reviewed on sense-making, trust and leadership, and the links with the study evidence about the case of is both under-developed and insufficiently focused with the limited insights provided about the CCP context and why/how it was unique.

Thanks again for the prompt here too, we have reviewed our discussion on sense-making and added more from an article by Pye (2005). We now use this article as the basis for our conceptual framework for the study. Please see pages 4-5.

2. The methodology is currently poorly presented. How was access negotiated? What questions were asked? No such information is provided. Currently the findings are presented as simply unattributed quotes. While the authors have suggested the use of thematic analysis, the reader is left unsure with the conclusions drawn about the chosen approach. Clarity about the research ethics would help too.

Thank you for the feedback here too, we have now included more information on how access was negotiated, we have also included further information on the interview questions and provided material in appendices. We have also clarified that the participants agreed to anonymity at the start of the research hence unattributed quotes and have expressed the goal of examining the leadership experience of the CCPs through the lens of Weick's Sensemaking processes (Weick, 2005). We have also added further information on the ethics process undertaken for this research.

These modifications to the text can be seen on pages 5-7.

3.The Discussion section would benefit with greater linkage of the core themes to the

literature and how the study findings confirm/contradict the extant literature and the current evidence. It would be helpful if this aspect was dealt in more details for the benefit of the readers.

We have reviewed the discussion section and tried to make more clear links to the extant literature, please see pages 15-18.

The implications of the study findings, especially for managers, could be further highlighted with limitations of the approach clearly identified.

We have made some further practical suggestions (see page 19) and highlighted the limitations of the research (see page 18).

4. The authors should also be clear whether the themes unearthed in the study address a knowledge or evidence gap and what are the key contributions made by the study which currently seem to be both under-developed and rather over claimed, arising out of a small ten-interview based qualitative study.

Thanks again, we have tried to expand on our contribution in the conclusions section on pages 19-20.

This is an interesting paper but requires substantial work and going back to the drawing board in arguing the key points.

Thanks, we hope that our revisions have made you more confident of the contribution of our work.