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RESEARCH NOTE

LEADING DURING A PUBLIC HEALTH CRISIS

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ABSTRACT

Leading teams during the COVID-19 pandemic had unique challenges often requiring timely decisions based on emerging new information to then rapidly implement changes. The usual scaffolding for system changes lagged behind the implementation. The command and control of crisis management blended with traditional health leadership styles as the emergency response became protracted and building sustainable teams became a focus of the response.

This paper presents the results of a survey of the leadership cohort at the Centre for National Resilience, a large quarantine facility in northern Australia, that managed over 30,000 people requiring quarantine and isolation.

METHODS:

A grounded explorative theory approach was implemented, with descriptive data analysis and thematic analysis of an online Leadership survey in conjunction with site data and information specific to the leadership structure.

RESULTS:

The core challenges for leaders were identified as establishing a workforce combining health and non-health resident care roles, rapid changes in legislation, communication, site logistics, and resident management and support.

CONCLUSION:

The survey highlights lessons for sustaining high-performing leadership in future protracted health emergencies such as the importance of peer support, attention to work-life balance, sharing positive work outcomes, early, clear communication and collaboration, and the need for flexibility and adaptability.

KEYWORDS

COVID-19, communication, leadership, quarantine, workforce

INTRODUCTION

Health leaders on the front line of pandemic responses are often required to be reactive and innovative with limited information. They rely on their team's compliance often with little work-team consultation and yet are expected to ensure they facilitate supportive work relationships and establish efficient communication channels. The multidisciplinary leadership team at a large regional quarantine and isolation facility in Northern Territory, Australia established and managed the safe quarantine of thousands of residents across domestic, humanitarian, repatriated and international travellers [1]. The quarantine and isolation facility was directed by both territory and commonwealth governments requiring innovative approaches to ensure coherent resident care across local and national legislation. New work models were

established to build workforce capacity integrating non-health staff to work alongside health professionals and the logistical adaptation of facilities to serve as a quarantine service occurred.

Having efficient and productive leaders in such an environment has been found to be vital to staff motivation and retention influencing how well staff will perform [2]. This is particularly evident for the middle management level who are often the front-facing leaders for the workforce and passing on decisions they may have had little input with [3]. As a result, they also bear the majority of criticism or pushback on decisions. As presented in the Australian Health Sector Emergency Response Plan for Novel Coronavirus (COVID-19), (2020) it is stated that leaders strive to make good decisions based on best available evidence [4]. Strong leaders were required in many areas of the pandemic response inclusive of pathology, epidemiology, disease surveillance, immunisation implementation, supervision of national and local borders and in quarantine and isolation services.

During the COVID-19 pandemic leadership required flexibility to adapt to changing situations often recognising it was preferable to move ahead with plans immediately rather than spend extensive time analysing possible outcomes [5,6]. Indeed, with the sudden onset of the COVID-19 pandemic, leadership teams were not provided the luxury of considered strategic planning but had to make decisions and implement actions immediately. This meant evaluation processes were instant and observational, occurring as a process was initiated such as airport arrival screening.

Dadich and Lopes (2022) point to limited clarity about how leadership manifested during the COVID-19 pandemic and a missed opportunity to learn from our experiences [7]. This study seeks to document key characteristics for the success of the leadership cohort at the Centre for National Resilience (CNR), a 3,000-bed quarantine and isolation facility in northern Australia to inform future protracted health crisis responses. The survey forms part of a larger project that aims to present a series of open-access quarantine guidelines for use in future disasters and emergencies where the isolation and quarantine of people is required.

METHODS

An anonymous online survey was sent to the leadership team at the time of closure of the CNR, including executive and middle-level roles. To ensure validity that participants represented the broader leadership team, the survey invitation was inclusive of: nurse, medical and allied health leaders, administration and site logistics leaders, and leaders from government areas and non-government organisations that had significant roles with the running of the quarantine site, such as site maintenance, catering and cleaning. Participant consent was assumed with the completion of the survey, with an opt-out approach. Survey questions identified the participant's workplace site and roles within the CNR, challenges faced in their role, the greatest successes they achieved and their recommendations for the future.

Results were analysed in conjunction with site data and information specific to the leadership structure and site operations. A grounded explorative theory approach was utilised, with descriptive data analysis and thematic analysis of open-ended survey questions to identify key trends and themes in staff responses. The qualitative research methodology of grounded theory is becoming more accepted in management and leadership areas and aligns well with the examination of the open-answer survey responses [8]. The text mining software Leximancer was additionally used to assist with open response data analysis.

Ethics approval was obtained by the Human Research Ethics Committee of the Northern Territory Department of Health and Menzies School of Health Research (HREC Number 2022-4349).

RESULTS

The leadership team survey was sent to 45 participants and received 16 responses (response rate 35.5%) across both government and non-government staff. Participants were requested to identify which areas of Leadership their position was located with the option to add a role if it was not included with the list of 15 provided. This resulted with responsibilities nominated across corporate services, digital engagement, education and training, executive, executive planning team, finance management, infection prevention and control, media and communications management, medical and nursing services, operations,

quarantine services, security services, tele wellbeing, work health and safety, administration, maintenance, dispatch, catering, safety and quality.

Leaders were asked to describe their mission in their role at quarantine. The key themes were keeping the Northern Territory safe, leading and supporting staff, managing resident care, overseeing infrastructure, reporting outcomes, and being guided by Chief Health Officer Directions (government legislation). Respondents identified their main priority areas as site management, communication across the site, infection prevention and control (IPC) measures, clinical administration, report writing, and work health and safety.

There were 13 detailed open responses to the most challenging aspects of their role and communication was central to the majority. The five core themes identified for this question set included: staff, legislation, communication, site logistics, and resident management. A sixth theme was added titled "emotive" as it was evident certain feedback related to personal feelings about the experience described (refer to Table 1).

TABLE 1: CENTRE FOR NATIONAL RESILIENCE (QUARANTINE SERVICE) LEADERSHIP TEAM RESPONSE ANALYSIS TO THE SURVEY QUESTION WHAT WERE THE MOST CHALLENGING ASPECTS OF YOUR ROLE?

Core theme	Descriptive theme	example
Communication	Site teams	• Communication between teams with different directors could be difficult if the directors were not collaborating effectively • Communication from key executive to the education to enable/ensure staff were aware of roles/responsibilities and changes in health directives.
	Stakeholders & external parties	• Communication between NTG and non-NTG stakeholders • Communicating between different organisations in order to find out what residents had recently been admitted.
	Rapid changes	• Sometimes work and decisions were changing so rapidly in order to keep up with an evolving situation, that decisions were not able to be communicated to all effectively • Communication and information sharing in a constantly changing environment
	Tools to share information	• Initially no access to written procedures. limited shared databases.
Staff	Recruitment	• Rotation of staff through CNR • Large numbers of staff
	Rostering	• Inflexibility with rostering of new staff fixed monthly rosters causing inflexibility of teams and managing business as usual no live roster to update with staff sickness
	Lack of experience with health	• Working with people who were new to health (non-health backgrounds and new graduate nurses) and teaching them health-related interactions with PPE and infection control.
	Unmotivated	• Sometimes staff did not have enough work to keep them occupied, and so they became demotivated
Resident management	Arrivals & departures	• Discovering that people had already arrived on site without us knowing they were arriving.
	Health care needs	• People transferred from NT health facilities without a clinical handover, without medications and without basic care being provided prior to being discharged from a facility (ie arriving from dialysis without having a meal and in some cases without receiving their dialysis). The hundreds of people who arrived from remote communities without a clinical handover and/or without their

		medications were where we had no access to their medical records and prescriptions. Then to discover a few days after they had arrived that they had significant health issues and needed their medications, putting them at a huge risk of harm. • Managing residents with mental health issues • Managing residents objections to the system of quarantine
Legislation	CHO Directions	• CHO directions changed on a dime • Adapting HSQF response to changing legislative requirements from the CHO Political overlay at all levels of the health and emergency response • Changes in disease transmission and CHO Directions and therefore changes in practice
Site Logistics	Maintenance	• Access to areas that required maintenance.
Emotive	Positive	• Embraced the challenges.
	Negative	• Providing positive leadership when personally fatigued

The survey presented an opportunity for the participants to rank their perceptions of their work-life balance at the quarantine facility. Responses demonstrate the leadership team members felt overworked and experienced a compromise with work-life balance. However, the two areas regarding feeling satisfied with work outcomes and being supported by your peers rated much higher (refer to Table 2).

In addition, there were 14 pieces of feedback provided for the aspects leaders felt most proud of in relation to their work at CNR. These can be summarised as achieving site goals (predominantly no community transmission of COVID-19), career progression, resident-focused outcomes, teamwork, and work responsibilities. Survey feedback varied from generalised comments regarding satisfaction with teamwork to identifying specific areas and/or projects they completed. Leximancer identified the core themes of team and safe for staff responses (refer to Table 3).

TABLE 2: CENTRE FOR NATIONAL RESILIENCE (QUARANTINE SERVICE) LEADERSHIP RESPONSE TO THE SURVEY QUESTION: ON A SCALE OF 1-5 (1 BEING NOT AT ALL TO 5 BEING EXTREMELY) STATE YOUR RESPONSE TO THE FOLLOWING QUESTIONS.

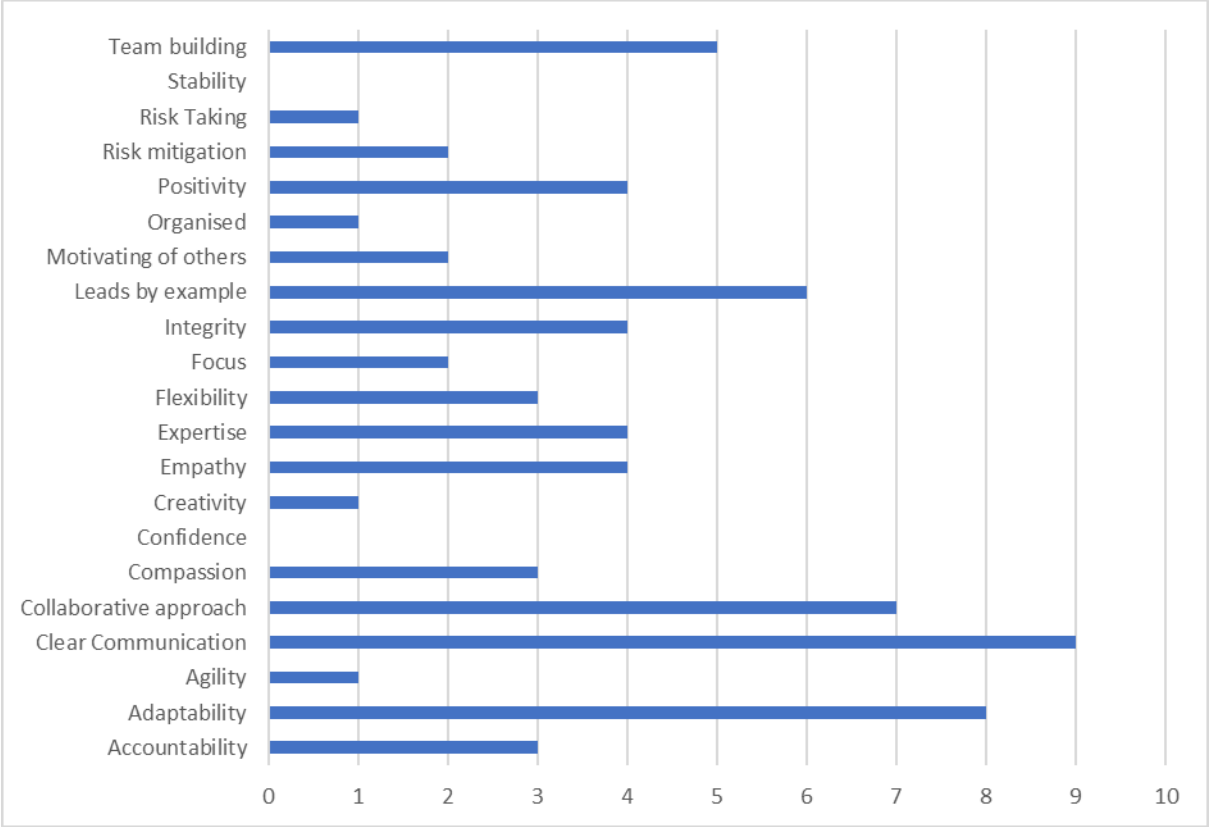
Field	Minimum	Maximum	Mean	Standard Deviation	Variance	Count
How overworked were you in your role at CNR?	2.00	5.00	3.29	0.96	0.92	14n
How compromised was your work-life balance?	2.00	5.00	3.67	1.30	1.69	15n
How satisfied were you with your work outcomes?	3.00	5.00	4.07	0.80	0.64	14n
How supported were you in your role by your peers?	4.00	5.00	4.62	0.49	0.24	13n

TABLE 3: CENTRE FOR NATIONAL RESILIENCE (QUARANTINE SERVICE) LEADERSHIP TEAM RESPONSE ANALYSIS TO THE SURVEY QUESTION: WHAT WERE YOUR GREATEST SUCCESSES/ WHAT ARE YOU MOST PROUD OF?

Core theme	Descriptive theme	Example
Achieving site goals	Nil COVID-19 transmission to staff	Leading a large amount of staff across the site no cross-infection of COVID between staff or residents The ability to not have one transmission of Covid 19 from residence to staff.
	Nil COVID-19 transmission to community	No community transmission of COVID
Work outcomes	Successfully completed projects	Arranging a system for a totally deaf woman should an emergency occur during the night when she is sleeping or in her room. Creating an onsite pharmacy room, with a workable impress list and working with the many pharmacies and remote health centres to ensure there was a minimal delay in getting medications to the people who arrived on site without them
Teamwork	Being part of or leading teams	The working relationships formed to achieve a common goal Leading an education team who proved to be more than just adaptive, reactive and proactive to the facility and staff needs, they were innovative and creative and dedicated to ensuring staff were supported to safely meet resident and site needs.
Career progression	Career and knowledge progression	Opportunity to learn and take on study to further my career The knowledge gained through working with some of the best infectious control leaders in their fields.
Resident	Resident management and safety	Making a difference in the lives of people returning to Australia often under extreme and traumatic circumstances. Keeping our residents safe.

Understanding what leaders prioritise regarding desirable leadership skills presents a valuable lesson for future leaders. For the CNR leadership team, 14 people responded to this question and the priority areas were distinctly identified as: clear communication, adaptability, collaborative approach, leads by example and team building (refer to Table 4).

TABLE 4 CENTRE FOR NATIONAL RESILIENCE (QUARANTINE SERVICE) LEADERSHIP RESPONSE TO THE SURVEY QUESTION: CONSIDERING LEADERSHIP ROLES AT CNR, WHICH OF THE FOLLOWING LEADERSHIP CHARACTERISTICS WERE IMPORTANT TO THE SUCCESSFUL OPERATION OF A QUARANTINE FACILITY OPERATING IN AN EMERGENCY RESPONSE ENVIRONMENT? IDENTIFY THE TOP 5.



DISCUSSION

The goals of the leadership team at the CNR were underpinned by the public health mandate of protecting the community. The survey revealed leaders were focused on the protection of staff, residents, and the community from COVID-19, recognising the quarantine facility as a potential transmission hazard. The leadership was initially a command-and-control model but as the emergency became protracted, a more collaborative model of leadership was needed to retain and sustain the workforce. The initial emergency reactive response merged into a more sustainable proactive approach as it became evident the COVID-19 pandemic was an ongoing event.

The important leadership qualities in this unique setting included capacity to collaborate and communicate within and across agencies, the ability to make decisions quickly and implement change rapidly in an evolving health emergency, the fostering of peer support and celebrating the contribution every member of the workforce is making to the evolving crisis. Ahern and colleagues (2021) refer to sustaining trust in the workforce through remaining closely connected to those on whom decisions impact and this was critical at the CNR and achieved by leaders working alongside teams in the tropical heat and building a strong sense of purpose in the workforce [9]. This aligns with one study that examined the core leadership traits required as presented by their staff and identified three specific areas- attending to the person, taking charge, and showing the way forward and sustaining the spirit [10].

In complex emergencies, leaders need to be adaptive at all levels [9]. The protracted nature of the pandemic required a reset in terms of health workforce leadership from encouraging staff to surge to meet the demands with the expectation it would be over soon to accepting the new normal and providing opportunities for staff to achieve a better work-life balance. The staffing of new health services such as the CNR had to be balanced against the workforce needs of the acute and primary health care systems and as such new workforce models needed to be explored and implemented. The challenge for leaders in this protracted crisis setting is to have the courage to try untested innovations and be comfortable with the risk of failure.

The leadership at the CNR employed health and non-health staff to work in teams providing quarantine and isolation health and wellbeing care to its residents. The non-health staff were drawn from professional groups that had become unemployed because of the pandemic such as travel and hospitality workers. A model of assistants in nursing was developed to employ nursing students in the facility to also work within these teams. This adoption of innovative staffing models was successful and has subsequently been adopted into other settings.

The leadership at CNR identified clear communication and a collaborative approach as critical to the success of the service. Effective messaging during a public health emergency is vital and the resulting infodemic which occurred with COVID-19 made this an incredibly difficult task for governments and health organisations [11]. In a mixed workforce of health and non-health professionals it is important for leadership to provide tailored information sessions. It is additionally critical in a rapidly changing response such as the pandemic where public health orders impacted directly on the CNR operations that information can be rapidly disseminated from the leadership team to all staff.

LIMITATIONS

The number of participants in this research could be considered low and thus limiting in representing the true experience of the leadership team. The participants who did respond to the survey, however, are representative of the various leadership areas of the quarantine service and do represent a holistic view of leadership across the service.

CONCLUSION

The COVID-19 pandemic provided challenges for health leaders and an opportunity to capture those challenges and prepare for the future. Leaders who are currently in positions where they will likely be called on to respond should be provided training for the leadership skills required in health emergencies and particularly for protracted emergencies. Our work at the CNR suggests leadership should focus on rapid decision making, adaptability, innovation and acceptance of risk, communication strategies, leading from the front to build strong teams and fostering a sense of purpose.

ETHICS

This project received ethical clearance from the Human Research Ethics Committee of the Northern Territory Department of Health and Menzies School of Health Research (HREC Number 2022-4349).

DECLARATION

The authors declare that there is no conflict of interest.

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