



Research paper

Critical care health professionals' self-reported needs for wellbeing during the COVID-19 pandemic: A thematic analysis of survey responses

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ABSTRACT

Background: Critical care healthcare professionals are a key part of any pandemic response and are at an increased risk for physical and psychological harm, yet their self-reported suggestions to ameliorate the negative effects of pandemics on their wellbeing have rarely been sought.

Objectives: The objective of this study was to explore and interpret themes of critical care healthcare professionals' responses to the question 'What do you think could assist your wellbeing during the COVID-19 crisis?'

Methods: A descriptive study using an online survey, performed in April 2020, investigating pandemic preparedness and psychological burden during the early stages of the COVID-19 pandemic among critical care professionals was carried out. Informal snowball sampling was used. Thematic analysis of qualitative data from an open-ended survey item was informed by Braun and Clark.

Findings: Eighty percent (2387/3770) of respondents completed the open-ended survey. Three themes were generated from the synthesis: adequate resourcing for the role; consistent, clear information, and prioritised communications; and the need for genuine kindness and provision of support for healthcare professional wellbeing.

Conclusions: There is merit for considering the perceptions, concerns, and suggestions of critical care clinicians during a pandemic. Suggestions included simple measures to maintain physical and mental health, clear messaging, consistent information, trust in health and political leaders, supportive working environments, specific training, and allowances for personal circumstances. This information is important for health and political leaders and policy makers to implement strategies to reduce the burden associated with delivering care in the context of a pandemic.

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1. Introduction

Disasters including pandemics are increasing in prevalence globally with healthcare professionals (HCPs) more likely to be impacted than other occupational groups as they are generally at

the forefront of a pandemic response. The impact of this can increase the risk of physical and psychological harm.^{1,2} Critical HCPs can be negatively impacted during pandemics, with previously reported outcomes including secondary traumatic stress,³ compassion fatigue, and moral distress.⁴ Our own research, examining psychological burden with the Depression, Anxiety and Stress Scale-21 (DASS-21),⁵ during the early stages of the COVID-19 pandemic revealed between 22 and 29% of respondents reported moderate to extreme depression, anxiety, and stress symptoms.⁶

In addition to the mental health risks, there are physical health risks associated with the COVID-19 pandemic for HCPs including infection with COVID-19, facial skin reactions as a result of prolonged

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use of personal protective equipment (PPE), and skin reactions in response to frequent hand hygiene.¹ Recently, in the wake of the COVID-19 outbreak, a telephone interview study with 40 critical care HCPs in England and Scotland revealed that adequate training, adjustments to new ways of working, structured psychological support, and clear information were important.⁷ A thorough exploration of the perceptions of critical HCPs is required, to better understand wellbeing needs and prepare the health workforce. Undertaking qualitative research in this area enables a deeper understanding of critical care HCP needs, 'giving them a voice'.

This article reports the findings of a qualitative analysis of survey responses on preparedness and psychological burden during the COVID-19 pandemic.⁶ Specifically, this article reports a secondary analysis of the exploration and interpretation of responses to the open-ended question, 'What do you think could assist your wellbeing during the COVID-19 crisis?'

2. Methods

2.1. Design

This was a descriptive study involving the thematic analysis of qualitative data. The approach was inductive–deductive. The Standards for Reporting Qualitative Research⁸ were used. An online survey was used to capture qualitative data rather than individual interviews or focus groups in recognition of the additional burden these modes would place on HCPs at the commencement of a pandemic.

2.2. Procedures

The online anonymous survey was conducted in April 2020.⁶ The survey comprised the DASS-21 scale, 13 pandemic-specific items (published elsewhere), and the open-ended question, 'What do you think could assist your wellbeing during the COVID-19 crisis?' The volume and breadth of responses to the open-ended question prevented an appropriate level of detail regarding this thematic analysis to be presented in the main study report. To ensure we faithfully and accurately represent the responses of HCPs, the results of this analysis are presented separately in this article.

2.3. Settings and sampling

Informal sampling was used. Informal snowball recruitment was performed in which HCPs were recruited from five Australian and New Zealand critical care networks, social media platforms, and the researchers' networks; participants and organisations were encouraged to share the invitation with their networks. Medical, nursing, and allied HCPs working as clinicians, educators, researchers, managers, or students in critical care areas were invited to participate. Although the survey invitation was circulated globally, responses were received predominately from HCPs based in Australia and New Zealand. Ethical approval for the conduct of this low-negligible-risk project was provided by the Research Ethics Committee of Children's Hospital (Queensland Hospital and Health Service). Informed consent was assumed if participants completed the survey and this statement was included in the study participant information provided at the beginning of the survey. In addition, participant information included assurances that survey completion was voluntary, and that respondents' data would be de-identified.

2.4. Data collection

Details about the 13-item survey have been published previously.⁶ The data pertaining to this study were the free text

responses to the item, 'What do you think could assist your wellbeing during the COVID-19 crisis?' The survey was administered via the REDCap electronic data capture tools hosted at the George Institute, Sydney, Australia.^{9,10} Data were downloaded and cleaned before analysis. A large dataset (in excess of 51, 000 words) was generated from the open-ended question. Most responses were detailed and included several points.

2.5. Number and relevant characteristics of participants

There were 3770 critical HCP participants of whom 2387 (80%) responded to the open-ended question, 'What do you think could assist your wellbeing during the COVID-19 crisis?' Of the participants who responded to the open-ended question, 50% were female ($n = 1863$). The most commonly reported age was 40–49 years ($n = 753$, 31%). The majority were based in Australia ($n = 1956$, 82%), and 177 (7%), in New Zealand. The remainder ($n = 254$, 11%) were based in other countries including the United States of America, United Kingdom, Africa, Europe, Asia, and the Middle East. Clinical registered nurses comprised approximately half of the sample ($n = 1147$, 48%), and 495 (21%) were medical doctors. The remainder were other HCPs including allied health professionals, nurse researchers, managers, and educators.

2.6. Data analysis

Descriptive statistics were performed to summarise respondent characteristics. For the qualitative data, NVivo (v12) (QSR International, released March 2018) was used to store and manage the data. The inductive–deductive and iterative analysis was informed by Braun and Clarke.¹¹ This requires researchers to immerse and familiarise themselves with the data, code and perform confirmatory coding, and consolidate and interpret the results. The analysis was also guided by the open-ended question in the survey pertaining to 'solutions and suggestions to assist HCP wellbeing during the COVID-19 crisis'. Two researchers (L.C. and R.E.) independently performed a detailed exploration of the data for patterns and commonalities as well as unusual or surprising responses. These were coded into categories. Further analysis principally by one researcher (L.C.) was performed to define the themes. The themes were then reviewed by the other researchers, and any discrepancies were resolved by consensus or the lead researcher (N.N.H.). A further refinement of the themes was performed after an independent blind review of the study report.

2.7. Researcher characteristics and reflexivity

Reflexivity was ensured throughout by the researchers analysing the data independently and challenging interpretations and assumptions collaboratively. Research team discussions about the resulting themes ensured transparency, consistency, and robustness. Transferability was established by considering respondent characteristics and from identifying sufficient quotations to support each theme.

The researchers predominately responsible for data analysis were female critical care nurses (R.E. and N.N.H.) and a social worker (L.C.). All researchers had extensive critical care clinical, education, and research experience. The social worker had wellbeing expertise providing psychological interventions for critical HCPs, patients, and their families. While all three researchers drew on their experience and background to inform their interpretation of the data, they deliberately and consciously avoided making assumptions. Participants undertaking the survey were aware of the names of the researchers.

2.8. Findings

Three themes were evident from the analysis: adequate resourcing for the role; consistent, clear information and prioritised communications; and the need for genuine kindness and provision of support for HCP wellbeing. A common thread linking the three themes was respondents' focus on basic physiological needs and safety for themselves, their families, and their colleagues.

Many responses were direct answers to the question, with suggestions on how 'to support HCPs' wellbeing'. In other instances, HCPs appeared to be expressing their frustration and their suggestions were embedded in a narrative about their own circumstances and examples about 'what should not be done'. Anticipatory anxiety was evident through many of these narratives.

2.9. Theme: adequate resourcing for the role

Critical HCPs requested the provision of basic resources for them to safely fulfil their roles. The words 'adequate' and 'sufficient' particularly in relation to PPE and training were consistently used. HCPs were clear they did not expect the 'best' or to be over-resourced, although they did want 'adequate' access to PPE, information, knowledge and training, breaks and food, appropriate rostering, and support to ensure they could safely perform their role physically and emotionally. Many HCPs suggested that the pandemic was an opportunity to correct perceived existing deficiencies with regards to pay, leave entitlements, and compensation. The primary request in this theme however was for 'adequate PPE and PPE training' as exemplified by an intensive care nurse: "Adequate PPE and a no-tolerance policy for inadequate PPE, especially in emergency situations" (ID 1360, Australia); an anaesthetist: "Adequate PPE and consistent guidance" (ID 3788, UK); and another intensive care nurse:

"Knowing we will be supplied with adequate PPE, I believe a gown, eye shield and mask are not enough. Even airline cleaners get hazmat suits, and they don't come into direct contact with patients." (ID 1462, Australia).

HCPs wanted to be safe. Furthermore, they wanted to have the knowledge, resources, leadership, autonomy, and support to enable them to effectively respond to the pandemic. This was illustrated by a clinical ICU nurse:

"reassurance that we are safe and up to date in our practice on the day - it is constantly changing [which is understandable] but therefore disconcerting when yesterdays practice is now not considered safe" (ID 2020, Australia).

Another related aspect for this theme was the need for access to COVID-19 testing and the timely return of results as reported by a speech therapist:

"Access to testing for COVID-19 with a quicker turnaround time to getting results. I worry most about whether I may have COVID-19 or whether I am overreacting and imagining/exaggerating symptoms. If there was a quicker test then I would feel more confident to be able to test my symptoms", (ID 3593, Ireland).

Many respondents identified the pandemic as an opportunity to improve remuneration, increase compensation for risk, and address perceived flaws in current attitudes to the risk posed for HCPs, particularly nurses. This was clearly articulated by intensive care nurses, for example: "..... ..If your work exposes you to something

that makes you unable to attend work it is industrial sickness which should be covered by your employer" (ID 205, Australia), "I think the possibility of higher pay during the high-risk period should be considered." (ID 54, Australia) and "Hazard pay" [single suggestion from respondent] (ID 2769, New Zealand).

Increased provision for leave and compensation for risk was also a suggestion made by other HCPs, for example, an intensive care physiotherapist, "Improved leave provisions for when we get sick and/or catch COVID and not use up our current normal sick leave ± rec leave". (ID 3239, Australia).

It was evident that HCPs perceived an urgent need for frequent access to education and training including simulation. Many identified that this was key to their 'survival' during the pandemic. For those who were asked to act outside their normal roles, education and clinical support was perceived as critical. An emergency nurse and medical trainer highlighted the need for skills training through "simulation scenarios for training [and this would result in]- less anxiety when you are trained how to manage e.g., intubation without manual ventilation pre ETT etc in your own workplace" (ID 1004, Australia). This was reiterated by many respondents, for example, an acute care nurse identified the need for: "Ensuring adequate training supervision if changing nursing role e.g. stepping up to HDU" (ID 1289, Australia) and an emergency nurse recommending: "Clinically, much more training on whatever information is available regarding the pathophysiology and treatment options of COVID19" (ID 1382, Australia). Concern was expressed by a consultant anaesthetist about missing essential training during her maternity leave:

".... I am not stressed by long hours or patient exposure. But I am stressed by not being present. To help or get PPE training and simulation [training]. So, I do not feel at all prepared for returning to work I would like to attend training sessions even when on leave." (ID 410, Australia).

Many respondents requested stronger consideration for healthier rostering, for example, 'adequate' time between shifts to recover and recuperate. This was illustrated by an intensive care nurse: "Adequate down time to recover and avoid COVID-19 fatigue" (ID 3156, Australia) and a consultant anaesthetist: "Adequate rest days in between shifts" (ID 3617, UK).

There were also requests for shorter shifts as HCPs found PPE restrictive and exhausting physically and emotionally. An emergency paramedic suggested: "Shorter shifts. Working in PPE is exhausting" (ID 3526, UK) and an emergency nurse practitioner: "Shorter shifts, working in teams (same roster for 3months etc) and more days off to prevent transmission of COVID19" (ID 1107, Australia).

HCPs, particularly nurses, repeatedly requested 'adequate staffing levels' primarily to provide clinical support with PPE and to cover breaks. This intensive care nurse provided a detailed response:

"... actually getting proper breaks as described in our policy when caring for COVID patients for example the policy says a 15 minute break every hour that is not happening and I've been looking after these critically sick COVID patients in an isolation room for 3 + hrs without breaks " (ID 1485, Australia).

Nurses also requested shifts in which they were not caring for patients with COVID-19 as a means of maintaining their wellbeing, as articulated by an intensive care nurse: "Access to exercise equipment, shower facilities and rotation to non-COVID19 patients" (ID 3119, Australia).

HCPs requested practical resources to assist with their well-being. These included facilities to shower at work and the provision of hospital supplied ‘scrubs’ (work clothes) to minimise the perceived risk of infection to their family and friends. An intensive care nurse identified that: *“Being provided with scrubs to wear at work so I reduce the risk of transmitted COVID to my family at home”*. (ID 3213, Australia) was needed, which was supported by an intensive care medical resident: *“Ability to use hospital laundered scrubs, shower at work to prevent transmission to home.”* (ID 3631, US).

Provision for their physiological needs was a plea among respondents. Physiological needs fell into the categories of sleep, food, hydration, accommodation, and exercise. Sleep hygiene and time to rest was a major request. This was one of several suggestions for wellbeing made by intensive care nurses: *“Using apps to help sleep/relax”* (ID 3521, UK) and *“adequate sleep and rest”* (ID 302, Australia). The need for a place to sleep was also premised with the requirement to physically isolate and protect others as exemplified by a nurse educator:

“sleeping arrangements for healthcare staff if they do not [have] enough space to do proper social distancing at home - it's hard to have mental wellbeing when the physical stuff feels impossible to achieve.” (ID 3850, UK).

And an emergency nurse suggested: *“Having hotels available for staff to self-isolate if needed, so they don't have the worry of taking it home to their family/children.”* (ID 1169, Australia).

Respondents wanted easy access to nutritious and healthy food and hydration when working clinically. For example, a consultant anaesthetist suggested: *“Hospital provision of food and drink”* (ID 3685, UK). A more extensive list of provisions was offered by an emergency paramedic:

“Access to healthy nutritious food, ability to work out, shifts that allow for adequate rest, separate staff quarters for those that need separate accommodations from susceptible family members” (ID 3648, US).

Another physiological need identified was the time and space to exercise. Exercise was a common suggestion to enhance wellbeing across disciplines and often made in combination with other strategies, as exemplified by an emergency medical consultant: *“Healthy eating, exercise [our emphasis] and fresh air where possible. Meditation”* (ID 1895, Australia).

HCPs suggested that vulnerable HCPs should be ‘shielded’ and not expected to do frontline clinical work. This was exemplified by a rural emergency doctor: *“Take the vulnerable staff off the floor don't leave it to their line managers”* (ID 372, Australia).

2.10. Theme: consistent, clear information and prioritised communications

Inconsistent, mixed information and messaging was a major concern with HCPs, suggesting this impacted negatively on wellbeing. Respondents were clear that they wanted information from someone who was also in the clinical frontline rather than from a hospital administrator or politician who they appeared to mistrust. This was exemplified by these intensive care nurses:

“Quieting down the rumour mill, too much information that is changing far too often almost daily and confusing staff. Having our manager on the unit not a ‘stand in’ so that we feel supported” (ID 1061, Australia).

“A clear (verbal) plan from our manager as to what is going to happen once we receive [patients with] COVID. Not word of mouth from others” (ID 2588, New Zealand).

HCPs wished for a reduction in the volume and frequency of communications about COVID-19, and they wanted an information break when they were at home. This was exemplified by an emergency nurse:

“... There is an abundance of COVID talk, it is fatiguing. At work it is all about COVID and at home the media, shops etc are all COVID. There is no break from it.” (ID 359, Australia).

Respondents described the flow of information as confusing and incessant. Some reported information overload was contributing to anxiety and stress and negatively affecting their wellbeing. This was highlighted by a high dependency nurse educator:

“Avoiding conflicting information. Reducing stress on other staff I support. Being transparent with decision making” (ID 1106, Australia) and by an intensive care nurse:

“... guidelines are often conflicting. too much information from too many different sources. All by email [as] if you have time to read it !!!!!” (ID 1131, Australia).

2.11. Theme: the need for genuine kindness and provision of support for HCP wellbeing

Many respondents offered suggestions about what could practically be implemented to assist their wellbeing as evidenced in the previous theme. Additional suggestions included the provision of regular debriefing and psychological support from people with specialised skills and an understanding of the clinical areas. These responses were framed with a need for authenticity, that is, actions not just words. There were requests for opportunities to debrief HCPs working in the clinically, for example:

“Formal debriefing for healthcare staff where necessary - not just the reminder of free counselling sessions through [state governance] - Actual debriefing with doctors, nurses etc. to unpack issues and learn, and to support each other” (ID 1360, intensive care nurse, Australia), and

“A space to share how scared I am on a personal level without having to be a Doctor who is supposed to be on the “frontlines” “fighting” this” (ID 3528, medical fellow intensive care, UK).

There was a strong emphasis on the importance of a healthy supportive team, for example: *“A positive work culture, staff being supportive and kind to one another during times of stress”* (ID 3073, intensive care nurse, Australia). There was also a level of skepticism about the term ‘wellbeing’. This was expressed in a single response by an intensive care social worker: *“Stop using the word wellbeing - it's at saturation”* (ID 834, Australia). HCPs required evidence of genuine concern from both health and political leaders. For example, an emergency medical consultant emphasised, *“Honest employers/hospital admit showing concern to staff wellbeing and providing PPE that WE feel we need to work safely”* (ID 2845, Australia).

Medical trainees requested more support to manage unique additional pressures related to the disruption of their training and uncertainty about their future careers as exemplified by an anaesthetic registrar:

“For the college to be more empathetic to the strain they are putting on trainees by delaying our VIVAs to some distant, non-committal date. For them to express something resembling human empathy and not the cold robotic tone” (ID 3079, Australia).

And an emergency registrar stated that:

“More genuine support from ACEM and ED staff specialists within our department; not just in regards to health and wellness surrounding COVID-19, but also regarding the cancellation of exams and the impact this has had on trainees.” (ID 460, Australia).

3. Discussion

In this qualitative analysis of critical HCPs' responses to the question ‘What do you think could assist your wellbeing during the COVID-19 crisis?’ in a survey conducted in April 2020, we found three predominate themes: adequate resourcing for the role; consistent, clear information and prioritised communications; and the need for genuine kindness and provision of support for HCP wellbeing.

This survey was conducted during the pandemic when there was uncertainty both in terms of the characteristics of the virus and the ability of healthcare systems to respond and primarily included HCPs based in countries in which case numbers were low. It is perhaps not surprising that the HCPs' responses were less influenced by experience and more by uncertainty and anticipatory anxiety which was a thread evident throughout. This contrasts with studies conducted in which respondents were based in countries with higher case numbers. In these studies, there was more emphasis on resourcing (shortages and rationing health care)¹² and moral distress (witnessing many deaths).^{13,14}

In the current study, HCPs highlighted the need to be ‘resourced for their role’. There were many commonalities in the HCPs' suggestions particularly the need to be safe (for example, the need for adequate PPE). The results from the quantitative component of our survey (n = 3770) highlighted that the primary concerns for respondents was transmission to family (30%) and adequate/appropriate PPE (21%) (REF), with secondary concerns including both transmission and adequate PPE but high concern for contracting COVID-19. In another survey of Australian HCPs (n = 400; April 2020), 80% of the sample expressed a fear of contracting COVID-19.¹⁵ This has also been reported in other research conducted during previous epidemics.¹⁶ Given that an estimated 11% (range <1–57%) of COVID-19 infections globally are among HCPs,^{17,18} this fear is not unfounded. Other qualitative data about HCPs' experience during the COVID-19 pandemic also reflect our findings such as an interview study of HCPs in Hubei province, China, in which the subtheme ‘The uncertainty and fear of being infected and infecting others’ was evident.¹³

HCPs in our study seemed to be intuitively aware of the need to maintain physical health as a priority. Suggestions for provisions to meet basic physiological needs (for example, food, drink, sleep, accommodation) were comprehensive. Concerns and suggestions for psychological and social health were not as obvious. Although they did not explicitly cite Maslow, HCPs' responses frequently referenced the lower levels of Maslow's hierarchy of needs, that is, physiological needs and safety such as food and shelter.¹⁹ Maslow highlighted the basis and hierarchy of needs for wellbeing almost 70 years ago, but the theory continues to be applicable.²⁰ Attending to physical health needs (diet, exercise, and sleep) is the enduring major prerequisite recommendation for the promotion and maintenance of mental wellbeing.^{21,22} Recent studies investigating HCP wellbeing during the COVID-19 pandemic have

rarely explored HCP perceptions using open-ended questions.²³ Thus, survey studies examining HCP perceptions and coping strategies for pandemics have not always captured this valuable, but logical insight into and reminder about physical health needs should be prioritised.

There was some skepticism and fear among HCPs as they commented on the unfolding pandemic. Anticipatory anxiety was particularly evident and was a function of the impact of the pandemic in the countries in which most respondents were based (Australia and New Zealand). In April 2020, community transmissions and hospitalisations in Australia and New Zealand were low. Many provided rationale for their wariness of information provided by both hospital and political leaders and the future impact of this. There were requests for concise, transparent, and consistent information. Some HCPs suggested this as a strategy to allay anxiety.

Our qualitative results are not surprising as they are reflected in the findings from quantitative studies. For example, ‘experiencing poor communication’ was found to be a contributing factor for symptoms of burnout in a study (n = 2700) examining the impact of the COVID-19 pandemic on a cohort of critical HCPs including nurses, physicians, and respiratory therapists from 77 countries mostly based in North America.¹² Of note, ‘addressing mistrust and fear of healthcare workers’ and the ‘need for reliable, consistent, and timely information’ were major recommendations suggested a decade ago following the 2009 H1N1 influenza pandemic.²⁴ The cohort of HCPs in the current study suggested hospital leaders should demonstrate “*genuine kindness and provision of support for HCP wellbeing*” (theme). They wanted to see evidence that leaders valued their safety in tangible ways and that there were contingencies for ‘vulnerable’ workers. They requested formal and informal psychological debriefing from trained providers.

Professional and financial concerns were evident. HCPs perceived that these concerns might impact their short- and long-term career and financial circumstances. Medical trainees perceived a lack of support from employees and professional organisations for their education and training program.

3.1. Limitations: trustworthiness and limitations of the findings

The study has several limitations. The survey responses reveal perceptions rather than actions and behaviours. There is a potential for response bias; HCPs with particularly strong feelings about the topic may have responded more frequently than HCPs who felt less affected. Our recruitment approach included a snowball strategy which may have increased this response bias. In addition, written information may not be interpreted as accurately as audio recordings. These potential limitations are strengthened by the commonalities of our findings with the results of other studies examining HCP wellbeing during pandemics.

Our study reveals the merit of considering the perceptions, concerns, and suggestions of critical care clinicians during a pandemic. This cohort of critical HCPs advocated for simple measures to maintain their physical and mental health, clear messaging and consistent information, and trustworthy health and political leadership. They acknowledged the value of supportive working environments, specific training, and allowances to be made for their personal circumstances to enable them to perform their role effectively. The findings provide useful information for health and political leaders and policy makers to lessen the burden associated with challenges of delivering care in the context of a pandemic. Furthermore, the findings will inform further research to explore the specific needs for HCPs to maintain their mental and physical wellbeing during a pandemic.

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Conflict of Interest

None.

CRedit authorship contribution statement

Rosalind Elliott: Validation, Formal analysis, Writing – original draft, Writing – review & editing, Visualisation. **Liz Crowe:** Conceptualisation, Methodology, Funding acquisition, Investigation, Validation, Formal analysis, Writing – review & editing, Visualisation. **Brett Abbenbroek:** Conceptualisation, Methodology, Funding acquisition, Investigation, Project administration, Data curation, Writing – review & editing, Visualisation. **Sarah Gratton:** Conceptualisation, Methodology, Project administration, Investigation, Data curation, Formal analysis, Writing – review & editing, Validation, Visualisation. **Naomi E. Hammond:** Conceptualisation, Methodology, Funding acquisition, Investigation, Project administration, Data curation, Writing – review & editing, Visualisation.

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