


# COVID-19: Challenges and opportunities for research nursing and nursing research on paediatric intensive care

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## 1 | INTRODUCTION

The Coronavirus pandemic (COVID-19) has had a profound impact on the provision of health care across the NHS. In the hospital setting, elective work was suspended, virtual outpatient clinics were rapidly developed, and there was huge redeployment of staff, all measures to support critical care provision for COVID-19. During this period, two key aspects became apparent: the value of a highly trained critical care nursing workforce and the importance of research to understand the disease and identify effective treatments. Much research activity has therefore focused on the critical care domain. A pivotal figure to the conduct of this research has been that of the research nurse. Within this commentary, we highlight the contribution and value of the critical care-trained research nurse in paediatric intensive care (PIC) during COVID-19 and highlight that now is an opportune moment to reflect on nursing practice, identify potential improvements, and promote the growth of more nurse-led research.

## 2 | PIC COVID-19 RESPONSE

In March 2020, reflecting on the international situation, it was becoming clear that children were not as affected by the pandemic in numbers and severity, whereas adult critical care services were rapidly reaching capacity.<sup>1</sup> As with adult services, hospital bed capacity was maximized through the cancellation of elective surgery, and nurses were redeployed to support critical care provision. This included the redeployment of research nurses and an accompanying suspension of all non-COVID-19-related research. In April, there was an emerging picture of a paediatric-specific illness, showing features similar to Kawasaki disease, which was identified as Paediatric Inflammatory

Multisystem Syndrome-Temporally (PIMS-TS), associated with SARS-CoV-2.<sup>2</sup> Flagged by the Paediatric Intensive Care Society to international recognition, COVID-19-related studies were reviewed, and amendments were approved to allow the inclusion of COVID-positive paediatric patients and those demonstrating symptoms of PIMS-TS.<sup>3</sup> Critical care-trained research nurses in many units were deployed back to support the setup and conduct of research specifically related to this, thus recognizing the importance of timely research to enhance the understanding of a new phenomenon.<sup>4</sup>

## 3 | RESEARCH NURSING

The role of the research nurse is focused on research delivery, with responsibilities including the co-ordination of studies, screening, recruitment and obtaining informed consent, planning of investigations/interventions, monitoring participants, collecting data and reporting any adverse events.<sup>5,6</sup> Conducting research within PIC under "normal" conditions is challenging for several reasons. In most circumstances, the child is too unwell to participate in the consenting or assenting process. Obtaining informed consent from parents is challenging because of the difficulty of conveying information in a noisy, disruptive environment in time-critical situations and with high levels of parental anxiety.<sup>7</sup> Then, there are the additional challenges associated with conducting research during COVID-19, reflecting the anxiety for families of a diagnosis associated with COVID-19, the challenge of restricted visiting and the potential for parental exclusion if parents are symptomatic, and the wearing of personal protective equipment (PPE) impairing communication, as well as the fact that children and young people with PIMS-TS are often under the care of multiple speciality teams. In addition, patients are often eligible for multiple research studies, requiring the provision of multiple

participant information sheets and the challenge of discussing and obtaining consent for several studies and case reporting.

Like many other intensive care units, our PIC has an embedded research nurse team—PIC-trained nurses in secondment or permanent research nurse posts to facilitate research delivery on PIC. The team is familiar with the PIC environment, the staff, and context-specific practices and has advanced communication training about research within the context of critical care. Having been redeployed back to full-time clinical work, the team was also familiar with the changes from standard care provision and confident in infection control and PPE requirements. It was therefore well placed to support research activity and assume a co-ordination role for PIMS-TS research, with a focus on timely communication, synchronization of activities, and advocating for families. Successful clinical research has been identified as being dependent on good working relationships between research and clinical teams.<sup>8</sup> Therefore, efforts to minimize the burden on clinical teams were also important, not only to ensure adherence to study protocols but also to reduce additional demands on teams that were working in extremely challenging circumstances amid uncertainties of a new disease. Key research nurse activities included: review of study eligibility with multiple specialty teams; provision of participant information sheets and discussions about research opportunities, with sufficient time to facilitate decision-making; obtaining informed consent; liaison with clinical areas to ensure timely collection of samples; and using the correct sampling bottles, labels, and forms. The team worked flexibly, altering shift patterns to fit with patterns of research activity and attending virtual daily multidisciplinary meetings to monitor potentially eligible patients across the region.

The result has been the successful recruitment of patients to several COVID-19-related research studies and a contribution to understanding more about the impact on children and young people.<sup>9</sup> The next challenge for the team will be to balance the COVID-19/PIMS-TS studies with the resumption of non-COVID-19 research. Clinical research has never been more visible and relevant, and there is huge positivity across the society about the impact that research has on clinical care.<sup>10</sup> In a year dedicated to recognizing and celebrating the value of the nurse and midwife,<sup>11</sup> we want to build on this positivity to highlight a less visible, but no less important, role—that of the research nurse. However, this is also an opportunity for PIC unit nurses to consider how they could contribute to new knowledge and undertake research themselves.

## 4 | NURSING RESEARCH

The term “nurse researcher” has often been used interchangeably with “research nurse”; however, this role reflects an individual who has undertaken further academic qualifications, develops his or her own research ideas and proposals, applies for research funding, conducts research independently, leads the project approval process, takes responsibility for study conduct, analyses results, and disseminates findings with the aim of advancing nursing science.<sup>5</sup> Historically,

there has been a lack of clinical academic career opportunities for nurses and midwives, and this situation has been slow to change. In 2018, the proportion of clinical academic nurses, midwives, and allied health professionals was less than 0.1% of the workforce, in contrast to 4.6% of the medical consultant workforce.<sup>12</sup> Addressing this deficit is a key aim for the National Institute for Health Research, recognizing that a research-active nursing workforce contributes to improved clinical outcomes for patients, a more critical review of treatment options, effective utilization of resources, increased service user satisfaction, and the increased satisfaction and retention of nursing staff.<sup>13</sup> The pandemic challenged PIC practice in a multitude of ways. Nurses had to adapt to new patient cohorts, new colleagues redeployed from non-intensive care unit areas of practice, new models of working, new or significantly altered working environments, and challenges to delivering family-centred care in the ways that we would expect at times of acute illness and end of life.<sup>14</sup> As services start to resume, this is an opportune moment for the PIC nursing workforce to reflect on their experiences, positive and negative, and develop ideas or observations related to patient and staff experience, service delivery, or quality and safety into robust quality improvement, service evaluation, or research projects. With nurses at the front line of patient care, they are excellently placed to identify gaps in clinical practice and develop ideas and strategies for improving the health care needs of patients and the quality of care given to patients.<sup>15</sup> We urge all PIC nurses interested in conducting their own research to speak to their research teams, their managers, their Research and Development department, and the Paediatric Intensive Care Society Study Group (PICS SG) for further guidance on local and national opportunities. Despite being an expensive resource, associated with significant morbidity and mortality, PIC is a speciality with a sparse evidence base.<sup>7,16</sup> In the UK PIC community, there are a growing number of clinical academic nurses, but we must continue to talent spot and support others to expand this further.

## 5 | CONCLUSION

This is a call to PIC nurses to consider the opportunities both research nursing and nursing research can offer. This is a fantastic time to consider a research nurse position supporting critical care research delivery as COVID-19-related research continues and a diverse portfolio of new research reopens/opens. The knowledge and insight of a critical care background are hugely important in operationalizing and delivering research with patients, families, and the clinical teams. However, this is also a time to take stock and reflect on the impact of COVID-19. Now more than ever, the World Health Organization urges that nurses need to work to the full extent of their education and training.<sup>11</sup> We have all been forced to think and work differently, and we encourage PIC nurses to use this as a catalyst to drive change and take the first steps on a clinical academic pathway. Developing our future nurse researchers is vital; if you enhance nursing, you enhance health care.<sup>17</sup>

## CONFLICT OF INTEREST

Dr Julie Menzies is a National Institute for Health Research (NIHR) Senior Nurse and Midwife Research Leader. The views expressed in this article are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.

## ETHICS STATEMENT

In accordance with guidance from Health Research Authority, no ethical approval was required for this commentary.

## DATA AVAILABILITY STATEMENT

This is a commentary about the conduct of research on PICU. No data from any studies are reported within the paper; therefore, no data are available.

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