


REGULAR ARTICLE

Parental and staff experiences of restricted parental presence on a Neonatal Intensive Care Unit during COVID-19

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Abstract

Aim: The COVID-19 pandemic had a significant impact on parental presence in the Neonatal Intensive Care Unit (NICU) during the first wave. The NICU team at the Rosie Hospital, Cambridge, endeavoured to explore the impact on parent and staff experiences of supporting parents throughout the period when visiting was restricted, between 13th August and 11th September 2020.

Methods: Bespoke surveys were designed following the first lockdown to gather information on the impact on staff and parents. The questions were developed in the context of initial observations and conversations with staff and parents.

Results: The findings of this study have illustrated the extent of the restrictions on parental wellbeing and mood, with the restrictions having had an adverse effect on these. In addition, the findings illustrate the adverse effect that the parents reported due to the restricted presence in terms of their babies' wellbeing, parent-infant bonding, partners' wellbeing, parental confidence, the ability to breastfeed confidently and parents' access to the medical teams.

Conclusion: The findings of this study have a number of clinical implications for parents and staff. Namely, the data supported the decision not to close NICU again during the second and third waves.

KEYWORDS

COVID-19, NICU, psychological distress, visiting restrictions

1 | PATIENTS AND METHODS

On the 23rd March 2020, the United Kingdom was put into lockdown following an increase in infection and death rates caused by the COVID-19 global pandemic. Hospitals in the UK had to make the difficult decision to significantly reduce the risk of spreading

the disease. Therefore, parental and extended family access was reduced on some Neonatal Intensive Care Units (NICUs) across the UK. The NICU at the Rosie, Addenbrooke's Hospital, Cambridge, is a tertiary neonatal intensive care unit and accepts high-risk pregnancies and babies from the East of England Operational Delivery Network (ODN), likely to require neonatal intensive care. The NICU

Abbreviations: BAPM, British Association of Perinatal Medicine; COVID-19, coronavirus disease; eg, for example; NHS, National Health Service; NICU, Neonatal Intensive Care Unit; ODN, Operational Delivery Network; PPE, personal protective equipment; RCPCH, Royal College of Paediatrics and Child Health; UK, United Kingdom.

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usually allows both parents to be present 24 hours a day. However, between March 2020 and September 2020 the hospital executive, implementing government and NHSE guidance, reduced parental presence to one parent, pre-booked, 2 hours per day, which meant that both parents were not able to visit at the same time.

To date, there have been few studies of the implications of changes to parental presence on the NICU parents themselves, as well as staff, during the global pandemic.¹ One survey sought to understand parental presence in NICUs across the UK during COVID-19.² Seventeen NICUs responded to this survey and, overall, the survey demonstrated that parental access was variable across the UK, with 60% of units only allowing one parent at any time. The authors argued that restricting access in this way was not in keeping with the level of risk posed to babies or staff and suggest that these restrictions might have had a detrimental impact on parents.

Research has highlighted the importance of parent involvement in infant care in the NICU in order to improve the physical and emotional wellbeing outcomes for the baby, as well as for parents.³⁻⁸ However, the COVID-19 global pandemic meant that parents were not able to be present in the NICU for their baby/ies for more than two hours per day. This had significant implications for parental mental health, parent/infant bonding and infant development.⁶ As such, the absence of a parent from the NICU is likely to have had consequences for the baby/ies in terms of their developmental and psychological needs. The national neonatal charity, Bliss (2020),⁹ have stated that NICU parents should not feel as though they are visitors of their baby; however, the implications of restricted parental presence in the NICU during the COVID-19 pandemic can position parents to feel more like a visitor than a parent to their baby. Since the first wave of the pandemic, Bliss, alongside the British Association of Perinatal Medicine (BAPM) and the Royal College of Paediatrics and Child Health (RCPCH), have recommended that NICUs offer unrestricted access rights for parents.^{9,10}

Given the significant implications of parent involvement in infant care in the NICU in terms of helping their baby/ies development, it was hypothesised that the restricted parental access rights put in place due to the COVID-19 pandemic would have a detrimental impact on parental wellbeing, including increased parental stress and emotional wellbeing difficulties. The deleterious impact on parents of having a baby in NICU is well documented.¹¹⁻¹⁴ Taking into account the psychological distress when their baby/ies are in the NICU, together with the NICU visiting restrictions, it was anticipated that these factors together would increase the psychological vulnerability of parents in the NICU. However, there is a dearth of research on this, given the novelty of the COVID-19 pandemic.

2 | IMPACT ON STAFF

The levels of distress which parents experience in the NICU can lead to staff experiencing some challenging behaviours from parents.¹⁵ Further, NICU staff are often faced with having to care for some of the most sick babies in the ODN. They are frequently challenged with

Keynotes

- The findings of this study illustrate the extent of the adverse effect restrictions to NICU had.
- Name, the effect on parent's perceptions of their babies' wellbeing, parent-infant bonding, partners wellbeing, parental confidence, the ability to breastfeed confidently and parents' access to the medical teams.
- The data presented in this paper supported the decision not to close NICU again during the second and third waves of the COVID-19 pandemic.

ethical dilemmas and exposed to traumatic experiences, and staff are therefore at risk of traumatic stress and developing burnout.¹⁶⁻¹⁹

The restricted parental presence put in place in response to the COVID-19 pandemic can not only be expected to affect the wellbeing of parents and babies in NICU, it is also likely to have a significant impact on staff. Staff on the NICU might feel powerless to support parents as they do not see them as often and do not have the chance to build a relationship.²⁰ However, to date, there has been a dearth of research focussing on the experiences of NICU staff during a global pandemic. A study by Ffrench-O'Carroll et al., (2021) on staff working on adult and paediatric intensive care units throughout the pandemic found that the most common stressors experienced by staff were about passing COVID-19 to families and shortages of personal protective equipment (PPE).²¹ These stress factors were found to place ICU staff at risk of post-traumatic stress disorder. It is, therefore, possible that the staff working on our NICU could have been vulnerable to experiencing similar distress to those cited in the Ffrench-O'Carroll et al. (2021) study.²¹

Due to the observed psychological distress which the COVID-19 pandemic has brought to families and staff in the NICU, together with the impact of the restricted parental presence in the first wave, we set out to develop a questionnaire for staff and parents to explore how much of an impact this was having at the time. We did this in order to help us to make sense of how best we could be supporting parents and staff, as well as informing hospital policy and governance in relation to the COVID-19 restrictions. The following sections will reflect on why and how we developed these questionnaires, as well as the findings and clinical implications.

3 | METHOD

A bespoke survey was pilot tested and completed by parents and staff following the first COVID-19 lockdown to gather more information on the impact of change to parental presence on one level 3 NICU. Following the pilot, the survey was amended following staff and parental feedback. It was then sent out to all families and staff in the NICU during the first COVID-19 lock down.

4 | PARTICIPANTS

One survey was completed by staff in the NICU (N = 56), and one survey was completed by parents of babies currently in the NICU or had a baby admitted to NICU while COVID-19 restrictions were in place (N = 50). One or both parents were invited to take part in the survey.

5 | PROCEDURE

The staff survey was approved through the hospital Trust's quality and safety team (Reference number: PRN9113), and the parent survey was approved by the hospital Trust's Patient Experience team.

5.1 | Staff survey

Once approval was in place, an email was sent to all staff working in NICU. The survey could be completed by any staff member from the NICU (eg doctor, nurse, allied health care professional, support staff or administrative staff). The survey was completed through Survey Monkey and was open for 3 weeks in March 2020. Data were collected anonymously, and no personal information was collected. Staff were informed on the front page that findings might be written up and published, and consent was assumed to be agreed if staff continued to the survey.

5.2 | Parent survey

Parents who had a baby in the NICU while restrictions were in place between March-September 2020 were invited to take part. Parents of babies who had died in the NICU were not sent a letter to take part in the study, due to the sensitive nature of this. Some parents had babies who were still in the NICU when they completed the survey and other parents had babies who had been discharged home or to another hospital. Some of the parents who completed the survey experienced full parental access on NICU prior to COVID-19 and then a reduction of only 2 hours of parental presence per day. Some parents experienced restricted access only as their baby was/babies were admitted to NICU during the COVID-19 pandemic.

Parents of babies currently in the NICU were informed about the study through posters on the unit and through staff. The posters had a summary of what the survey entailed with an online link that parents could complete at any time (either while on the unit or at home). Parents of babies who had been discharged were sent a letter with a summary of the study and the online link included. As above, anonymous data were collected and consent was agreed through carrying on with the survey after they had read the information about the survey. The survey was completed through Civica and was completed between August and September 2020.

6 | MEASURES

Both sets of survey questions were developed by the NICU clinical psychology team in collaboration with the NICU nursing and medical team. The questions were developed in the context of initial observations and conversations with families and staff and the impact of restricted parental presence. Relevant literature was also used to help develop questions, such as research on parent's wellbeing and babies' developmental needs while in special care.³⁻⁸

6.1 | Parent survey

The parent survey included a mix of open-ended and closed questions, including Likert scale questions (not at all, not very much, somewhat, very much and extremely). The questions included demographic questions (eg length of stay and type visiting access) and covered the key themes of wellbeing, developmental care, health of baby, practical considerations and communication of visiting access. There were 16 questions overall. Please see Appendix S1.

6.2 | Staff survey

The staff survey questions included demographic questions (eg job role, if they had been re-deployed from other areas within the trust or deployed to cover shift in adult critical care) and a mix of questions that were open-ended and closed questions, including Likert scale questions (Strongly agree, somewhat agree, neither agree or disagree, disagree and strongly disagree). The staff survey included questions related to: communication, family centred care, parents' wellbeing, their views on restrictions, ideas for how it could be different. There were 10 questions overall. Please see Appendix S2.

7 | RESULTS

7.1 | NICU parents

A total of N = 50 parents completed the restricted parental presence survey, representing a response rate of 35%. Of these responses, 35% were respondents from families who had a baby currently on the unit, and 65% were families whose baby had been on the unit when the restricted parental access were first introduced and were since discharged home at the time of survey submission. There was a high attrition rate in terms of parents completing some questions and missing out others; therefore, the response rate is not consistent throughout for all 50 participants (see Table 1).

The findings from the survey suggested that 72% of the NICU parents agreed that the restricted parental presence did have a significant impact on their ability to form a relationship with their baby. The parents reflected on the restrictions leaving them feeling 'exhausted and stressed'. The parents agreed (65%) that the restricted

TABLE 1 Parent responses to survey

Variable	Not at all % (n)	Not very much % (n)	Somewhat % (n)	Very much % (n)	Extremely % (n)	Range between somewhat, very much and extremely (%)
Relationship with my baby	7 (2)	21 (6)	17 (5)	31 (9) ^a	24 (7)	72
Partner meeting baby	31 (9)	3 (1)	21 (6)	10 (3)	34 (10) ^a	65
Overall Wellbeing	7 (2)	3 (1)	17 (5)	28 (8)	45 (13) ^a	90
Confidence in parenting reduced	7 (2)	17 (5)	31 (9) ^a	21 (6)	24 (7)	76
Establishing breastfeeding	17 (4)	4 (1)	22 (5)	13 (3)	43 (10) ^a	78
Impact on mood	7 (2)	3 (1)	14 (4)	14 (4)	62 (18) ^a	90
Anxiety	3 (1)	17 (5)	7 (2)	14 (4)	59 (17) ^a	80
Wider family's emotional wellbeing	3 (1)	10 (3)	17 (5)	24 (7)	45 (13) ^a	86
Harder to communicate with NICU team	25 (7)	7 (2)	32 (9) ^a	11 (3)	25 (7)	68
Harder to understand baby/ies health condition	10 (3)	10 (3)	33 (10) ^a	20 (6)	27 (8)	80
Baby/ies wellbeing	10 (3)	30 (9) ^a	23 (7)	20 (6)	17 (5)	60

^aHighest score in variable examined in survey out of all of the variables.

parental presence had a negative impact on their partner being able to meet their baby. The mothers of NICU babies that completed the survey commented on the impact of the restrictions on their partners. The restrictions meant that partners often sacrificed time with their baby for their baby's mother to be able to visit. This led to many mothers expressing that they thought this had had an impact on their partner's bond and confidence in parenting their baby once they were home.

A total of 90% of parents noticed that the restrictions had an adverse effect on their psychological wellbeing. In terms of their perceived impact on their baby's wellbeing, 60% felt that the restrictions had an impact on this. Of the parents that completed the survey, 76% rated an impact on their confidence in parenting in that their confidence felt reduced. Further, 78% felt that they were not able to establish breast feeding correctly. Parents described the logistics of bonding through breastfeeding and skin to skin being a significant challenge in a 2-hour window.

They particularly felt that trying to align access times with their baby's time of being awake and a time when nursing staff were able to support them as a challenge. Many parents showed understanding of the need to alter some practice during the pandemic however many also pleaded senior managers to consider the detrimental impact the absence of parent-baby bonding opportunities was having, when balanced with the risks of contracting COVID-19.

A total of 90% of the NICU parents that completed the survey agreed that the restricted parental presence had a negative impact on their mood, with 80% reporting experiencing anxiety. A high number of parents (86%) noticed that it had an adverse effect on their wider family's emotional wellbeing. Parents reflected on the heightened need for psychological support on the NICU which, due to the restrictions of COVID-19, felt absent at such a devastating time for the majority of parents. They agreed (68%) that they found it harder to communicate effectively with the NICU team due to not being able to visit the unit because of the restrictions and 80% felt that it was harder to understand their baby/ies health condition. A total of 60% of parents felt that the restricted parental presence impacted on their baby/ies wellbeing.

7.2 | Qualitative experiences

The survey also enabled parents to share their qualitative experiences of the restrictions. The data from their comments indicated themes of trauma and psychological distress. Parents reported feeling devastated, heartbroken and powerless, which led to implications for their relationships with staff. Some described the separation from their baby to be the 'most distressing experience' of their lives. Some parents reported that they were not able to sleep or look after themselves during the visiting restrictions, due to feelings of guilt and helplessness about their baby being in the NICU and not being able to see them and comfort them during procedures. Mothers had experienced most of the labour on their own, separated from their partner and were then separated

from their baby which was extremely distressing for them. There appeared to be a shared experience across mothers in terms of their concern for their partners not having had as much time with their baby in the NICU and noticing the impact on parental bonding and confidence post-discharge. Some parents felt as though they were positioned as more of a 'visitor' rather than a parent to their baby, which left them feeling helpless and disempowered. A further shared experience was the impact on breast feeding in terms of mothers not feeling able to effectively do this during the restrictions.

7.3 | NICU staff

The restricted parental presence survey was also sent out to the NICU team (N = 282) to ascertain their experiences of the restrictions. There was a 20% response rate (n = 56). Of the 56 responses, 12% were doctors, 73% were nurses, 6% were allied health professionals and 9% had other job roles (genetic counsellor, NICU assistant, support staff). Overall, the findings suggest that 68% of staff agreed that the restricted parental presence was a necessary precaution in order to protect the babies and staff on the unit. A total of 93% of staff agreed that the restricted parental presence had a negative on parental wellbeing. Some staff suggested that parents should not be considered as 'visitors' but rather an integral part of their baby's development as a neonate, particularly with regards to parent-infant bonding and promoting milk supply. Most of the staff (59%) felt that the restrictions did not appear to impact on their ability to engage parents in family-centred care with their baby/ies. In terms of communication with parents, 53% of staff felt that the restrictions made it more a more challenging experience overall (see Figure 1).

The survey data appear to indicate that staff felt able to be open and honest about their views on the visiting restrictions. Most staff

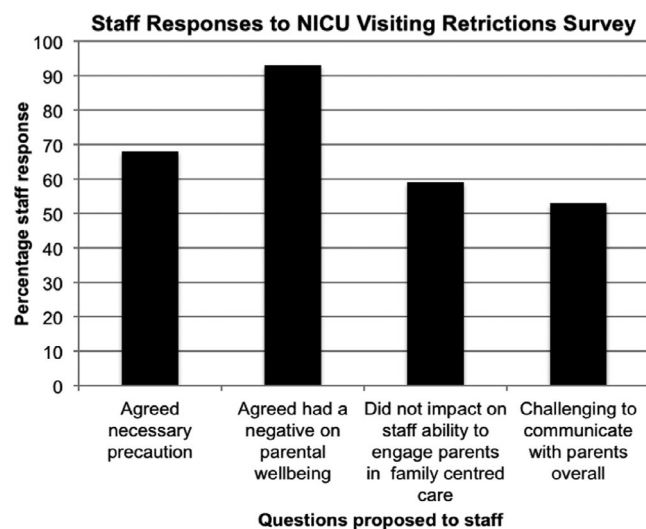


FIGURE 1 Staff responses to the NICU restricted parental presence survey

agreed that it was a necessary measure in order to protect the welfare of the babies as well as staff on the unit. Some staff described feeling concerned about how parents were experiencing the restrictions, in terms of hoping that parents would not feel as though they were being positioned as visitors, rather than parents to their baby/ies. Staff reported feeling 'safe' and protected by the measures put in place; however, many staff wondered about the impact of the restrictions on parent/infant bonding. Staff reported feeling sad for the families, in terms of parents not being able to visit their baby as often as they wanted to, and also a sadness for the wider family such as siblings and other integral family members not being able to visit. Staff also wondered about the longer-term impact on babies. There also appeared to be a theme of 'intensity' which staff felt with parents when they were present on NICU with their baby and that nurses felt under pressure to offer more 1:1 care with parents during their allocated access slot.

The survey enabled staff to give their opinion regarding what they thought could have been done to improve the experience of the restricted parental presence for families. Staff felt that extending the access hours for mothers and fathers was important in order to promote bonding and for helping with the baby/ies development. Other ideas included the use of transparent face masks, staggered visiting slots (in terms of offering longer access across staggered times slots) and monitoring of parent's temperatures and hand washing techniques as further ideas to help with managing the restrictions. There was a strong consensus from staff for both parents to be able to be present at all times.

8 | DISCUSSION

The COVID-19 global pandemic has had significant implications for NICU parents and staff in terms of the restricted parental presence that were put in place during the first wave, from March 2020. It therefore felt important to explore the impact on parents, as well as to ascertain the NICU staff experiences of supporting parents throughout the restrictions. The findings of this study have illustrated the extent of the impact the restrictions had on parental wellbeing and mood. These variables were some of the highest percentage of responses, indicating how strongly parents felt their mood and wellbeing were affected. Parents also felt that the restrictions impacted on their baby's wellbeing. The findings of this study have also highlighted that the restrictions meant that parents felt a significant impact on their ability to form a relationship with their baby. Mothers felt that there was a negative impact on their partner being able to meet their baby, which also had a longer-term impact on paternal bonding and parental confidence when baby was able to come home. The ability to breastfeed confidently was also something which was hard for mothers during the pandemic, and parents also felt that the restrictions impacted on their communication with the NICU team.

The NICU staff that participated in this study felt that although the restricted parental presence was necessary, they were

concerned about the impact on parental wellbeing. The restrictions made it challenging for staff to communicate with parents; however, staff did feel that they were still able to engage parents in family-centred care when they were present.

The findings of this study are consistent with the literature on parental wellbeing for NICU parents and infant wellbeing.^{3-8,11-14} Notwithstanding this, the findings are helpful in the sense that they add to the evidence base in terms of understanding the emotional impact for NICU parents going through a global pandemic, as this is currently in its infancy.¹ The current study also compliments the findings of Bainter et al. (2020), in that staff also experienced difficulties feeling able to fully communicate with parents during the first wave because of the visiting restrictions.²⁰ Furthermore, this study adds to a recent survey conducted by Fonfe et al. (2021), in which the authors argue that restricted parental access in NICU could have a detrimental impact on psychological wellbeing on parents and babies.²

Although the current study has been helpful in understanding the impact of the restricted parental presence on NICU parents and in ascertaining staff experiences, it has a number of limitations. The data from the parent sample are biased by gender, given that the majority of participants were mothers. The sample size is small, which could have led to an inflated type-1 error of the findings. There was a high rate of missing data where respondents did not answer all items in the survey, which meant that not all questions were answered by the whole sample. Detailed demographic data relating to the parents and their baby/ies were not collected, nor were any validated and reliable outcome measures on perinatal mental health and trauma used. Further, the survey itself did not use reliable and valid tools to assess for parental distress. It would be helpful for any future studies to consider increasing their sample size and including psychological outcome measures to enable a richer understanding on parent's welfare due to NICU visiting restrictions.

In addition to this, we have not followed up the longer-term effects on parental wellbeing from baseline, nor have we followed up the longer-term impact on how the parents and families coped once discharged home. Given that the findings indicated a negative impact on the wider family, further research may also benefit from exploring outcomes for other family members, such as siblings, grandparents and other carers. Although this study was open to both mothers and fathers, few fathers participated. Further research on the impact on NICU fathers of the global pandemic and restricted parental presence would also be of use, given that NICU fathers are often under-researched.^{11,14} The staff data were limited by sample size, with a small response rate from the overall NICU team. The majority of responses were from nursing colleagues, with few from doctors and other NICU members of staff. This has implications for response bias. The literature would benefit from further evaluation which builds from this study, in terms of future research into the emotional impact of the pandemic on NICU staff.

8.1 | Implications for clinical practice

The findings of this study had a number of significant clinical implications for parents and staff in the NICU. The data collected from the survey were made available to senior management on the 13th October 2020 and were helpful in informing senior management of the psychological impact on parents and the impact this had on staff. The data supported the decision not to close NICU again when cases of COVID-19 rose dramatically again over the winter of 2020–2021 and into the third wave. This was helpful to the wider NICU team and senior management. The current authors plan to repeat the surveys in different lock down levels, as well as to follow-up this cohort to explore impact of psychological distress in further future studies.

This study has illustrated the impact of restricted parental presence for NICU parents and has also revealed some of the challenges faced by NICU staff during the pandemic. As discussed above, further research is needed to understand the longer-term psychological impact of restricted parental presence on the emotional wellbeing of both NICU parents, as well as their wider family. It may be helpful for NICUs to consider psychology and counselling provision to enable screening for distress and mental health difficulties in the midst of a global pandemic for mothers as well as fathers. This could help parents to feel recognised and validated for any distress which restricted parental presence is adding on top of the distress already caused by their baby/ies being in the NICU. Fonfe et al. (2021) advocate that parents should be able to spend more time with their babies, in a safe way, and have made some useful suggestions that NICUs could use in the future.² For example, they suggest ensuring parents on the unit are well educated in infection control procedures. It is recommended that clinicians and service leads take account of research papers, such as this, on this topic and consider changes to policies that could be adapted to maintain safe visiting access during a pandemic.

In line with the above, it may also be helpful for NICUs to encourage staff to talk openly and honestly with one another regarding their experiences of access restrictions, in terms not only of how it affects them but, their ability to support parents. Evidence suggests that levels of distress which parents experience in the NICU can lead to staff experiencing some challenging behaviours from parents.¹⁵ Furthermore, NICU staff are frequently challenged with ethical dilemmas and traumatic experiences and are therefore at risk of developing symptoms of traumatic stress and burnout.¹⁶⁻¹⁹ It is therefore reasonable to suggest that the offer of regular debriefs for staff could enable them to process their experiences of restricted parental presence.

In conclusion, this study has provided a helpful insight into the experiences of NICU parents and staff following the institution of restricted parental presence in the first wave of the pandemic in the unit where the study was conducted. Further research would benefit from exploring the impact on staff and what staff feel they need in order to feel adequately supported in their role, as well as what they feel is needed to support parents. From a governance point of view,

it could be helpful for other maternity wards and NICUs to carry out a similar study to scope what has been helpful and less helpful from imposing restricted parental presence for parents and the extended family. This would enable senior management and decision-makers to understand the wider impact of restricted parental presence on patients as well as staff.

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CONFLICT OF INTEREST

We have no conflicts of interest to disclose.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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