COVID-19: IMPACT ON NEONATAL SERVICES

The consequences of the pandemic for babies and their families must not be overlooked, argues Tamsyn Crane

Since the first cases of the novel coronavirus were seen in Wuhan, China, in December 2019, the whole world has been reeling from the effects of this highly infectious new virus.

Healthcare services across the UK have been impacted in many significant ways: the cancellation of non-emergency services; the admission and treatment of thousands of patients with COVID-19, many of whom were incredibly sick and required intensive care; a massive increase in deaths, either directly or indirectly caused by coronavirus; significant changes in work practices regarding the use of personal protective equipment (PPE) and social distancing; substantial staff sickness and absence for isolation or shielding purposes; and the effect of the global pandemic on the mental health of the entire population, patients and staff included.

Every aspect of working within the NHS has changed immeasurably—the hospital environment in which neonatal units (NNUs) around the country are based is not the same place to work that it once was.

There have been babies that have died and have had a positive COVID-19 test result; however, it is not possibly to directly attribute these deaths to coronavirus infection. It does appear, however, that we have been successful at keeping COVID-19 out of neonatal intensive care units (NICUs)—there is currently no published report of SARS-CoV-2 transmission within a NNU setting. This is likely because of the already extremely vigilant policies on the prevention of infection to protect this extremely vulnerable population.

PREVALENCE AND EFFECTS OF COVID-19 INFECTION IN NEONATES

In many ways, neonatal services are considered a low-risk and, therefore, relatively unaffected specialty. It is generally acknowledged that the prevalence of infection with SARS-CoV-2 in children is low, and that those who are infected with the virus have a mild course of illness or are asymptomatic; however, these conclusions are drawn from limited data. In China, approximately 10% of neonates and infants with COVID-19 have developed severe disease symptoms, which is a higher proportion than in any other paediatric age group.

There is also little evidence around how infection with COVID-19 impacts the condition of an already sick or preterm infant, whose immune systems are immature and compromised.

COVID-19 INFECTION IN PREGNANT WOMEN

Currently, there is no good-quality evidence that there is an increased risk of severe illness or complications due to infection with COVID-19 in pregnant women compared with healthy non-pregnant women. However, the
effects of antenatal COVID-19 infection on the fetus are less well understood. Since the start of the pandemic, hundreds of pregnant women have been reported to be COVID-19-positive, either with minor symptoms or asymptomatic. So far, there is no conclusive evidence of vertical transmission from mother to baby perinatally. In the majority of these cases, the newborn has both tested negative and not been unwell; however, the reliability of testing in newborns is uncertain, with a risk of both false-negative and false-positive results.

There does seem to have been an increase in the prevalence of preterm birth among COVID-19-positive pregnant women, although this may not be directly causative; it is likely that these were iatrogenic preterm deliveries because of maternal infection. The British Association of Perinatal Medicine (BAPM) states that, despite earlier concerns, perinatal transmission of SARS-CoV-2 is unlikely if correct hygiene precautions are followed.

**IMPACT OF THE PANDEMIC ON NEONATAL SERVICES**

So, if there is not a significant risk of infection in this population, what are the effects of the pandemic on neonatal services and the families that use them? The most discernible impacts have been on the restriction of parental and family visits and, in turn, the limitation of physical contact with their babies. When the first national lockdown was introduced, NHS trusts nationwide limited visiting policies to the bare minimum; for most adult departments, this meant strictly no visitors. Most paediatric units were allowing one parent to visit, as a child’s guardian is necessary for consent purposes. In addition, there are legal implications: the United Nations Convention on the Rights of the Child states that ‘a child shall not be separated from his or her parents against their will’. The situation in paediatric units is clearly different from that of an adult patient being visited by their family members. However, as has historically been the case, the NNUs adopted a different position.

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**PARENTS ARE NOT VISITORS, BUT PARTNERS IN THEIR BABY’S CARE**

As a profession, we are still recovering from the early 1900s idea of a newborn nursery, in which babies were taken from their parents and looked after by nurses. It wasn’t until the 1980s that this was no longer considered acceptable practice. The point of view that parents are just visitors lingers in neonatal settings, and this was evident in the decisions made regarding ‘visiting’ during the coronavirus outbreak. Initially, a large proportion of NNUs put restrictions on either the length of time that parents were able to visit for, or stated that only one parent could visit at a time or only one parent could visit full stop.

My most difficult memory of the COVID-19 outbreak was having to tell a new, young mum and dad that they had to choose which of them would visit their sick baby in the NICU until she was able to go home—it was heartbreaking. There were also incidences of parental visits being stopped entirely, although fortunately these policies were in place for less than 24 hours. These were difficult and unprecedented times. It was soon established by Bliss, the charity for babies born premature or sick, that there was no adequate reason for parental visits to be prohibited, and that the negative implications of doing so were of great consequence. This message was echoed by the BAPM, which declared: ‘it is essential that the mother and her partner are never considered to be visitors within the neonatal unit—they are partners in their baby’s care, and their presence should be encouraged’.

**VARIATION IN VISITING POLICIES AROUND THE COUNTRY**

That said, there is still great variation in what NNUs around the country are doing in terms of restrictions on
The implications of a reduction in breastfeeding rates should not be overlooked

Parental visits. The policies vary from no restrictions, to an enforced time limit, to one parent at a time. Clearly, these decisions are not made lightly, and have been adopted in the best interests of the babies, their families, and the staff caring for them. The specific limitations prescribed also take into account the individual unit’s footprint, footfall, workload, and staffing numbers, as these will contribute to the capacity to socially distance and provide safe, effective care. The visiting policies also vary in terms of whether parents are asked to wear PPE during their visit (for example masks and aprons) and if they are permitted to have their babies out of their cot or incubator for skin-to-skin care.

There is an abundance of evidence to show the positive effects of skin-to-skin contact with parents on the wellbeing of both the infant and the parents. Skin-to-skin contact has been shown to increase parent–infant bonding and attachment, and ‘kangaroo care’ (holding an infant in an upright position, skin-to-skin, against the chest of the parent) is known to help improve breast milk production and the establishment of breastfeeding. Skin-to-skin contact has also been shown to decrease variation in heart and respiratory rates, improve oxygenation, and lead to more stable skin and core temperatures in the neonate. Restricting the practice of kangaroo care in the NNU will prevent the significant positive effects described here.

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As well as limited skin-to-skin contact, have on these children, their future attachments, and their ability to form loving relationships; combined with the massive reduction in opportunities to see people’s faces, facial expressions, and lip movement behind surgical masks, it may lead to a generation of children who struggle with attachment and communication.

EFFECTS ON BREASTFEEDING

The other important consequence of implementing these restrictions is their enormous negative impact on the rates of establishment and continuation of breastfeeding. Both within NNUs and in the population at large, breastfeeding rates have taken a substantial hit. Lockdown constraints have prevented mothers from seeking support with breastfeeding difficulties, and many services have been unavailable. Healthcare workers, both in maternity and neonatal settings, may have misunderstood breastfeeding policies around coronavirus, and failed to support breastfeeding practices. The reduction in quality time that mothers have been able to spend visiting their babies and holding them will have made the breastfeeding journey even more challenging than it already is for the parents of babies in NICUs. The long-term health benefits of breastfeeding are well established, and the implications of this reduction in breastfeeding rates on the future health of these babies should not be overlooked.

CONCLUSION

Although the prevalence and risk of severe symptoms of COVID-19 infection are considered to be low in children and there is no evidence of vertical transmission between mother and fetus, the COVID-19 pandemic has impacted neonatal services and the infants and families that rely on them. The increased anxiety and cautiousness with regard to cross-infection during the COVID-19 pandemic are completely
understandable. However, we need to ensure that the impact of COVID-19 on global health status will not last longer than the virus itself. SM

REFERENCES