Conclusion In our analysis, we noted that paracetamol was preferred to ibuprofen due to our success in treating (86% vs 43%) and safety profile (Nil vs 29%) in preterm babies. We analyzed the safety profile of paracetamol with regular levels and liver function and only two (9%) babies did not require dose changes to maintain the therapeutic levels emphasizing the importance of checking levels.

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1251 TRIALLING A NEW METHOD OF ADMINISTERING NASAL CPAP IN THE DELIVERY ROOM FOR PRETERM INFANTS

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Aims Providing continuous positive airway pressure (CPAP) from birth in preterm infants ≤32 weeks gestation has been shown to reduce the need for intubation and improve respiratory outcomes.[1] Delivering consistent positive end expiratory pressure (PEEP) via facemask at delivery can be a challenge due to mask leak and possible airway occlusion. To combat these issues, some units use a cut endotracheal tube (ETT) to provide short prong nasal CPAP at delivery and for transfer to the neonatal unit. This is invasive and likely uncomfortable for the baby. This was the method of choice for providing delivery room PEEP in preterm infants in our unit.

We trialled a method using a circuit specifically designed to provide CPAP via nasal mask. We hypothesised that this method would provide more comfortable and equally effective PEEP in the delivery room, and may help us to facilitate delivery room cuddles.

Methods I identified that babies with a gestational age of ≤32 weeks were likely to benefit most from this method. I created an instructional video and photographic guide on how to set up and use the equipment. This was shared with the medical and nursing teaI designed a feedback form and collected timely feedback from nursing and medical staff. I did a preliminary trial over a three month period followed by a longer trial over a five month period.

Results In the preliminary trial we used five circuits. The mean gestation was 31 weeks (range 29-32 weeks). There was an 80% success rate in establishing a stable PEEP during stabilisation and transfer to the neonatal unit. Feedback showed that a higher gas flow rate was required to deliver the same PEEP compared to our usual circuits. When a circuit change was required in order to provide positive pressure ventilation, this was felt to be easy to do. The first trial used nasal masks from a different manufacturer to the circuits and these were, on occasion, found to have a loose fitting and unstable PEEP as a result.

In the second trial we used nine circuits. The mean gestation was 28 weeks (range 26-32 weeks). There was an 88% success rate of establishing a stable PEEP. In this trial we used hats and masks from the same manufacturer as the circuits. Feedback suggested that this resulted in more stable PEEP, as well as an increased stability of the baby to mask interface.

The feedback from this trial was overwhelmingly positive, and the method was even described as 'beautiful' by midwifery colleagues. Using the new method helped to facilitate delivery room cuddles for this group of babies.

Conclusion This nasal CPAP method appears to provide stable PEEP to preterm babies requiring CPAP from delivery. It is likely to be more comfortable than other methods and is facilitating us to provide delivery room cuddles. Following this successful trial and positive feedback, we plan to incorporate this into routine practice.

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1206 NEONATAL COMPLICATIONS OF SARS-COV-2 INFECTION IN THE UK: A PROSPECTIVE NATIONAL COHORT STUDY USING ACTIVE SURVEILLANCE

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Aims While there were no neonatal deaths recorded from SARS-CoV-2 infection in the first pandemic year, there is little known about the differing impacts new variants have on neonatal populations.

We set to describe the neonatal complications across three periods corresponding to the dominant SARS-CoV-2 variant in the UK: 1 March 2020 to 30 November 2020 ('wildtype'), 1 December 2020 to 15 May 2021 (Alpha), and 16 May 2021 to 15 December 2021 (Delta).

Methods From 1st March 2020 to the 15th December 2021 prospective neonatal data collection of hospitalised neonates with SARS-CoV-2 infection and babies born to mothers with COVID-19 and admitted for neonatal care was undertaken through the British Paediatric Surveillance Unit (BPSU).[1] From 1st March 2020 the UK Obstetric Surveillance System (UKOSS)[2,3] prospectively collected information about all pregnant women admitted to hospital with confirmed SARS-CoV-2. Both studies were adopted as urgent public health priority studies.

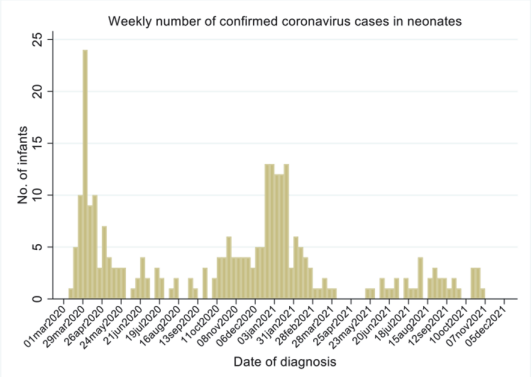
Neonatal deaths were attributed directly to SARS-CoV-2 if the treating paediatrician reported that SARS-CoV-2 contributed to the baby's death, and attributed indirectly if maternal SARS-CoV-2 infection was reported to have contributed to neonatal death (e.g. extreme preterm birth).

Results 836 BPSU cases notified during the study period. Complete data forms were available for 703 (84%) individual babies. Of these, 276 had confirmed SARS-CoV-2 infection. The weekly number of neonates admitted with confirmed SARS-CoV-2 by date of diagnosis is shown in figure 1.

During the surveillance period 9/268 (3%) were born <28 weeks gestational age, 33/268 (12%) 28-31 weeks, 64/268 (23%) 32-36 weeks, and 162/268 (59%) ≥37 weeks.

Gestational data were missing for 8 (3%) babies 182/251 babies (66%) were of white ethnicity, 47/251 (17%) Asian/British Asian, 18/251 (7%) 11 (4%) Black/Caribbean/African/Black British, 11/251 (4%) mixed, 3/251 (1%) other. Ethnicity data were missing for 15 (3%) of babies. 223 (81%) neonates were discharged home, 13 (5%) were transferred, and 7 babies had SARS-CoV-2 infection and died. Four of the deaths of babies who were born during the delta wave were directly attributable to SARS-CoV-2. Neonatal mortality in association with SARS-CoV-2 infection is described in table 1.

Figure 1: Weekly number of neonates admitted who have confirmed SARS-CoV-2 by date of diagnosis, UK, 1st March 2020 to 7th November 2021



Abstract 1206 Figure 1 Weekly number of neonates admitted who have confirmed SARS-CoV-2 by date of diagnosis, UK, 1st March 2020 to 7th November 2021

Abstract 1206 Table 1 Maternal and neonatal mortality in association with SARS-CoV-2 infection, UK 01/03/2020-31/10/2021

Table 1: Maternal and neonatal mortality in association with SARS-CoV-2 infection, UK 01/03/2020-31/10/2021

	Wild-type period (01/03/20-30/11/20)	Alpha period (01/12/20-15/05/21)	Delta period (16/05/21-15/12/21)
Live births*	512,425	313,143	448,372
Neonatal deaths directly or indirectly related to SARS-CoV-2 infection (Direct)	0 (0)	1 (0)	6 (4)
Neonatal Mortality Rate in association with COVID-19 per 100,000 live births (direct and indirect) (95% CI)	0 (0)	0.3 (0.01-1.8)	1.3 (0.5-2.9)

*Data for 2020 used to estimate live births in 2021, data for which are not yet available

Conclusion Using population level surveillance data we describe neonatal complications directly and indirectly attributable to SARS-CoV-2 infection during the first three pandemic waves. This study demonstrates the low risk to neonates despite the emergence of new variants. Continued surveillance will allow the impacts of new variants on the neonatal population to be characterised.

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1293 TIMELY TPN – A COMPARATIVE STUDY REVIEWING THE ADMINISTRATION OF TPN FOR PRETERM INFANTS FOLLOWING IMPLEMENTATION OF NICE GUIDELINES

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Aims Preterm infants are born with an immature gastrointestinal tract and less nutritional reserve, with the risk of postnatal growth failure and long term neurocognitive sequela if these needs are not addressed. Early administration of parenteral nutrition is recommended with regional guidelines using absolute criterion based around gestation or birthweight to determine the need for this form of nutrition. In 2020, NICE updated their guidance for administration of parental nutrition in preterm neonates, advocating a gestational cut-off of less than 31 weeks and introducing an 8 hour administration window. Our level 2 unit admits any baby with a gestation greater than 27 weeks, and this comparative study evaluates the management of these neonates before and after implementation of this guidance.

Methods Quantitative data was collected between 01/12/2019 till 30/9/2021, both pre and post local implementation of the new guidance. Enteral feeds were introduced and built up based upon standardised East of England regional feeding guidelines, and this was the same for both groups.

Forty-five neonates who were started on parenteral nutrition were identified and their records reviewed. Of these, twenty-three were excluded as they were ex-utero transfers or above the gestational age threshold.

Results Table 1 compares the management of infants born pre and post-implementation of the new guidance.

The results show that post implementation, parenteral nutrition and enteral feeds are started sooner. However there is no effect on time to reach full enteral feeds. Reassuringly, the 8 hour administration window has not led to any catheter associated infections.

Abstract 1293 Table 1 Summary of management of Infants required parental nutrition

Pre-Implementation of SOP 8 Infants *(3 Infants born "In Hours" vs. 5 Infants born "Out of Hours")*		Post-Implementation of SOP 14 Infants *(9 Infants born "In Hours" vs. 5 Infants born "Out of Hours")*	
Average Time to start PN "In Hours"	8-12hrs	Average Time to start PN "In Hours"	8hrs
Average Time to start PN "Out of Hours"	18-22hrs	Average Time to start PN "Out of Hours"	8-10hrs
Average Catheter Associated Infections	0%	Average Catheter Associated Infections	0%
Average Time to start feeds	24-36hrs	Average Time to start feeds	12-24hrs
Average Time to reach full feeds	5-6 days from birth	Average Time to reach full feeds	6-7 days from birth

Conclusion In summary, these results illustrate the early successes of the implemented pathway with a large proportion of infants receiving parenteral nutrition in a timely fashion. Although our study has limited numbers, there was no difference noted in time to reach full enteral feeds from when the parenteral nutrition was started. Further evaluation is required to determine the impact this guidance has on time to reach