Methods An anonymous electronic survey was composed and sent to all level 1 (ST1-3), level 2 (ST4-5) and level 3 (ST6-8) paediatric trainees working in a tertiary neonatal intensive care unit between August 2020 and February 2021, and again between August 2021 and February 2022. Data was then analysed using Microsoft Excel for reporting.

Results There were 16 respondents (52% response rate), 63% were level 1 paediatric trainees. 81% reported having only 1-3 opportunities to perform intubation over a 6-month post. Common perceived barriers to these opportunities were: (1) multiple staff seeking these opportunities; (2) fewer intubations occurring; (3) procedures being considered unsuitable for inexperienced staff.

Less than half (44%) of respondents reported that their intubation attempts were mostly successful (76-100% overall success rate [figure 1]). Only 1/4 of all respondents (25%) reported that their attempts were mostly successful on first attempt. Approximately 1/3 (31%) reported a success rate of 50% or less for all intubation attempts, and almost half (44%) of respondents reported first attempt success rate of 50% or less.

A five-point Likert scale was used to assess confidence around intubating term and preterm babies independently. Reported confidence in intubation was low amongst trainees [figure 2]. 44% indicated they were not at all confident intubating term infants, and almost 2/3 (63%) were not at all confident intubating preterm infants. The majority (88%) felt that further formal teaching of this procedure would be beneficial.

Conclusion This survey demonstrates that even in a busy level 3 NICU, most trainees have infrequent opportunities to learn and perform endotracheal intubation during a 6-month neonatal post. Subsequently, perceived first attempt success rates and confidence levels in performing this core procedure independently are strikingly low, and further training is desired. If neonatal intubation is to remain a mandatory skill for all paediatric trainees, the impetus in on level 3 neonatal units need to meet these training needs, and the introduction of a videolaryngoscope will help address this.

Aims With the declaration of the pandemic in March 2020, concerns on its impact on neonatal outcomes were raised. This study was conducted to compare neonatal diagnoses and outcomes during pre-COVID and COVID periods in a local neonatal unit (LNU) in the United Kingdom.

Methods A retrospective study was conducted between 1st January 2019 – 31st May 2021. Admissions into the neonatal/post-natal wards were screened via electronic record system. Data was categorised as pre-COVID (January 2019- March 2020, 15 months) and COVID periods (April 2020- May 2021, 14 months). Preterm births, congenital anomalies, hypoxic ischemic encephalopathy (HIE), deaths were included. P-value was calculated using Chi-square test, <0.05 was considered significant.

Results 8825 were the total births recorded. 1809 (20%) neonatal admissions were identified. 638 (7%) neonates were included in the analysis (based on inclusion criteria). Live births between pre-COVID and COVID periods were similar (median = 4412, p 0.99). Neonatal admissions during the COVID period were higher in comparison to pre-COVID (943 vs 866, p <0.01). No ethnical differences were observed between two periods (p 0.65). One preterm neonate at day 13 was COVID positive. On comparison of gestational ages (pre-COVID and COVID periods) - <27 weeks (0.2% vs 0.16%, p 0.56), 27-32 weeks (0.5% vs 1.3% p <0.01), 32-37 weeks (3.2% vs 5.4%, p<0.01). Congenital anomalies during pre-COVID and COVID periods (15% vs 10%, p 0.21) were the same. HIE in COVID period was higher in comparison to pre-COVID (0.06% vs 0.23%, p 0.03). Neonatal deaths were the same (0.09% vs 0.02%, p 0.2).

Conclusion This observational study captures a large number of neonatal births and outcomes during pre-COVID and two COVID peaks in the region. We report very low COVID test positivity rate in neonates in this cohort. We conclude that neonatal admissions during COVID increased due to preterm and complex term admissions. Interestingly, HIE incidence was high during COVID period, this needs further validation.