was no significant difference in age, parity, BMI, infant feeding method at discharge or pre-operative haemoglobin concentration between the groups. Four women were discharged within 12 h of delivery, each of whom had previous CSs. Mean age was 32 and BMI 28.7 kg/m 2. Two were breastfeeding at discharge, one had an emergency CS and blood loss ranged from 460 to 1200 mL.

Table: Patient characteristics by LoS with significant differences

	23hr stay n = 142	>23hr stay n=1911	*P* value
Gestation (weeks)	39.0 [39.0, 39.0]	39.0 [37.5, 39.0]	0.002
No. of previous CS			<0.001
0	46 (34%)	1086 (57%)	
1	73 (51%)	638 (33%)	
2	18 (13%)	156 (8.2%)	
>2	3 (2.1%)	31 (1.6%)	
Blood loss (mL)	600 [405,815]	650 [198, 1000]	0.027
Urgency of CS			<0.001
- Elective	108 (76%)	1023 (54%)	
- Emergency	34 (24%)	888 (46%)	

Data are median [IQR]; n (%).

Discussion: A significant proportion of women are leaving hospital before the recommended time. Those choosing to leave hospital earlier were more likely to have had a previous CS, a smaller blood loss and an elective procedure. This is in keeping with the expectation that this group would be better prepared ahead of surgery and have experienced minimal physiological disturbance. A small group of women returned home on the same day as surgery and further study is required to assess the safety of this. However, this analysis indicates that the guidance on length of stay may need to be revisited.

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O.5 COVID-19, category 1 caesarean sections, decision-to- delivery intervals and neonatal outcomes

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Introduction: During the COVID-19 pandemic, we highlighted a significant 50% reduction in general anaesthetic (GA) rates for caesarean section (CS).[1] NICE guidance standard recommends a decision-to-delivery interval (DDI) <30 min for category (cat) 1 CS.[1] We investigated whether the increased use of regional anaesthesia (RA) for cat 1 CS during the pandemic influenced DDI and neonatal outcomes.

Methods: Electronic records precisely looking at anaesthetic technique, DDI and composite neonatal outcomes (Apgar score 5 min <7, umbilical arterial pH < 7.10 and neonatal ICU (NICU) admission) of 193 women who delivered by cat 1 CS between 1April and 30June 2019 (Pre-C19) were reviewed and compared with 147 women having a cat 1 CS during a similar period in 2020 (Post-C19).

Results: GA rates were significantly reduced during C19 (Table). Overall DDI, number of CS with DDI <30 min and composite adverse neonatal outcomes were similar in both periods. DDI was significantly longer with spinal anaesthesia (SA). GA was significantly associated with worse composite adverse neonatal outcomes with lower Apgar scores, umbilical arterial and venous pH, and higher rates of NICU admissions.

Table: COVID-19 and cat 1 CS GA rates, DDI and neonatal outcomes

	Pre-C19 (n=193)	Post-C19 (n=147)	*P* value
General anaesthesia [a]	42/193 (21.8)	17/147 (11.6)	0.015
DDI (min) [b]	26 [19-30]	27 [22-30]	0.20
CS with DDI < 30 min [c]	135/193 (70)	99/147 (67.4)	0.64
Composite adverse neonatal outcomes [d]	51/196 (26)	37/153 (24.2)	0.71
Apgar 5 min <7 [e]	4/179 (2.2)	9/146 (6.2)	0.09
Umbilical artery pH <7.10 [f]	26/151 (17.2)	16/124 (12.9)	0.40
NICU admission [g]	35/196 (17.9)	29/153 (19)	0.89
Prematurity < 37 weeks [h]	33/191 (17.3)	22/147 (15)	0.66

Data are median [IQR] or proportion (%) and analysed using Mann-Whitney U, Kruskal- Wallis or Expanded Fisher Exact statistics with $P< 0.05$ as significant. [a]Risk Ratio 0.53 (0.32-0.88), $P=0.014$; Worse with SA [b, c]$P≤0.002$; Worse with GA [d,e,f,g,h], $P≤0.031$

Discussion: DDI and neonatal outcomes were not affected by reduced GA rates with COVID-19. The less favourable short- term neonatal outcomes associated with a GA in our audit are consistent with the published literature on cat 1 CS. Unless contraindicated, RA is generally preferable for cat 1 CS and our data support its increased use as reported during the COVID-19 pandemic.[2]

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O.6 Laboratory biomarkers of severe COVID-19 in pregnancy

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Introduction: Elevated D-dimer is associated with worse outcomes from COVID-19 in non-pregnant adults.[1] We analysed laboratory parameters of pregnant women with PCR swab positive COVID-19 to identify biomarkers associated with severe infection.

Methods: After ethical approval, anonymised observational data were collected on pregnant women admitted with PCR swab positive COVID-19. Infection was classified as mild (asymptomatic screen positive/mild symptomatic) or severe (requiring organ support). Information collected included symptoms, demographic and pregnancy

data, blood results and outcome data. Sequential women having planned caesarean section with negative COVID-19 PCR were controls.

Results: 34 women with PCR positive COVID-19 were recruited between 10 June–31 December 2020; 15 were asymptomatic. Median day of presentation from symptom onset was 3 (IQR, range) (3, 0–12). Control, mild and severe groups had median ages of 32, 30.5 and 31; gestation of 39, 38+6 and 31+5 and BMI of 27, 28, 28, respectively. The proportion of smokers was 12%, 11% and 17%; and diabetics 13%, 14% and 17%. BAME was 23%, 40% and 67%. In the severe group, 6 required supplemental oxygen, 1 progressed to invasive ventilation. None required renal support.

	Control n=78	Covid-19 PCR Swab positive		P value
		Mild n=28	Severe n=6	
Haemoglobin (g/L)	125.5 [115-130]	116 [109-126]	112 [110-114]	0.24
Platelets (x10⁹/L)	230.5 [189-257]	181.5 [156-260]	207 [165-268]	0.75
WCC (x10⁹/L)	9.4 [7.8-11.1]	8.4 [7.1-12.3]	6.4 [5.6-9.0]	0.13
Neutrophils (x10⁹/L)	6.4 [5.5-8.2]	6.1 [5.1-9.1]	4.9 [4.3-7.2]	0.35
Lymphocytes (x109/L)	1.75 [1.5-2.1]	1.5 [1.1-2.2]	0.95 [0.8-1.0]	<0.01
D-Dimer (µg/L)	1610 [1268-2305]	1654 [1092-1706]	1729 [1421-2216]	0.49
PT (s)	10.6 [10.3-11]	11 [10.4-11.3]	11.2 [11-12]	0.27
APTT (s)	26.8 [25.3-28.3]	30.6 [26.6-32.2]	31.6 [29.6-31.9]	0.45
CRP (mg/mL)		17 [6-30]	113 [73-123]	0.01
Creatinine (µmol/L)		51 [49-55]	46.5 [45.3-50]	0.06

Data are median [IQR]

Discussion: Lymphocytopenia and higher CRP at admission were associated with increased disease severity similar to non- pregnant adults. BAME women were over represented in the severe COVID-19 group. D-dimers were indistinguishable between mild and severe COVID-19 groups in contrast to non- pregnant adults so cannot be used as a predictive biomarker.

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O.7 iChew: Chewing gum to prevent nausea and vomiting after caesarean section under spinal anaesthesia

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Introduction: The incidence of post-operative nausea and vomiting (PONV) is common after caesarean delivery (CD), ranging from 21%-79%.1 PONV delays post-operative recovery, reduces patient satisfaction, and can affect the bonding between mother and baby. It also increases the risk of aspiration, which is a recognised cause of maternal death.1 Chewing gum has previously been shown to improve recovery of gastrointestinal function after abdominal surgery.2 Chewing gum was not inferior to ondansetron for treatment of PONV after general anaesthesia for laparoscopic breast surgery in female patients.3 In this randomised, controlled trial, we investigated whether the addition of regular chewing gum in addition to standard anti-emetic prophylaxis, reduced the incidence of PONV after CD.

Methods: After ethical approval 258 patients were randomised to either receive chewing gum in addition to standard therapy or to receive standard therapy alone. Standard therapy was defined as intraoperative IV ondansetron 4mg. The primary outcome was the incidence of PONV in the first 24 hours post- operatively. Secondary outcomes included the number of episodes and severity of PONV, the use of anti-emetics, the Obstetric Quality of Recovery (ObsQoR-11) score and patient satisfaction scores.

Results: There was no significant difference in the incidence of PONV between the chewing gum and standard therapy groups (41.4% v 36.9%, $P=0.461$). There was no difference in the number of patients requiring anti-emetic therapy (17.2% v 14.6%, $P=0.572$). The ObsQoR11 score was also similar between groups.

Discussion: This is the first RCT assessing the role of chewing gum in the prevention of nausea and vomiting after CD. The lack of prophylactic antiemetic effect demonstrated in this study, in the context of previously established improved recovery of gastro-intestinal function is suggestive of additional emetogenic mechanisms in this cohort of patients.2 Previously demonstrated non-inferiority of chewing gum when compared to ondansetron 4 mg for treatment of PONV in non- obstetric patients might not be applicable in the post-operative delivery context. Strengths of our study are high recruitment rate based on sample size calculation, protocol simplicity, complete-follow-up, familiarity with a low cost self-applicable intervention. A significant limitation is lack of blinding. In summary, the addition of chewing gum did not reduce the incidence of PONV after elective CD under spinal anaesthesia.

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O.8 Operator risk factors for accidental dural puncture rate in obstetrics

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Introduction: Accidental dural puncture (ADP) is a common complication of epidural analgesia with a reported incidence of 1.2%.[1] Risk factors relating to needle characteristics, patient movement and repeated attempts are well established, but little is known about operator risk factors.[2] In this service evaluation, we explored operator risk factors such as grade of the anaesthetist, fatigue and lack of familiarity and assess their impact on the ADP rate in a large teaching hospital.

Methods: After obtaining approval from the clinical governance department, all cases of ADP between January 2018 and October 2020 were identified. Data were collected from the electronic database