

Why is our Emergency caesarean section rate increasing?

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Objective

At Dumfries and Galloway Royal Infirmary (DGRI) we noticed an increase in the rate of emergency caesarean sections. This prompted a review of our service using the Robson Criteria to identify areas for closer investigation.

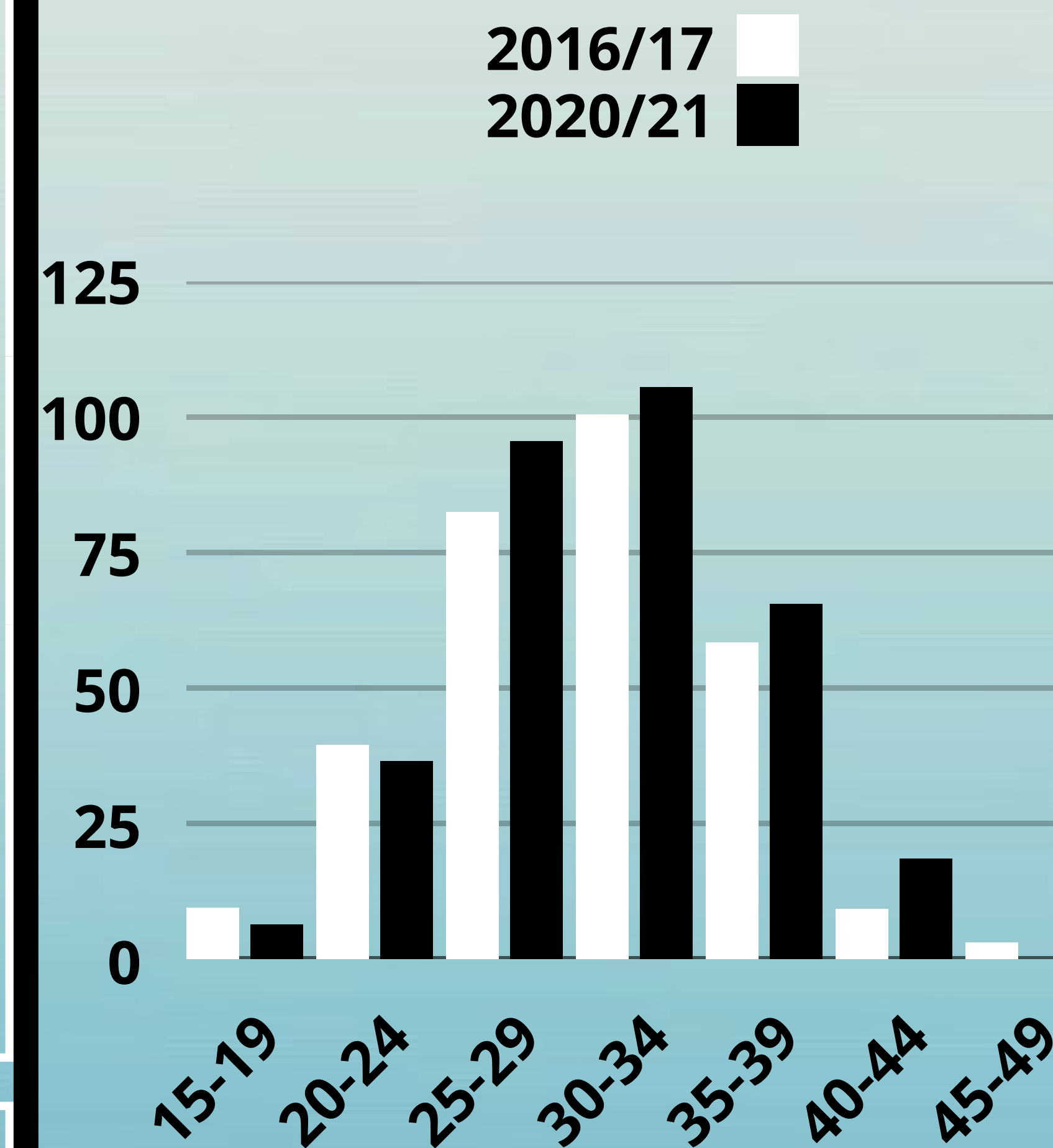
Design

We designed a retrospective study of all births via caesarean section in two separate time periods, 2016-17 and 2020-21. This provides the department with a means to identify areas which could be researched further, with an overall aim of improving patient care.

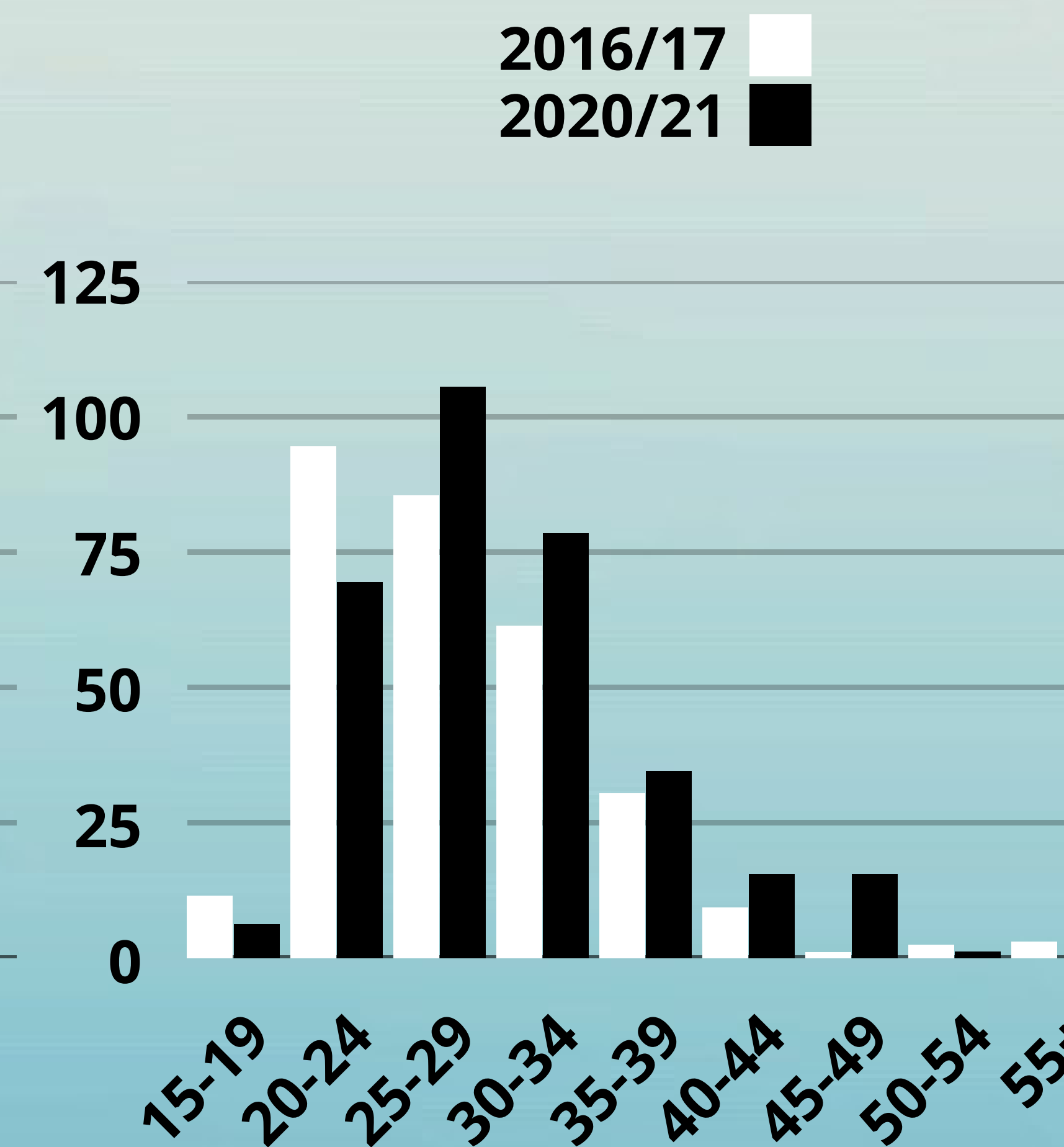
Method

All patients that delivered via caesarean section over a one year period between 2016-2017 and 2020-2021 were extracted from our electronic maternity notes system (badgernet). From 2016/17 there were 301 patients, from 2020/21 343 patients. Patient's age, parity, BMI, previous deliveries and indication for section were recorded on excel. It was also recorded if it was an elective or emergency section or if it was a multiple pregnancy. The patients were then sorted into 1 of 13 categories using the WHO Robson Criteria and analysed on excel. The exclusion criteria were delivery outside of DGRI, antepartum stillbirth or if they were a fake patient used for demonstration.

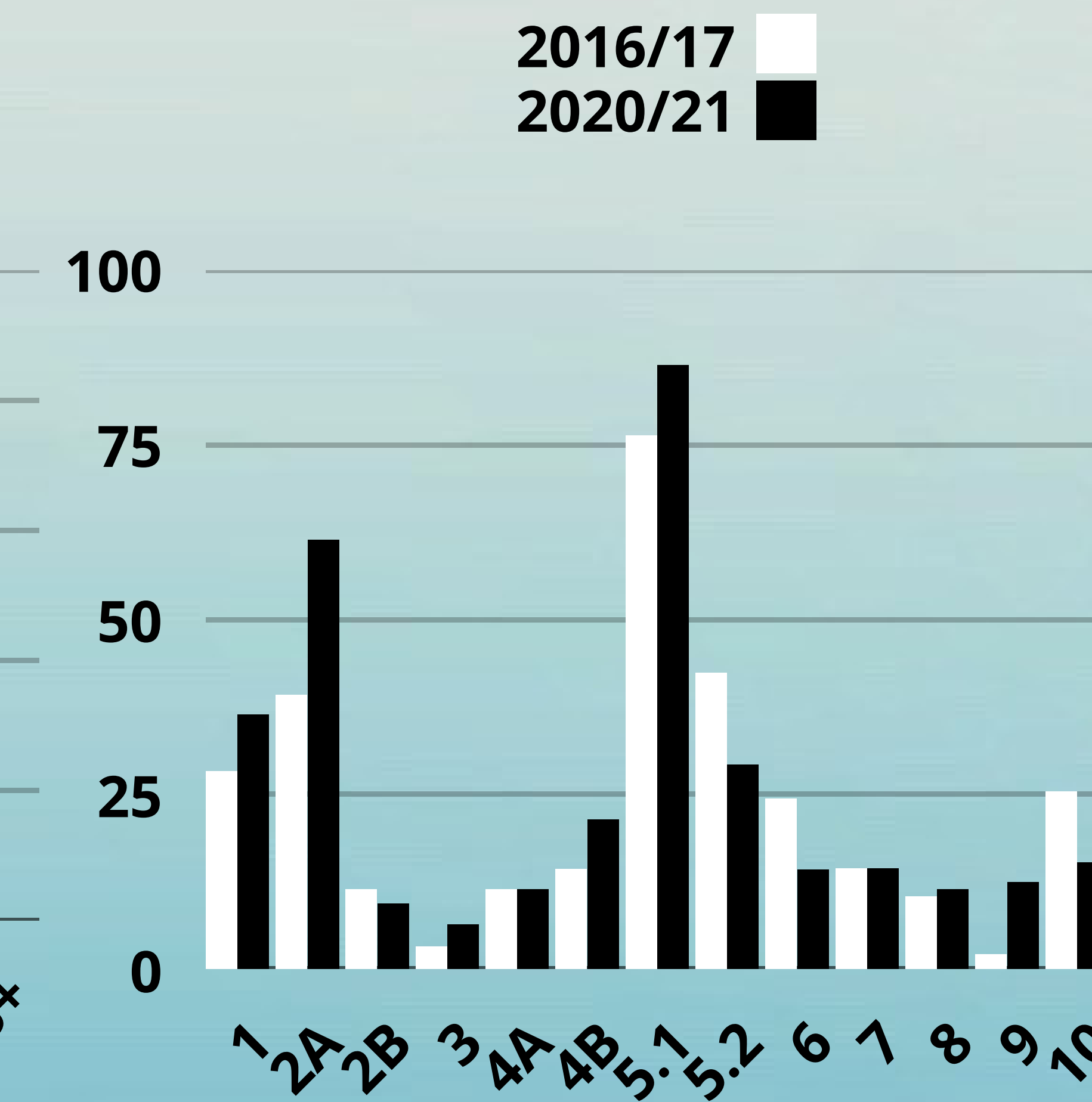
Maternal Age



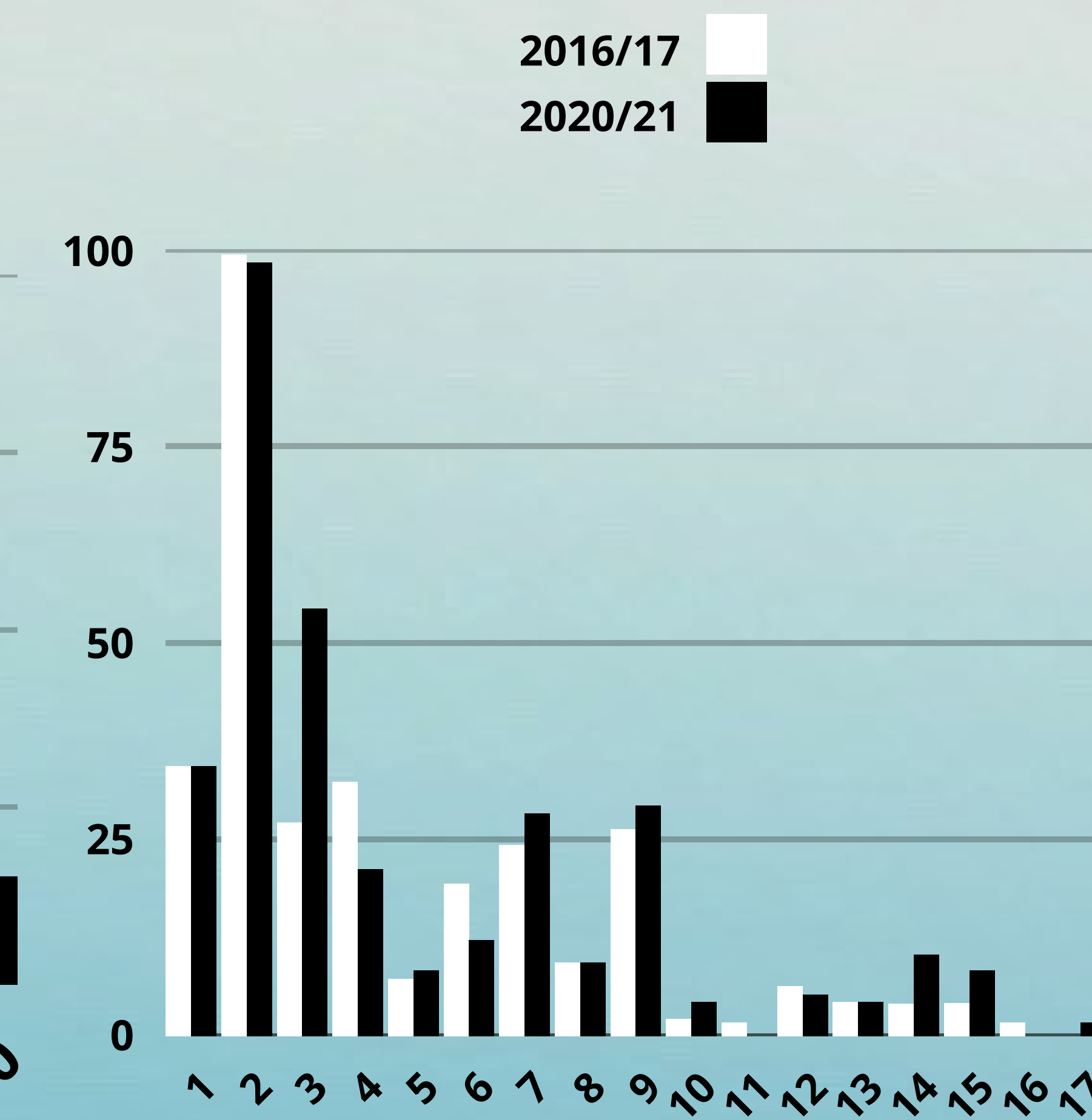
Maternal BMI



Robson Category



Indication



Results

The total number of deliveries decreased from **1225** to **1092**, whilst the caesarean sections rate increased from **24.40%** to **29.76%**. The percentage of patients requiring emergency section increased from **11.4%** to **15.7%**. The rate of elective caesarean section remained stable with **13.0%** in 2016/17 and **14.1%** in 2020/21. Nulliparous patients delivering via caesarean section increased from **116** to **132**. Patients requiring emergency sections for delay in the 1st stage, abnormal CTGs and maternal condition all increased. We also noticed an increase in maternal age and BMI whilst comparing the two time periods.

Conclusion

There is an increase in BMI and maternal age in our patient population leading to a higher risk obstetric population. There is also an increase in nulliparous patients, both in spontaneous labour and being induced, requiring an emergency section. The main change in indication for section was the number of patients with a delay in the 1st stage doubling from **27** to **54**. On the basis of these results our first area of investigation will be our nulliparous patients to identify areas we need to improve. This review will also generate follow up studies such as a qualitative review of our patients with a delay in the 1st stage.

Indication for section

- 1 - Maternal request
- 2 - Previous section
- 3 - Delay in the 1st stage
- 4 - Breech presentation
- 5 - Pre-eclampsia/Raised BP
- 6 - Failed IOL
- 7 - CTG concerns
- 8 - Twins
- 9 - Prolonged second stage
- 10 - Placental position
- 11 - Unknown
- 12 - Fetal growth concerns
- 13 - APH
- 14 - Fetal position/lie
- 15 - Maternal Condition
- 16 - Fetal anomaly
- 17 - Cord prolapse