

Do women receive antenatal corticosteroids (ACS) inappropriately? A review of practice in a tertiary UK hospital

Refining prediction tools and education ensures timely ACS use, balancing risks while promoting safer preterm care.

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Aim

- Assess the proportion of pregnancies receiving ACS that ultimately delivered at term.
- Investigate whether predictive tests could refine ACS administration to improve targeting.
- Evaluate the impact of ACS administration on neonatal and maternal outcomes.

Background

Evelina London supports approximately 6,500 deliveries annually, with 175 births occurring before 34 weeks, of which over 100 are extremely low birth weight. The unit provides specialist care for neonates with complex congenital anomalies. The population is diverse, with a higher maternal age, greater ethnic variability, and increased socioeconomic deprivation compared to national averages. Despite these challenges, the preterm birth rate in 2024 was 8.1%. This study aimed to evaluate the appropriateness of antenatal corticosteroid (ACS) administration and assess whether steroids were being given to pregnancies that later progressed to term delivery.

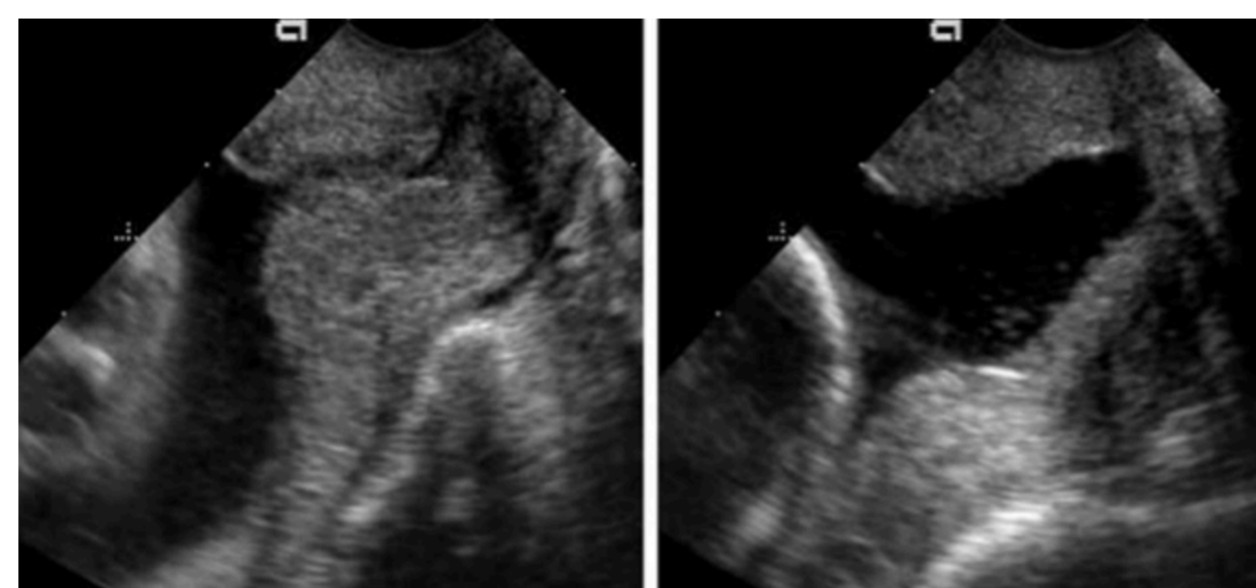
Method

A retrospective cohort study was conducted at a tertiary London hospital. Electronic pharmacy records from January to October 2024 were reviewed to identify patients who received dexamethasone. Patients who delivered before 35 weeks were excluded. Data was collected on maternal demographics, gestational age at steroid administration, and indications for ACS use. For cases of suspected threatened preterm labour (TPTL), additional factors such as cervical length, cervicovaginal biomarkers, and QUIPP App scores were analysed. Findings were compared against national guidelines to assess appropriateness of administration.

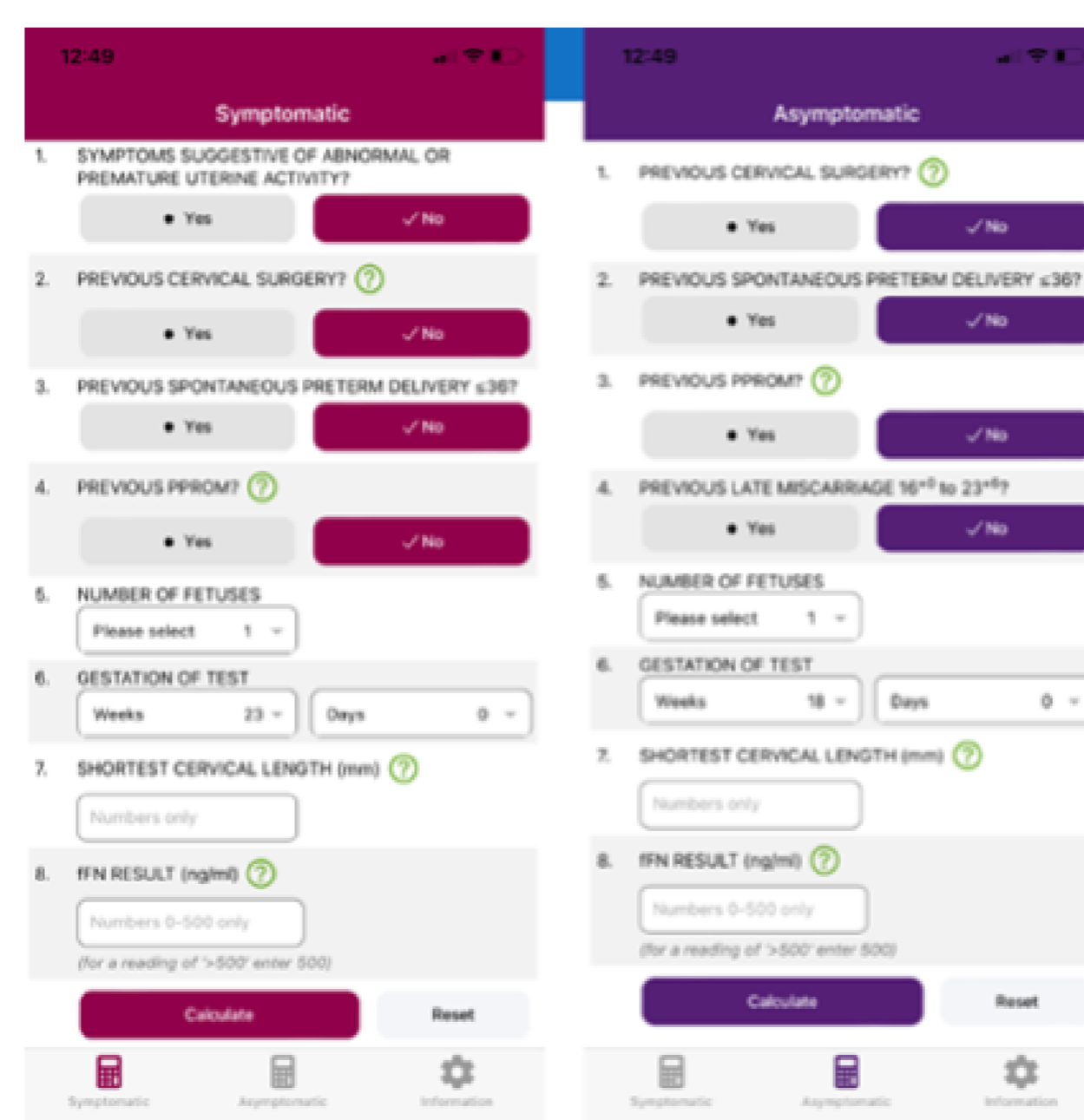
Results

- 113 antenatal patients were prescribed ACS during the study period.
- 22 (19%) received ACS then delivered ≥ 35 weeks, with 11 (10%) delivering >37 weeks.
- 14 (64%) were primiparous and 6 (27%) had a history of previous preterm birth or midtrimester loss.
- 3 (14%) received ACS and cerclage during this pregnancy, 1 (4.5%) had cerclage alone and 1 (4.5%) received just progesterone.
- Indications for ACS: 50% suspected TPTL, 27% preterm prelabour rupture of membranes (PPROM), 14% antepartum haemorrhage, and 4.5% pre-eclampsia.
- 4 patients received ACS prior to fetal medicine intervention (amniocentesis/iatrogenic preterm birth) or an identified abnormality (fetal arrhythmia, Tetralogy of Fallot, T21, massive polyhydramnios).
- 8/11 (73%) of the term deliveries had received steroids in response to symptoms (abdominal pain/TPTL), yet only 2 (18%) had a cervical length <15 mm, and only 3 (27%) had a positive Actim Partus test.

Ultrasound image of cervical length measurement



Screenshot of the QUIPP App interface



Conclusions

Significant numbers of ACS courses are administered to patients who ultimately deliver at term. The use of predictive tests, including cervical length and biochemical markers in conjunction with the QUIPP app, could improve targeted administration. A key challenge remains balancing the risk of withholding ACS against unnecessary exposure.

Future work will focus on developing a standardised cervical length training module within our trust and refining preterm labour prediction methods to ensure optimal timing of ACS for at-risk pregnancies to ensure equality of access to high quality care for each birthing person and their babies.

