



Antenatal Corticosteroids Administration: Better Timed in Spontaneous vs Iatrogenic Preterm Birth

Laurence Frei, Helena A. Watson, Mareike Bolten



Lewisham and Greenwich
NHS Trust

1. AIM

To assess whether appropriate timing of antenatal corticosteroids (ACS) in singleton preterm births, at our inner-city secondary care maternity hospital, had improved since the implementation of new NHS Guidance (Saving Babies Lives Care Bundle 2)¹.

2. METHOD

STUDY DESIGN

Retrospective analysis of digital records of all preterm deliveries (< 34 week's gestation) at Queen Elizabeth Hospital (Lewisham & Greenwich NHS Trust, London), between March and October 2021 using the maternity and neonatal notes software PowerChart and BadgerNet. The preterm births were classified into iatrogenic, preterm premature rupture of membranes (PPROM) and spontaneous preterm birth without PPRM.

INCLUSION CRITERIA

Singleton pregnancies
Gestation at delivery: 16⁺⁰ – 33⁺⁶ weeks

EXCLUSION CRITERIA

Multiple pregnancies
Termination of pregnancy for fetal indication

CONTROL

Control provided by local EQUIPTT trial cohort, which evaluated preterm birth management in the same region prior to the new NHS guidance².

PRIMARY OUTCOMES

ACS administration between 24 hrs and 7 days prior to delivery between 22⁺⁰ and 33⁺⁶ for all iatrogenic preterm births, preterm birth after PPRM and spontaneous preterm births without PPRM.

3. RESULTS

Overall, the rate of appropriate ACS administration (> 24hrs and < 7 days prior to delivery) was 26%, relative to 21% in the EQUIPTT controls. Appropriate ACS administration was highest in the spontaneous preterm labour group at 30%, vs 27% in the iatrogenic group, and 24% in the PPRM birth group. 40% of all preterm birth did not receive a first dose within 24 hours, 50% within the spontaneous preterm births without PPRM, 47% within the iatrogenic group and 29% within the PPRM birth group.

OUR PROJECT IN SHORT



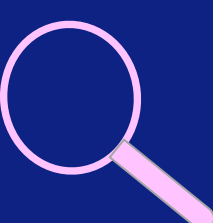
STUDY DESIGN: Retrospective analysis



COHORT: All singleton preterm (16+0 – 33+6 weeks) deliveries at Queen Elizabeth Hospital (Lewisham & Greenwich NHS Trust, London)



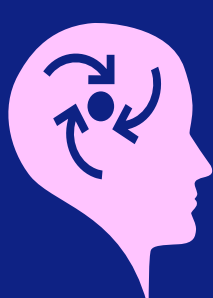
TIME PERIOD: March to October 2021



AIM: Assess timing of antenatal corticosteroids (ACS) administration



RESULT: Appropriate (between 24 hours and 7 days prior to delivery) ACS administration was highest in the spontaneous preterm labour group without preterm premature rupture of membranes (PPROM)



CONCLUSION: Improvement of the management of women at high risk of imminent delivery since implementation of Saving Babies Live Care Bundle 2

4. RESULTS OVERVIEW

	PRE SBLCB2* INTERVENTION		POST SBLCB2 INTERVENTION		
	Cohort (n)	Control (117)	All preterm births (42)	Spontaneous preterm birth - PPRM excluded (10)	Iatrogenic preterm birth - PPRM excluded (15)
Outcome					PPROM (17)
% of ACS > 24h and < 7 days prior delivery (n)		21 (24)	26 (11)	3 (30)	27 (4)
% of ACS < 24h prior delivery (n)		n/a	40 (17)	50 (5)	47 (7)

*Saving Babies Lives Care Bundle 2

5. CONCLUSION

Following Saving Babies' Lives Care Bundle Version 2 implementation, ACS administration has improved and is timed more accurately for our spontaneous preterm births than iatrogenic or PPRM cases. This may be partly attributable to better identification of women at high risk of imminent delivery. However, the surprisingly low rates of appropriately timed ACS in planned preterm deliveries owes also to the complexity and severity of our current obstetric population.

6. REFERENCES

- ¹<https://www.england.nhs.uk/wp-content/uploads/2019/03/Saving-Babies-Lives-Care-Bundle-Version-Two-Updated-Final-Version.pdf>
- ² Evaluating the use of the QUIPP app and its impact on the management of threatened preterm labour: A cluster randomised trial, Watson H.A., Carlisle N., Seed Paul T., Carter J., Kuhrt K., Tribe R.M., Shennan A.H. PLoS Med 2021 Jul 6;18(7):e1003689.