

Caesarean section analysis using the Robson classification in two major hospitals in Victoria: an observational study

Dr Ana Montoya, A/Prof Chris Georgiou
Eastern Health

Introduction The global increase in caesarean section (CS) rates is concerning and a better understanding of this phenomenon can allow us to identify strategies to reduce it. Our study aim is to determine the CS rate in two hospitals in Victoria, and analyse the contribution of specific obstetric populations to changes in CS rates over time using the Robson classification.

Methods Retrospective observational study of all women delivering at two hospitals in Victoria between July 2014 and June 2019. The overall CS rate, the size of each Robson group, the CS rate per group, and the absolute and relative contribution of each group to the overall CS rate were calculated. Additionally, trends over time and comparison between the two hospitals were also analysed.

Robson Group	CS in Group (n)	Total (n)	Group size (%)	Group CS rate (%)	Absolute contribution (%)	Relative contribution (%)
1	810	5070	21.0	15.9	6.7	10.3
2	2097	4557	18.9	46.0	17.4	26.6
3	180	5902	24.5	3.0	1.5	2.3
4	689	3190	13.2	21.6	5.8	8.7
5	2778	3222	13.4	86.2	23.1	35.2
6	437	484	2.0	90.3	3.6	5.5
7	320	378	1.6	84.6	2.7	4.1
8	154	226	0.9	68.1	1.2	2.0
9	27	29	0.1	93.1	0.2	0.3
10	402	1071	4.4	37.5	3.3	5.0



Results There were 7894 CS during the study period, giving an overall CS rate of 32.7%. The greatest contributor was Robson group 5 with 35.2%, followed by group 2 with 26.6% and lastly group 1 with 10.3%. Over the five-year period, CS rates at both hospitals increased 1.5% per year (95% CI: 0.1-2.9, p-value: 0.04) from 30.7% in 2015 to 36.0% in 2019. There were not major differences in the CS between the two hospitals.

Discussion The major groups contributing to our CS rate are groups 5, 2 and 1 and efforts aiming to reduce our CS rate should therefore target these groups. Strategies to reduce CS rates should include increasing the availability of VBAC, reviewing our protocols for IOL, and improving management and surveillance of labour.