Caesarean Section Rates from Malaysian Tertiary Hospitals using Robson 10-Group Classification

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Introduction

Caesarean section (CS) rates have been gradually rising in Malaysia. Robson 10 group classification according to specific characteristics allows us to analyse which group is significantly contributing to the rising CS rates. In 1985 WHO set the optimal CS rate at 10-15%. The rate of complications both in women and the babies may increase with efforts to achieve this set target.
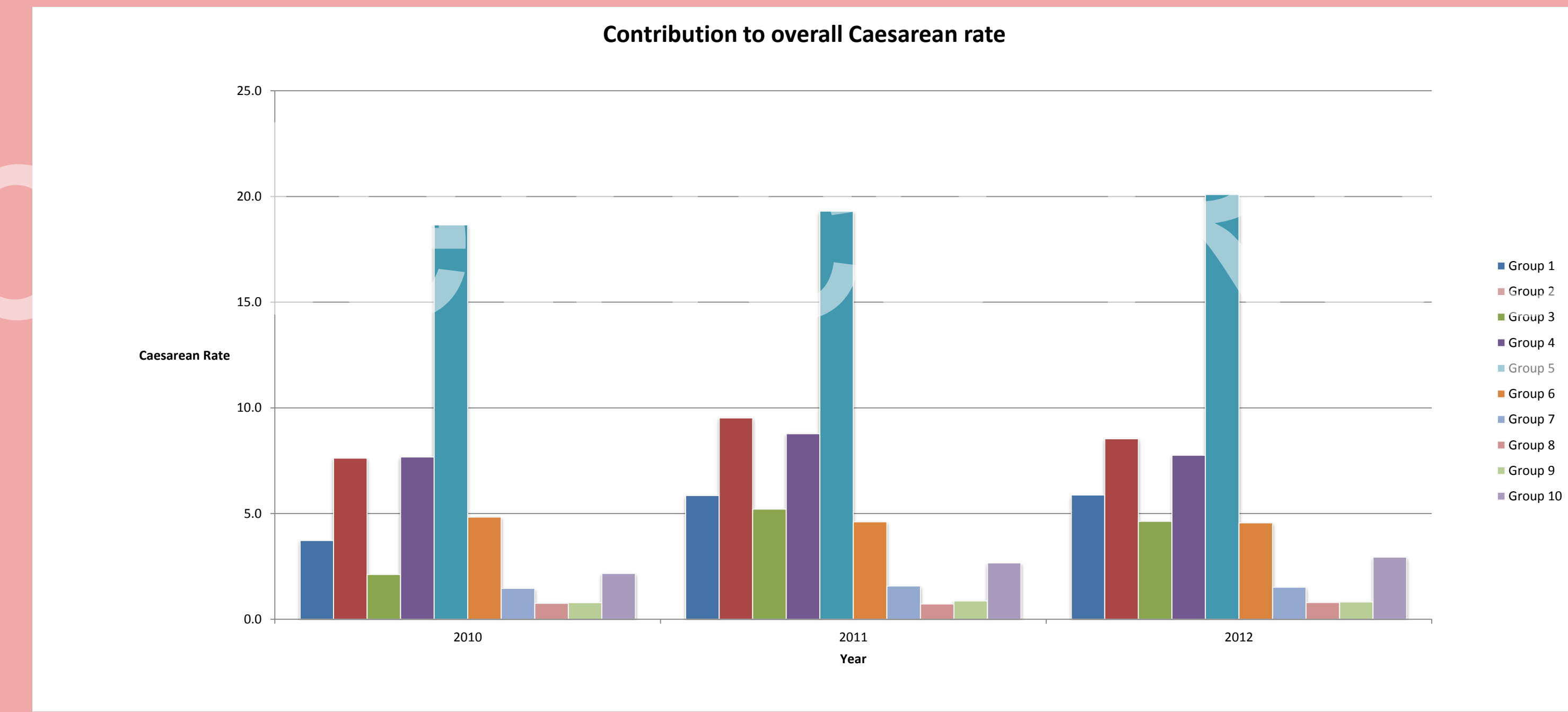
Robson 10- Group Classification

1. Nulliparous, single cephalic, >37 weeks in spontaneous   labor
2. Nulliparous, single cephalic, >37 weeks, induced or CS before labor
3. Multiparous (excluding previous CS), single cephalic, >37 weeks in spontaneous labor
4. Multiparous (excluding previous CS), single cephalic, >37 weeks, induced or CS before labor
5. Previous CS, single cephalic, >37 weeks
6. All nulliparous breeches
7. All multiparous breeches (including previous CS)
8. All multiple pregnancies (including previous CS)
9. All abnormal lies (including previous CS)
10. All single cephalic, <36 weeks (including previous CS)

2010-2012

| Robson Groups 1 - 10	Woman in this group	Relative size of group (%)	C/S section birth	C/S rate in each group (%)	Contribution to overall C/S rate
Group 1	30,990	32.6	4,891	15.8	5.1
Group 2	28,618	30.1	8,140	28.4	8.6
Group 3	54,941	57.8	3,787	6.9	4.0
Group 4	39,920	42.0	7,675	19.2	8.1
Group 5	32,906	34.6	18,398	55.9	19.3
Group 6	4,907	5.2	4,438	90.4	4.7
Group 7	1,524	1.6	1,441	94.6	1.5
Group 8	803	0.8	716	89.2	0.8
Group 9	782	0.8	782	100.0	0.8
Group 10	3,927	4.1	2,458	62.6	2.6

Method

This was a retrospective cohort study conducted over a 3 year period from 1st January 2010 to 31st December 2012. Data was obtained from the National Obstetric Registry which is an online data base that captures obstetric data from 14 tertiary hospitals in Malaysia. The data was compiled to satisfy the Robson's Classification of CS with the objective of identifying the groups of women contributing most to CS rates .There were a total of 399,274 deliveries analysed with 94,671 resulting in CS between 2010- 2012

Contribution to overall Caesarean rate

Result

The overall CS rates were 23.04%, 23.41% and 25.08% from 2010 to 2012.Group 5(previous CS, single cephalic,> 37 weeks) made the greatest contribution to the total CS rates for all three years at 18.7%, 19.3% and 20.1%. We also see a rising trend in this group from 2010 to 2012. Largest number of women admitted for delivery was also from group 5.Group 2 (nulliparous, single, cephalic,>37 weeks, induced or CS before labour) had the second highest contribution to the CS rates in 2011 and 2012 whilst Group 4 (Multiparous-excluding previous CS, single cephalic>37 weeks, induced or CS before labour) was second highest in 2010.In all 3 years the groups that contributed least to the CS rates were group 8(all multiple pregnancies-including previous CS) and group 9(all abnormal lies-including previous CS)

Caesarean rate in each group (%)
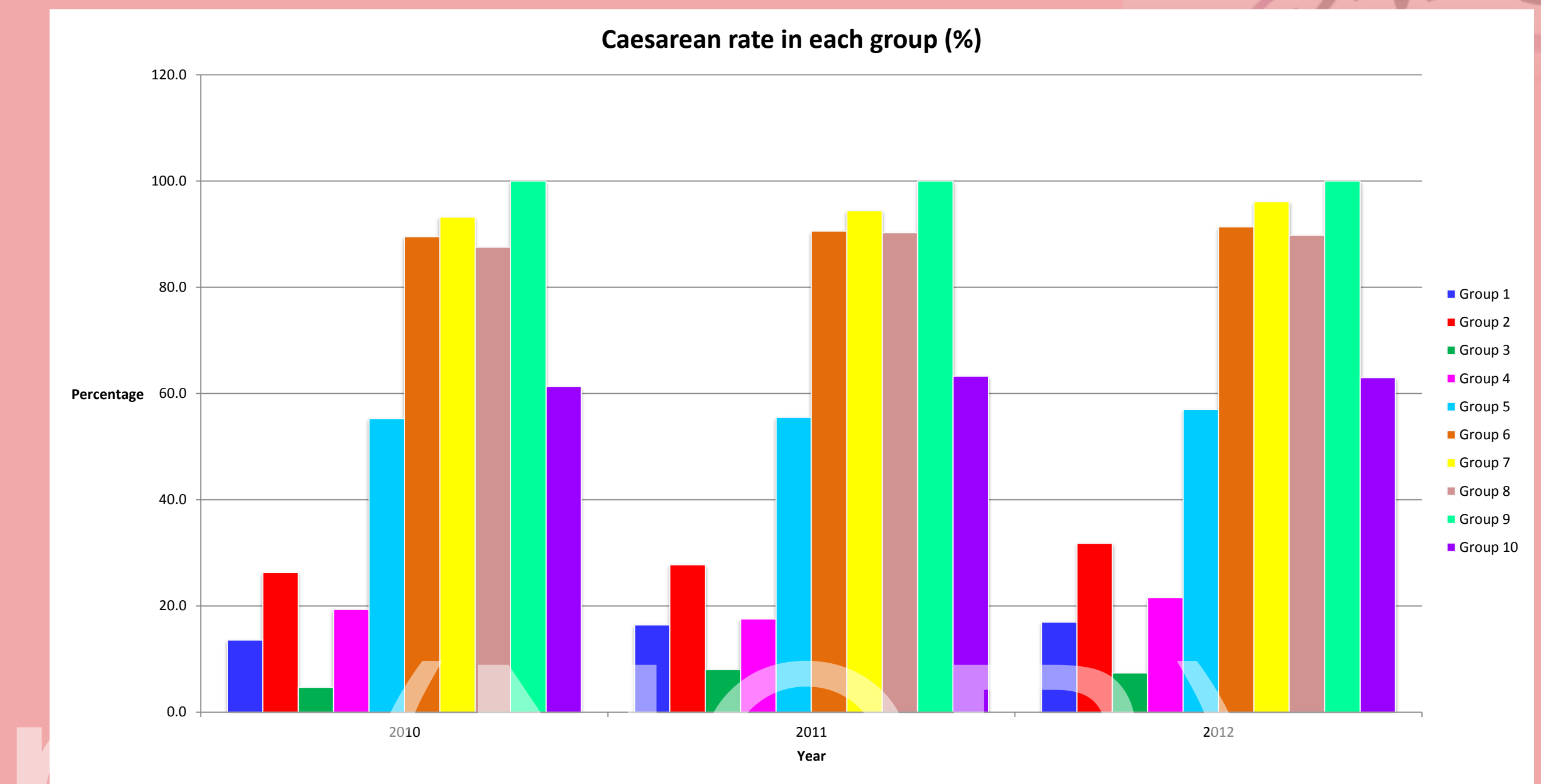
Conclusion

In 2011, there were 130 specialists in these hospitals. Direct specialist involvement in the decisions regarding delivery in both the antepartum and intrapartum periods is important to reduce the CS rates since the reproductive future of a woman is determined by the mode of delivery of her first pregnancy. Assessment for induction of labour in nulliparous women should follow guidelines and women with previous CS should be encouraged for vaginal birth after CS. Caesarean section audits should become the norm. The patient should be intimately involved in the decision making after being fully informed of the facts and risks. Robson classification has made it possible to gauge CS rates accurately and we recommend it to be adopted as an evidenced based tool to assess the need for remedial actions to reduce the CS rates in particular risk groups for Malaysia.