

ROBSON CLASSIFICATION

Example of Robson Report Table
with Interpretation



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Implementation Guide available at:

www.who.int/reproductivehealth/publications/maternal_perinatal_health/robson-classification/en/

Robson Classification: Example of Robson Report Table with Interpretation

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Robson Report Table with interpretation

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Group	N CS in group	Total N in group	Group Size (%) ¹	Group CS rate (%) ²	Absolute group contribution to overall CS rate (%) ³	Relative group contribution to overall CS rate (%) ⁴
1	611	2881	27.7	21.2	5.9	16.7
2	656	886	8.5	74.0	6.3	18.0
2a (Induced)	270	500	4.8	54.0	2.6	7.4
2b (Prelabor CS)	386	386	3.7	100.0	3.7	10.6
3	156	3435	33.0	4.5	1.5	4.3
4	199	422	4.1	47.2	1.9	5.4
4a (Induced)	77	300	2.9	25.7	0.7	2.1
4b (Prelabor CS)	122	122	1.2	100.0	1.2	3.3
5	1176	1411	13.6	11.3	32.2	32.2
5.1 (1 CS)	965	1200	11.5	80.4	9.3	26.4
5.2 (> 1 CS)	211	211	2.0	100.0	2.0	5.8
6	158	179	1.7	88.3	1.5	4.3
7	172	197	1.9	87.3	1.7	4.7
8	102	134	1.3	76.1	1.0	2.8
9	39	45	0.4	86.7	0.4	1.1
10	383	818	7.9	46.8	3.7	10.5
Total	3652	10408	100%	35.1	35.1	100.0

1. % = n of women in the group / total N women delivered in the setting x 100

2. % = n of CS in the group / total N of women in the group x 100

3. % = n of CS in the group / total N of women delivered in the setting x 100

4. % = n of CS in the group / total N of CS in the setting x 100

2 Not classified: 200 cases, 1.9% [(200/ 10408 + 200) * 100]

Definitions used in this setting:

1. Spontaneous labour: on arrival 3 contractions / 10 min with cervical effacement > 50% and dilation > 3 cm, with intact or ruptured membranes.

2. Induction: use of misoprostol, Foley catheter or oxytocin in a woman who does not fulfill the criteria for spontaneous labour

Robson Report Table with interpretation

Interpretation of dataset - Quality of the data:

1. This hospital had 200 cases out of 10608 deliveries that could not be classified (1.9%) in the Robson Classification. After looking at these 200 records, the clinicians discovered the specific reasons and created the following report:

No information on labor onset	110 cases
No information on presentation:	50 cases
No information on parity:	20 cases
No information on previous CS (multiparas):	10 cases
No information on gestational age:	10 cases

They sent an internal communication to the staff of hospital ABC asking for their collaboration in filling the records of all future women admitted to deliver, paying special attention to the Labour Onset and Fetal Presentation fields.

After looking at these **200 records**, the administrators **discovered** the **specific reasons**



Robson Report Table with interpretation

Type of population

1. Size of Group 9 (Column 4) is within the expected range (0.4%). However the CS rate (Column 5) is below the expected value (86.7%). This suggests that there is probably some misclassification of women in this group (possibly breeches). The users should review the 45 records in this group and correct errors in classification.

2. The size of Groups 1 + 2 (Column 4) is 36.2% which is within the expected range. The ratio of the sizes of Group 1/Group 2 is 3.2 which is within the expected (> 2:1) and indicates this hospital does not perform many inductions or prelabour CS in nulliparas.

3. The size of Groups 3 + 4 (Column 4) is 37.1% which suggest that this hospital serves a population with high fertility rates. The ratio of Group 3/Group 4 sizes is 8.0 which is expected (it is higher than the ratio of Groups 1/ Group 2) and it indicates that this hospital does not perform many inductions or prelabour CS in multiparas without previous CS scars.

4. The size of Group 5 (Column 4) is 13.6% which is relatively high and indicates that this hospital receives many women with a previous CS. Perhaps many of them were delivered at the same hospital in the past years, when they were nulliparas (in Groups 1 or 2).

5. The size Groups 6 + 7 (Column 4) is 3.6% which is within the expected range for breeches. The ratio of Group 6/Group 7 is 0.90 which is unusual since breeches are more frequent in nulliparas than multiparas. This could indicate inadequate data collection and it would be important to review the records of these groups.

6. The size of Group 8 (Column 4) is 1.3% which is close to the expected prevalence of multiple pregnancies in the general population.

7. The size of Group 10 (Column 4) is 7.9% which is higher than average and suggests that this hospital may be receiving high-risk patients from other local hospitals.

Robson Report Table with interpretation

CS rates per Groups and contribution

1. The CS rate for Group 1 (Column 5) is 21.2% which is high, compared to average hospitals. It would be interesting to look at the main indications for CS for this group and review the clinical protocols on labor management for nulliparous women in spontaneous labor with a single cephalic term infant.

2. The CS rate for Group 2 (Column 5) is 74.0% which is very high, compared to average hospitals (35-40%). This is part due to the size of Group 2b (pre-labour CS in nulliparas). Another possibility is inaccurate data and it would be interesting to check a sample of the records classified in this group to see if they have been misclassified.

3. The CS rate for Group 3 (Column 5) is 4.5% which is close to the expected range and indicates that the management of multiparas in spontaneous labor at term is probably adequate. Under the consideration that it could be slightly high, this is most likely to be due to misclassification of multiparas with a previous CS to this group

4. The CS rate for Group 4 (Column 5) is 47.5% which is much higher than the average (< 20%). The size of Group 4b is relatively small, so this could be caused by misclassification of multiparas with a previous CS in this group (instead of Group 5). Therefore, a sample of the records in Group 4 should be rechecked.

5. The CS rate for Group 5 (Column 5) is 83.3% which is very high. The size of Group 5b (women with >1 previous CS) is not very big, so this is not the cause. But we can notice that the rate of CS in women with one previous CS is 80.4%; this indicates there are probably few trials of labor in these women.



6. The CS rate for Group 8 (Column 5) is 76.1% which is higher than average (60%). This could be due to misclassification and these records should be rechecked. Alternatively, there may be a more liberal policy toward performing CS in twin pregnancies or a higher risk population.

7. The CS rate for Group 10 (Column 5) is 46.8% which is high. It suggests that most women who deliver preterm at this hospital are probably not entering labour spontaneously and may be having prelabour CS because of complications (e.g. preeclampsia or fetal growth restriction).

8. The contributions of Groups 1, 2 and 5 add up to 66.9% of all CS (Column 7) which is within the expected value.

9. The single group that most contributed to the overall CS rate was Group 5 which accounted for about one third (32.2%) of all the CS in that setting (Column 7). When we look at the subdivisions, we notice that women with a single previous CS (Group 5.1) were the ones that contributed most to the overall rate of CS in that hospital (Column 6: Group 5.1 contributed 26.4% while Group 5.2 contributed 5.8%). Therefore, it would make sense to implement interventions to reduce the rate of CS in this specific subgroup. This could start, for example, with an audit of all

women with one previous CS and to see how many were offered a trial of labor (TOLAC). If the rate is low, the clinicians could conduct a survey with these women to identify the counseling received during antenatal care about TOLAC. Based on these results, they could create an intervention targeting specifically this group early in pregnancy to increase their willingness to participate in TOLAC. Alternatively, if the audit reveals that the rate of TOLAC is high, then the hospital could review/modify the protocol for indications for CS in labouring women with a previous CS. Additionally, it would be important that the clinicians try to reduce the rate of CS in nulliparas (Groups 1 and 2), since these women will be the future women in Group 5 in the next years.

The second group which contributed most to the overall CS rate was Group 2 (Column 7). These women contributed to 18.0 % (Column 7) of all the CS (or approximately 1 in every 5 CS) and the CS rate in this group was 74.0% (Column 5). When we look at the subdivisions, we see that the highest contributors to the overall CS rate was Group 2.2, 10.6% (Column 7).

Therefore, this would also be an important group to target in order to reduce the overall CS rate. For example, the hospital clinicians could start by auditing the records of the 386 women in this group (Column 2) and look at the indications for CS in this group of women. This could lead to changes in the hospital's clinical protocols and/or the creation of a monthly discussion with health professionals to discuss these cases.



