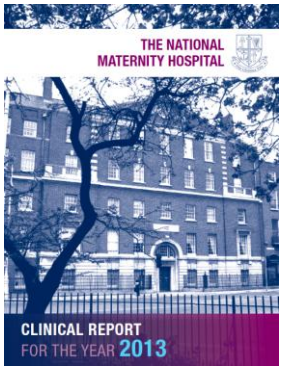
Classification of Caesarean Sections (Indications)

Michael Robson

The National Maternity Hospital
Dublin, Ireland
Mrobson@nmh.ie



Overall Caesarean Section rates
- are not helpful

Current classifications of caesarean sections

- Primary and repeat
- Sub groups of women
- Indications

Indications

Definitions
Application
Multiple
Growth
No indication
Retrospective

Current Classification Systems of Caesarean Sections

Repeat Caesarean Section
Breech
Dystocia
Fetal Distress
Others

Principles of perinatal audit

No perinatal event or outcome should be considered in isolation from other events, outcomes, organisational issues or epidemiological variables

Principles of the ideal Classification System

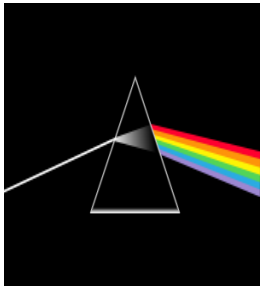
Simple, easy to implement, informative and useful

Robust, self validating and universal

Prospectively determined, clinically relevant, identifiable, totally accountable and replicable

The groups must be objectively not subjectively defined, mutually exclusive and totally inclusive

The groups must possess the ability to allow analysis of other epidemiological variables, outcomes and processes, indications within the groups



The Ten Group Classification System
- *the purpose*

A common starting point for comparing perinatal data

Robson MS. Classification of Caesarean Sections
Fetal and Maternal Review 2001; 12:23-39
Cambridge University Press

Philosophy of the 10 Group Classification

Based on the premise that all information

(epidemiological, maternal and fetal events, outcomes, cost and organisational)

will be more clinically relevant by stratifying them using the 10 groups

The 10 Group Classification System

- *the benefit of standardisation*

Any differences in sizes of groups or outcome are either due to

Poor data quality
Differences in significant epidemiological factors
Differences in practice

Classifying Perinatal Outcome

– the 10 Groups, Obstetrical Concepts and their Parameters

Previous Obstetric Record	Nulliparous Multiparous without a scar, Multiparous with a scar
Category of pregnancy	Single cephalic Single breech Multiple pregnancy Single transverse or oblique lie
Course	Spontaneous labour Induced labour Prelabour caesarean section
Gestation	The number of completed weeks at delivery

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Caesarean Sections - the 10 Groups 2013

1 Nullip single ceph >=37 wks spon lab
2 Nullip single ceph >=37wks ind. or CS before lab
3 Multip (excl prev caesarean sections) single ceph >=37 wks spon lab
4 Multip (excl prev caesarean sections) single ceph >=37wks ind. or CS before lab
5 Previous caesarean section single ceph >= 37 wks
6 All nulliparous breeches
7 All multiparous breeches (incl previous caesarean sections)
8 All multiple pregnancies (incl previous caesarean sections)
9 All abnormal lies (incl previous caesarean sections)
10 All single ceph <= 36 wks (incl previous caesarean sections)

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Caesarean Sections - the 10 Groups 2013

Total number of caesarean sections over the overall total number of women

	2013 **2024/8755** **23.1%**
1 Nullip single ceph >=37 wks spon lab	146/2040
2 Nullip single ceph >=37wks ind. or CS before lab	468/1305
3 Multip (excl prev caesarean sections) single ceph >=37 wks spon lab	31/2564
4 Multip (excl prev caesarean sections) single ceph >=37wks ind. or CS before lab	130/944
5 Previous caesarean section single ceph >= 37 wks	683/1003
6 All nulliparous breeches	167/178
7 All multiparous breeches (incl previous caesarean sections)	124/138
8 All multiple pregnancies (incl previous caesarean sections)	130/198
9 All abnormal lies (incl previous caesarean sections)	40/40
10 All single ceph <= 36 wks (incl previous caesarean sections)	105/345

Number of caesarean sections over the total number of women in each group

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Caes Groups 2013

Size of each group is the total number of women in each group divided by the overall total number of women

	2013 2024/8755 23.1%	Size of group %
1 Nullip single ceph >=37 wks spon lab	146/2040	23.3
2 Nullip single ceph >=37wks ind. or CS before lab	468/1305	14.9
3 Multip (excl prev caesarean sections) single ceph >=37 wks spon lab	31/2564	29.3
4 Multip (excl prev caesarean sections) single ceph >=37wks ind. or CS before lab	130/944	10.8
5 Previous caesarean section single ceph >= 37 wks	683/1003	11.5
6 All nulliparous breeches	167/178	2.0
7 All multiparous breeches (incl previous caesarean sections)	124/138	1.6
8 All multiple pregnancies (incl previous caesarean sections)	130/198	2.3
9 All abnormal lies (incl previous caesarean sections)	40/40	0.5
10 All single ceph <= 36 wks (incl previous caesarean sections)	105/345	3.9

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Caesarean Sections - the

CS rate in each group is worked out for each group by dividing the number of caesarean sections by the total number of women in each group

	2013 2024/8755 23.1%	Size of group %	C/S rate in gp %
1 Nullip single ceph >=37 wks spon lab	146/2040	23.3	7.2
2 Nullip single ceph >=37wks ind. or CS before lab	468/1305	14.9	35.9
3 Multip (excl prev caesarean sections) single ceph >=37 wks spon lab	31/2564	29.3	1.2
4 Multip (excl prev caesarean sections) single ceph >=37wks ind. or CS before lab	130/944	10.8	13.8
5 Previous caesarean section single ceph >= 37 wks	683/1003	11.5	68.1
6 All nulliparous breeches	167/178	2.0	93.8
7 All multiparous breeches (incl previous caesarean sections)	124/138	1.6	89.9
8 All multiple pregnancies (incl previous caesarean sections)	130/198	2.3	65.7
9 All abnormal lies (incl previous caesarean sections)	40/40	0.5	100
10 All single ceph <= 36 wks (incl previous caesarean sections)	105/345	3.9	30.7

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Caesarean Sections

Absolute contribution of each group to the overall CS rate is worked out by dividing the number of CS in each group by the overall population of women

This will depend on the size of the group as well as the CS rate in each group

	2013 2024/8755 23.1%	Size of group %	C/S rate in gp %	Contr of each gp 23.1 %
1 Nullip single ceph >=37 wks spon lab	146/2040	23.3	7.2	1.7
2 Nullip single ceph >=37wks ind. or CS before lab	468/1305	14.9	35.9	5.3
3 Multip (excl prev caesarean sections) single ceph >=37 wks spon lab	31/2564	29.3	1.2	0.4
4 Multip (excl prev caesarean sections) single ceph >=37wks ind. or CS before lab	130/944	10.8	13.8	1.5
5 Previous caesarean section single ceph >= 37 wks	683/1003	11.5	68.1	7.8
6 All nulliparous breeches	167/178	2.0	93.8	1.9
7 All multiparous breeches (incl previous caesarean sections)	124/138	1.6	89.9	1.4
8 All multiple pregnancies (incl previous caesarean sections)	130/198	2.3	65.7	1.5
9 All abnormal lies (incl previous caesarean sections)	40/40	0.5	100	0.5
10 All single ceph <= 36 wks (incl previous caesarean sections)	105/345	3.9	30.7	1.2

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Caesarean Sections - th

Groups 1,2 and 5 contribute to two thirds of all caesarean section rates and are the source of biggest variation between units

	2013 2024/8755 23.1%	Size of group %	C/S rate in gp %	Contr of each gp 23.1 %
1 Nullip single ceph >=37 wks spon lab	146/2040	23.3	7.2	1.7
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9 All abnormal lies (incl previous caesarean sections)	40/40	0.5	100	0.5
10 All single ceph <= 36 wks (incl previous caesarean sections)	105/345	3.9	30.7	1.2

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Caesarean Sections - the

Groups 6, 7, 8, 9, 10. Small groups, high CS rates but small overall contributions to the total CS rate and very similar between different units

	2013 2024/8755 23.1%	Size of group %	C/S rate in gp %	Contr of each gp 23.1 %
1 Nullip single ceph >=37 wks spon lab	146/2040	23.3	7.2	1.7
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4 Multip (excl prev caesarean sections) single ceph >=37wks ind. or CS before lab	130/944	10.8	13.8	1.5
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10 All single ceph <= 36 wks (incl previous caesarean sections)	105/345	3.9	30.7	1.2

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Classifications for Cesarean Section: A Systematic Review

Maria Regina Torloni[1]*, Ana Pilar Betran[2], Joao Paulo Souza[2], Mariana Widmer[2], Tomas Allen[3], Metin Gulmezoglu[2], Mario Merialdi[2]

1 Department of Obstetrics, Sao Paulo Federal University and Brazilian Cochrane Centre, Sao Paulo, Brazil, **2** Department of Reproductive Health and Research, World Health Organization, Geneva, Switzerland, **3** Department of Knowledge Management and Sharing, World Health Organization, Geneva, Switzerland

January 20, 2011

Conclusions: This review and critical appraisal of CS classifications is a methodologically sound contribution to establish the basis for the appropriate monitoring and rational use of CS. Results suggest that women-based classifications in general, and Robson's classification, in particular, would be in the best position to fulfill current international and local needs and that efforts to develop an internationally applicable CS classification would be most appropriately placed in building upon this classification. The use of a single CS classification will facilitate auditing, analyzing and comparing CS rates across different settings and help to create and implement effective strategies specifically targeted to optimize CS rates where necessary.

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A Systematic Review of the Robson Classification for Caesarean Section: What Works, Doesn't Work and How to Improve It

Ana Pilar Betrán[1]*, Nadia Vindevoghel[2], Joao Paulo Souza[3], A. Metin Gülmezoglu[1], Maria Regina Torloni[4]

June 3, 2014

Conclusions: The use of the Robson classification is increasing rapidly and spontaneously worldwide. Despite some limitations, this classification is easy to implement and interpret. Several suggested modifications could be useful to help facilities and countries as they work towards its implementation.

World Health Organization

WHO Statement on Caesarean Section Rates

Every effort should be made to provide caesarean sections to women in need, rather than striving to achieve a specific rate

Conclusion

WHO proposes the Robson classification system as a global standard for assessing, monitoring and comparing caesarean section rates within healthcare facilities over time, and between facilities. In order to assist healthcare facilities in adopting the Robson classification, WHO will develop guidelines for its use, implementation and interpretation, including standardization of terms and definitions.

WHO/RHR/15.02

Indications

Classification of indications for Caesarean Sections - prelabour

Fetal

Maternal

No medical reason

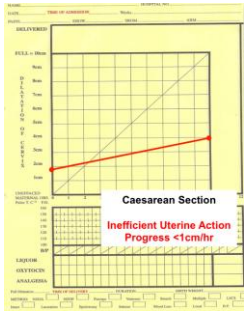
Classification of indications for Caesarean Sections – in labour or after induction

Fetal
Dystocia (Failure to progress)

Classification of Caesarean Section in labour

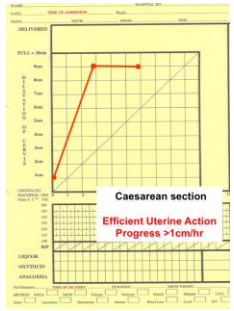
Fetal
(no oxytocin)

Dystocia



Inefficient uterine action (IUA)

Efficient uterine action (EUA)



IUA
Poor response

IUA
Inability to treat overcontracting

IUA
Inability to treat fetal intolerance

IUA
No oxytocin given

EUA
Persistent malposition

EUA CPD
(Obstructed labour multiparous)

Error in diagnosis, induction

Intact membranes

Delay in oxytocin

Inadequate dose oxytocin

Appropriate dose but hesitant use

Variables

Diagnosis of labour
Fetal monitoring
Assessment of progress
ARM and oxytocin regimen
Epidural

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Methods of achieving and maintaining an appropriate caesarean section rate

Michael Robson, MBBS, MRCOG, FRCPI, FRCS (Eng), Dr *, Lucia Hartigan, MB Bch BAO, Dr, Martina Murphy, RM, Senior Midwife

National Maternity Hospital, Holles Street, Dublin 2, Ireland

Quality is related to outcome and outcome will guide processes

The Ten Group Classification System
- the future

We should try and standardise analysis of outcomes rather than processes in the first instance

With standardised outcomes comparison of results will gradually result in the merging of processes

MRobson@nmh.ie