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# Strategies to limit the Caesarean Section rate

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2016

# Can the Caesarean Section rate be safely reduced?

Yes but only when it can be justified, safely implemented and accepted by women

# Caesarean Sections

Overall caesarean section rates on their own are meaningless

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

Risk-Benefit Calculus

- Perinatal morbidity and mortality
- Maternal morbidity and mortality
- Labour and delivery events and outcomes
- Complaints, adverse incidents and medico-legal cases
- Staff and infrastructure resources
- Maternal satisfaction and staff satisfaction
- Financial

# Classifying Perinatal Outcome

*– the 10 Groups, Obstetrical Concepts and their Parameters*

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

# Classifying Perinatal Outcome
## – *the 10 Group classification system (TGCS)*

The Ten Groups Have Been Created From the Previous Obstetric Record, Course, Category and Gestation

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

## - *and the advantage of standardisation*

Any differences in sizes of groups or outcomes in the groups are either due to

- Poor data quality
- Differences in significant epidemiological factors
- Differences in practice

# National Maternity Hospital, Dublin

## 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) |

# National Maternity Hospital, Dublin

## Caesarean Sections - the 10 Groups 2013

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

| | **2013**<br>**2024/8755**<br>**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

# N tal, Dublin

## 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<br>2024/8755<br>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 |

# National Maternity Ho

# 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 |

# National Maternity 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 |

# National Maternity H

# 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 |
| **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 |

# National Maternity Ho

# 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 |
| **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 |

# National Maternity Hospital, Dublin

## Caesarean Sections - the 10 Groups 2012

| | 2012 775/2229 34.8% | Size of group % | C/S rate in gp % | Contr of each gp 34.8 % |
|---|---|---|---|---|
| **1** Nullip single ceph >=37 wks spon lab | 132/624 | 28.0 | 21.2 | 5.9 |
| **2** Nullip single ceph >=37wks ind. or CS before lab | 158/312 | 14.0 | 50.6 | 7.1 |
| **3** Multip (excl prev caesarean sections) single ceph >=37 wks spon lab | 30/505 | 22.7 | 5.9 | 1.3 |
| **4** Multip (excl prev caesarean sections) single ceph >=37wks ind. or CS before lab | 47/172 | 7.7 | 27.3 | 2.1 |
| **5** Previous caesarean section single ceph >= 37 wks | 176/262 | 11.8 | 67.2 | 7.9 |
| **6** All nulliparous breeches | 59/65 | 2.9 | 90.8 | 2.6 |
| **7** All multiparous breeches (incl previous caesarean sections) | 32/37 | 1.7 | 86.5 | 1.4 |
| **8** All multiple pregnancies (incl previous caesarean sections) | 70/97 | 4.4 | 72.2 | 3.1 |
| **9** All abnormal lies (incl previous caesarean sections) | 17/17 | 0.8 | 100 | 0.8 |
| **10** All single ceph <= 36 wks (incl previous caesarean sections) | 54/138 | 6.2 | 39.1 | 2.4 |

# National Maternity Hospital, Dublin

## Caesarean Sections - the 10 Groups 2013

| | **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 |

SỞ Y TẾ
THÀNH PHỐ HỒ CHÍ MINH
BỆNH VIỆN TỪ DŨ

# BẢNG THỐNG KÊ PHÂN LOẠI CÁC TRƯỜNG HỢP MLT

**Ngày: 01/07/2015**

Thời điểm thống kê: từ 6g đến 5g59 phút ngày hôm sau

| NHÓM | Hành chánh | | Trực | | Tổng cộng | |
|---|---|---|---|---|---|---|
| | Tổng số | MLT % | Tổng số | MLT % | Tổng số | MLT % |
| 1. Con so, đơn thai, ngôi đầu, >=37 tuần, chuyển dạ tự nhiên | 570 | 42,81 | 886 | 36,68 | 1456 | 39,08 |
| 2. Con so, đơn thai, ngôi đầu, >=37 tuần, khởi phát chuyển dạ hoặc MLT trước khi xuất hiện chuyển dạ | 208 | 54,33 | 457 | 49,89 | 665 | 51,28 |
| 3. Con rạ (không có VMC trên tử cung), đơn thai, ngôi đầu >=37 tuần, chuyển dạ tự nhiên | 336 | 18,15 | 623 | 13,64 | 959 | 15,22 |
| 4. Con rạ (không có VMC trên tử cung), đơn thai, ngôi đầu >=37 tuần, được khởi phát chuyển dạ hoặc MLT trước khi xuất hiện chuyển dạ | 92 | 27,17 | 217 | 19,35 | 309 | 21,68 |
| 5. Con rạ, có ít nhất 1 VMC trên tử cung, đơn thai, ngôi đầu >= 37 tuần | 409 | 90,71 | 352 | 82,95 | 761 | 87,12 |
| 6. Con so, đơn thai, ngôi mông | 47 | 82,98 | 49 | 83,67 | 96 | 83,33 |
| 7. Con rạ, đơn thai, ngôi mông (bao gồm cả các trường hợp có VMC trên tử cung) | 38 | 78,95 | 47 | 85,11 | 85 | 82,35 |
| 8. Đa thai (bao gồm các trường hợp có VMC trên tử cung) | 57 | 71,93 | 57 | 57,89 | 114 | 64,91 |
| 9. Đơn thai, ngôi ngang hay xéo (bao gồm cả các trường hợp có VMC trên tử cung) | 71 | 53,52 | 125 | 37,6 | 196 | 43,37 |
| 10. Đơn thai, ngôi đầu <37 tuần | 356 | 66,29 | 411 | 50,85 | 767 | 58,02 |

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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*

# Comparative analysis of international cesarean delivery rates using 10-group classification identifies significant variation in spontaneous labor

Donal J. Brennan, PhD; Michael S. Robson, MD; Martina Murphy, RN; Colm O'Herlihy, MD

**OBJECTIVE:** Cesarean section (CS) rates continue to rise throughout the developed world. The aim of this study was to highlight variations in obstetric populations and practices and to identify variations in CS rates in different institutions.

**STUDY DESIGN:** Data from 9 institutional cohorts (total, 47,402; range, 1962-7985) from 9 different countries were examined using a 10-group classification system based on 4 characteristics of every pregnancy, namely single/multiple, nulliparity/multiparity, multiparity with CS scar, spontaneous/induced labor onset and term (≥37 weeks) gestation.

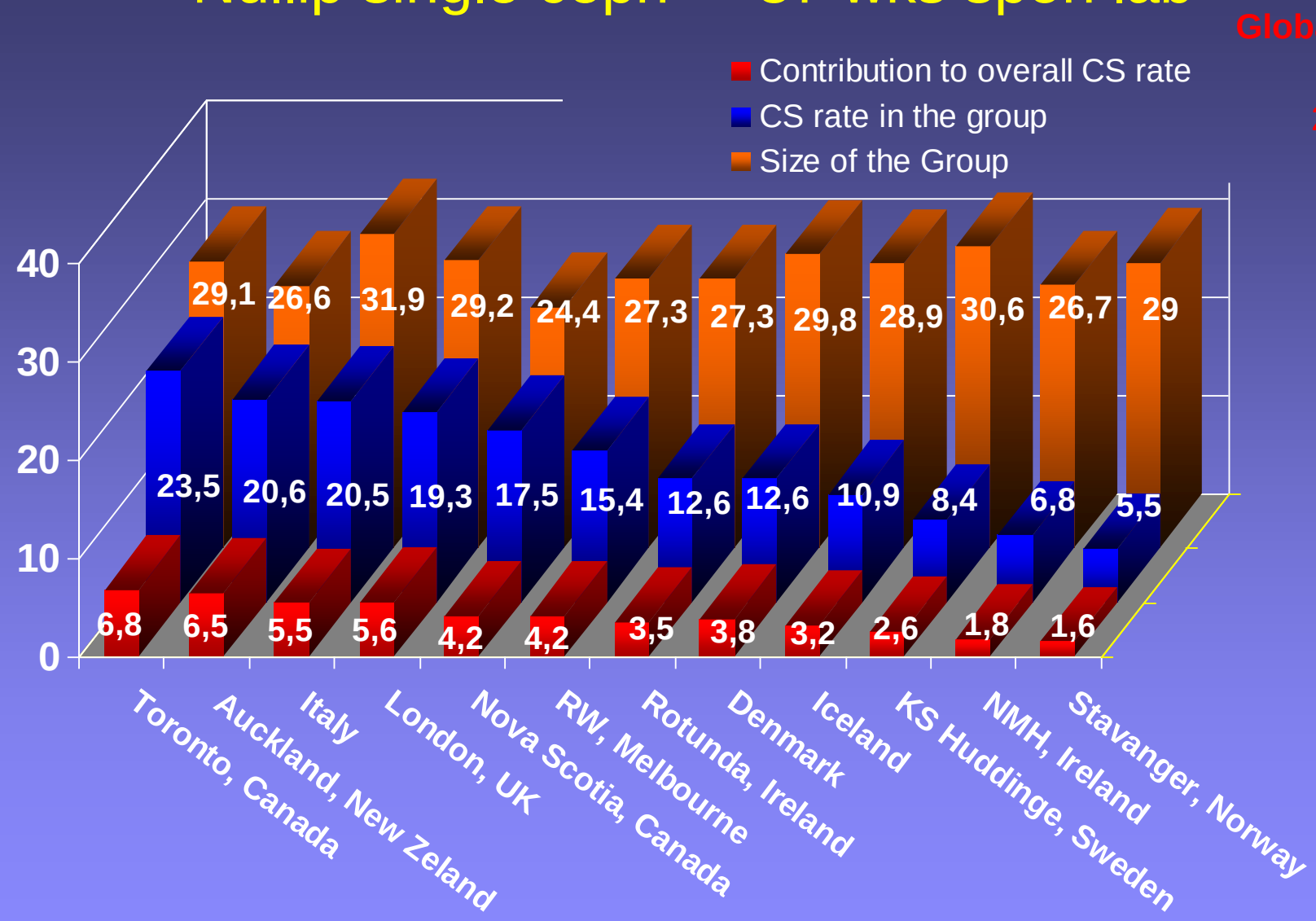
**RESULTS:** Overall CS rates correlated with CS rates in singleton cephalic nullipara ($r = 0.992$; $P < .001$). Whereas CS rates in induced labor were similar, greatest institutional variation were seen in spontaneously laboring multiparas (6.7-fold difference) and nulliparas (3.7-fold difference).

**CONCLUSION:** Ten-group analysis of international obstetric cesarean practice identifies wide variations in women in spontaneous cephalic term labor, a low-risk cohort amenable to effective intrapartum corrective intervention.

**Key words:** cesarean section, classification system, labor, pregnancy

Cite this article as: Brennan DJ, Robson MS, Murphy M, et al. Comparative analysis of international cesarean delivery rates using 10-group classification identifies significant variation in spontaneous labor. Am J Obstet Gynecol 2009;201:308.e1-8.

# Group 1
# Nullip single ceph >=37 wks spon lab



# The key to an appropriate caesarean section rate

Spontaneously labouring nulliparous women with a single cephalic pregnancy at greater or equal to 37 weeks gestation (Group 1)

# Dystocia

## - the biggest issue in obstetrics

# Classification of indications for Caesarean Sections - in labour

Requirements

Objective classification of indications for CS in labour

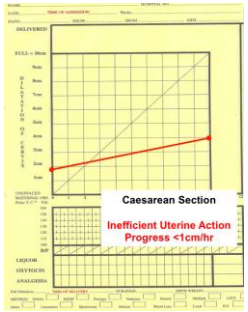
Classification can be used irrespective of management of labour

Outcomes will reflect the management of labour (Diagnosis, membrane rupture, oxytocin regimen, criteria for diagnosis of dystocia, the incidence of dystocia and maternal and fetal welbeing)

# Classification of CS in labour

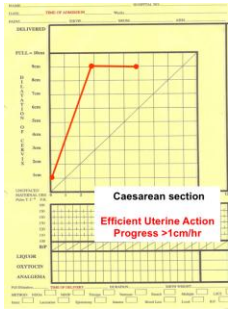
Fetal
(no oxytocin)

Dystocia




Inefficient uterine action (IUA)

Efficient uterine action (EUA)




IUA
Poor response

IUA
Inability to treat overcontracting

IUA
Inability to treat fetal intolerance

No oxytocin given

EUA Persistent malposition

EUA CPD
(obstructed labour multips)

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

# Classification of Caesarean Sections in labour Group 1 NMH 2013

**Group 1**

*Caesarean section rate of single cephalic nulliparous pregnancies at greater than or equal to 37 weeks gestation in spontaneous labour 146/2040 (7.1%)*

| | | |
|---|---|---|
| 1. Fetal reasons (no oxytocin) | 25/2040 | 1.2% |
| 2. Dyst/IUA/ITT/FI | 72/2040 | 3.5% |
| 3. Dyst/IUA/ITT/OC | 30/2040 | 1.5% |
| 4. Dyst/IUA/PR | 9/2040 | 0.4% |
| 5. Dyst (no oxytocin ) | 1/2040 | 0.05% |
| 6. Dyst/EUA/CPD/POP | 9/2040 | 0.4% |

**Hypothesis**

The incidence and distribution of your caesarean sections together with fetal and maternal outcome will depend on your timing, rate of increase and maximum dose of oxytocin. This will in turn be influenced by when you rupture your membranes

# Detailed audit of labour events and outcome Group 1 NMH 2013

| Group 1 | 2013 | | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 |
|---|---|---|---|---|---|---|---|---|
| ARM to accelerate | 1102/2040 | 54.0% | 52.8% | 53.6% | 52.9% | 52.4% | 53.5% | 54.5% |
| Oxytocin | 1100/2040 | 53.9% | 53.9% | 53.2% | 51.2% | 49.6% | 50.3% | 50.5% |
| Epidural | 1428/2040 | 70.0% | 73.0% | 73.7% | 68.6% | 66.4% | 63.9% | 64.7% |
| Electronic monitoring | 1790/2040 | 87.7% | 86.0% | 79.0% | 77.2% | 75.7% | 74.1% | 73.8% |
| Fetal blood sample | 424/2040 | 20.8% | 22.4% | 24.6% | 21.5% | 20.3% | 18.4% | 21.7% |
| Vaginal operative delivery | 479/2040 | 23.5% | 24.0% | 24.6% | 25.7% | 27.8% | 24.1% | 28.0% |
| Apgars <7 at 5 mins | 14/2040 | 0.7% | 0.8% | 1.1% | 0.2% | 0.6% | 0.7% | 0.8% |
| Cord pH < 7.0 | 4/2040 | 0.2% | 0.3% | 0.5% | 0.2% | 0.3% | 0.3% | 0.6% |
| Overall caesarean section rate | 146/2040 | 7.2% | 9.3% | 7.4% | 7.5% | 7.8% | 7.2% | 6.1% |
| Caesarean section at VE=10 | 19/2040 | 0.9% | 1.2% | 1.4% | 1.3% | 1.4% | 1.2% | 1.1% |
| Admitted to Neonatal Unit | 349/2040 | 17.1% | 10.1% | 11.7% | 10.6% | 9.8% | 9.4% | 7.2% |
| Episiotomy* | 936/2040 | 45.9% | 48.6% | 56.8% | 56.1% | 52.6% | 51.0% | 56.0% |
| OASIS* | 55/2040 | 2.7% | 3.1% | 2.5% | 2.9% | 2.6% | 3.0% | 3.4% |
| Length of labour > 12 hrs | 59/2040 | 2.9% | 3.4% | 2.8% | 2.2% | 1.5% | 3.5% | 3.7% |
| Babies >=4.0kg | 296/2040 | 14.5% | 15.4% | 15.9% | 13.6% | 13.2% | 13.6% | 14.1% |
| Aged >=35 | 374/2040 | 18.3% | 16.7% | 16.7% | 14.5% | 14.0% | 13.8% | 14.2% |
| BMI >30 | 146/2040 | 7.2% | 8.2% | 8.1% | 8.4% | 7.2% | 7.3% | 9.3% |
| PPH >1000mls | 34/2040 | 1.7% | 1.3% | 1.0% | 0.4% | 0.5% | 0.2% | 0.4% |
| HIE | 1/2040 | 0.05% | 0.1% | 0.2% | 0.0% | 0.1% | 0.1% | 0.1% |
| Blood transfusion rate | 35/2040 | 1.7% | 1.5% | | | | | |

** includes Episiotomy and Sphincter Damage (23)*

# Detailed audit of labour events and outcome Group 3 NMH 2013

| Group 3 | 2013 | | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 |
|---|---|---|---|---|---|---|---|---|
| ARM to accelerate | 1472/2564 | 57.4% | 59.3% | 60.5% | 59.1% | 56.5% | 57.1% | 58.6% |
| Oxytocin | 97/2564 | 3.8% | 4.6% | 4.0% | 3.4% | 3.8% | 5.2% | 4.9% |
| Epidural | 882/2564 | 34.4% | 35.0% | 34.9% | 30.7% | 30.2% | 32.4% | 30.4% |
| Electronic monitoring | 1697/2564 | 66.2% | 54.9% | 45.2% | 41.8% | 43.2% | 44.1% | 45.0% |
| Fetal blood sample | 76/2564 | 3.0% | 3.4% | 3.7% | 3.4% | 2.8% | 3.9% | 3.5% |
| Vaginal operative delivery | 71/2564 | 2.8% | 3.5% | 2.5% | 3.1% | 4.0% | 3.9% | 4.0% |
| Apgars <7 at 5 mins | 9/2564 | 0.4% | 0.5% | 0.3% | 0.3% | 0.1% | 0.2% | 0.3% |
| Cord pH < 7.0 | 4/2564 | 0.2% | 0.2% | 0.0% | 0.1% | 0.1% | 0.2% | 0.2% |
| Overall caesarean section rate | 31/2564 | 1.2% | 1.7% | 1.1% | 1.2% | 0.9% | 1.4% | 1.2% |
| Caesarean section at VE=10 | 4/2564 | 0.2% | 0.5% | 0.2% | 0.1% | 0.2% | 0.2% | 0.2% |
| Admitted to Neonatal Unit | /2564 | 0.0% | 4.7% | 4.9% | 5.4% | 4.7% | 5.6% | 4.2% |
| Episiotomy* | 174/2564 | 6.8% | 8.1% | 8.8% | 10.3% | 10.4% | 9.9% | 12.1% |
| OASIS* | 26/2564 | 1.0% | 0.7% | 1.0% | 0.5% | 0.9% | 0.7% | 1.1% |
| Length of labour >12 hrs | 5/2564 | 0.2% | 0.3% | 0.2% | 0.5% | 0.2% | 0.6% | 0.2% |
| Babies >=4.0kg | 641/2564 | 25.0% | 26.0% | 26.6% | 23.2% | 24.3% | 24.5% | 23.1% |
| Aged >=35 | 1047/2564 | 40.8% | 40.8% | 37.3% | 38.7% | 37.3% | 37.7% | 35.3% |
| BMI >=30 | 283/2564 | 11.0% | 11.9% | 11.4% | 13.6% | 10.5% | 11.8% | 15.8% |
| PPH >1000mls | 28/2564 | 1.1% | 0.8% | 0.5% | 0.4% | 0.3% | 0.3% | 0.3% |
| HIE | 4/2564 | 0.0% | 0.1% | 0.0% | 0.1% | 0.0% | 0.1% | 0.1% |
| Blood transfusion rate | 22/2564 | 0.9% | 0.7% | | | | | |

**includes Episiotomy and Sphincter Damage (4)*

# Classification of indications for Caesarean Sections - prelabour

Fetal

Maternal

No medical reason

# Caesarean section on request

Definition

At the time of the request in the opinion of the obstetrician there is a greater relative risk of a significant adverse outcome to mother or baby by carrying out a caesarean section than awaiting spontaneous labour and delivery or inducing labour

(within any of the 10 groups)

# Caesarean Section Rates: Much Ado about Nothing or a Marker of Quality Care?

Grace Neville, Michael Robson

Current Progress in Obstetrics & Gynaecology / Volume-2

*"Women will always choose the type of delivery that seems safest for them and their babies"*

*"If women choose a type of delivery that we disagree with then either they may be right and we may be wrong, the care that is being provided is not what we think it is or appropriate information is not available"*

# Summary

Labour ward audit is important irrespective of caesarean section rate

Group 1 is the key to an appropriate caesarean section rate

# Many thanks for your listening!