cesaria
BÉNIN • FRANCE • MALI
CAMBODGE • VIÊT NAM

Potentially avoidable Caesareans in a Vietnam hospital: Health care providers Perspective

Pascale FAGGIANELLI MD
Consultant for UNFPA

Objectives

To evaluate C-section practice at National Obstetrics Hospital in Hanoi

- Understand and describe the organization of care
- Analyze the practice and indications of C-sections

➢ Understanding the reasons for high C-Section rate from a Health care providers point of view

Methods:

Data sources

C-sections between the 1st and the 19th April 2017

Birth registers and observations

Analyze of organization of care

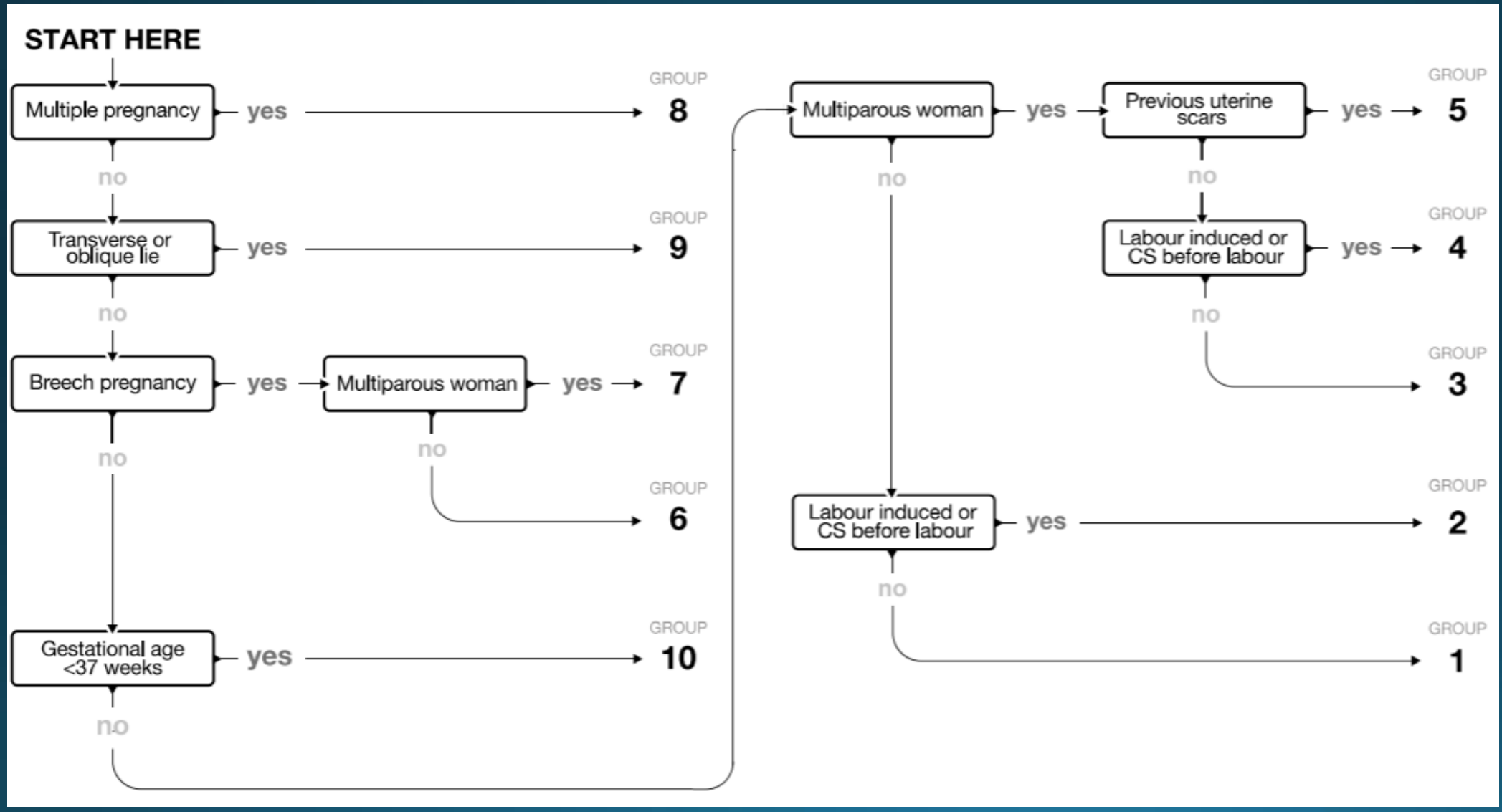
Interviews and observations

Analyze the practice and indications of C-sections

Robson's classification

Audit of C-section (flow chart)

Flow chart for the classification of women in the Robson Classification



Adapted from Nassar LF, Sancho HD. Instrucción de Robson . v.0.1-1. 2015/06/08. Caja Costarricense de Seguro Social)

GROUP 6

- Nulliparus
- Singleton
- Breech pregnancy

GROUP 7

- Multiparous
- Singleton
- Breech pregnancy
- Including women with previous uterine scar

This Classification System for Caesarean Sections is a tool to assist facilities and countries to study caesarean sections in more homogeneous groups of women and in an action-oriented manner.

LEGEND

- Spontaneous labour
- Missing data
- CS Caesarean section
- C Previous caesarean section

GROUP 1

- Nulliparous
- Singleton
- Cephalic
- Term
- Spontaneous labour

GROUP 1

- Nulliparous
- Singleton
- Cephalic
- Term
- Spontaneous labour

GROUP 10

- Singleton
- Cephalic
- Preterm
- Including women with previous uterine scar

GROUP 99

- Women with missing data

GROUP 4

- Multiparous (without previous CS)
- Singleton
- Cephalic
- Term
- Induced labour or pre-labour CS

GROUP 5

- Multiparous
- Singleton
- Cephalic
- Term
- Previous uterine scar

FLOWCHART for C-section making decision: Degree of contraindications to a vaginal birth

Sources Recommandations: NICE/ CNGOF/ ACOG/ OMS

Vaginal birth is a contraindication

- Previous Vertical Corporeal Hystérotomy
- Previous Polymyomectomy
- Previous utérine ruptured
- Previous strictly more than 2 C-sections
- Présentation transverse, oblique
- Triplet or more
- Abnormal placenta with no possibility for a vaginal delivery
- Macrosomia > 5000 gr without diabete
- Macrosomia > 4500 gr with diabète
- Previous shoulder dystocia with plexus injury AND macrosomia
- HIV > 400 copies VIH/ml
- ColnfectionVIH/VHC (accord expert)
- Previous primo infection HSV AFTER 33 WG

To be discuss on a case by case basis:

- Some fœtal malformations
- Some maternal deseases such avec neuro vascular hemorrhage (malformation)
- Previous fistula OR 3rd or 4th degree perineal tears OR perineal surgery

→ **Not avoidable**

Vaginal birth is possible on specific circumstances

- Previous C-section less than 6 months before new pregnancy
- No report available of the previous C-section
- TWINS with T1 in breech P
- Breech presentation
- Macrosomia > 4500 gr without diabète
- Macrosomie > 4250 gr wtih diabète
- Previous shoulder dystocia with plexus injury WITHOUT macrosomia
- Asymmetric pelvis (polio, traumatism...)
- Uterovaginal Anatomic anomaly
- Previous uterine septum with resection

→ **Potentially avoidable**

Vaginal birth is not contra-indicated

→ **Avoidable**

C-section during labor Not included in the analyze

29. FHR anomalies
30. Obstructed labor
31. No progression
32. Failed induction

→ **Exclusion**

FLOWCHART for C-section making decision: Degree of contraindications to a vaginal birth

Sources Recommandations: NICE/ CNGOF/ ACOG/ OMS

Vaginal birth is a contraindication

- Previous Vertical Corporeal Hystérotomy
- Previous Polymyomectomy
- Previous utérine ruptured
- Previous strictly more than 2 C-sections
- Présentation transverse, oblique
- Triplet or more
- Abnormal placenta with no possibility for a vaginal delivery
- Macrosomia > 5000 gr without diabete
- Macrosomia > 4500 gr with diabète
- Previous shoulder dystocia with plexus injury AND macrosomia
- HIV > 400 copies VIH/ml
- ColnfectionVIH/VHC (accord expert)
- Previous primo infection HSV AFTER 33 WG

To be discuss on a case by case basis:

- Some fœtal malformations
- Some maternal deseases such avec neuro vascular hemorrhage (malformation)
- Previous fistula OR 3rd or 4th degree perineal tears OR perineal surgery

→ Not avoidable

Vaginal birth is possible on specific circumstances

- Previous C-section less than 6 months before new pregnancy
- No report available of the previous C-section
- TWINS with T1 in breech P
- Breech presentation
- Macrosomia > 4500 gr without diabète
- Macrosomie > 4250 gr wtih diabète
- Previous shoulder dystocia with plexus injury WITHOUT macrosomia
- Asymmetric pelvis (polio, traumatism...)
- Uterovaginal Anatomic anomaly
- Previous uterine septum with resection

→ Potentially avoidable

Vaginal birth is not contra-indicated

→ Avoidable

C-section during labor Not included in the analyze

29. FHR anomalies
30. Obstructed labor
31. No progression
32. Failed induction

→ Exclusion

FLOWCHART for C-section making decision: Degree of contraindications to a vaginal birth

Sources Recommandations: NICE/ CNGOF/ ACOG/ OMS

Vaginal birth is a contraindication

- Previous Vertical Corporeal Hystérotomy
- Previous Polymyomectomy
- Previous utérine ruptured
- Previous strictly more than 2 C-sections
- Présentation transverse, oblique
- Triplet or more
- Abnormal placenta with no possibility for a vaginal delivery
- Macrosomia > 5000 gr without diabete
- Macrosomia > 4500 gr with diabète
- Previous shoulder dystocia with plexus injury AND macrosomia
- HIV > 400 copies VIH/ml
- ColnfectionVIH/VHC (accord expert)
- Previous primo infection HSV AFTER 33 WG

To be discuss on a case by case basis:

- Some fœtal malformations
- Some maternal deseases such avec neuro vascular hemorrhage (malformation)
- Previous fistula OR 3rd or 4th degree perineal tears OR perineal surgery

Not avoidable

Vaginal birth is possible on specific circumstances

- Previous C-section less than 6 months before new pregnancy
- No report available of the previous C-section
- TWINS with T1 in breech P
- Breech presentation
- Macrosomia > 4500 gr without diabète
- Macrosomie > 4250 gr wtih diabète
- Previous shoulder dystocia with plexus injury WITHOUT macrosomia
- Asymmetric pelvis (polio, traumatism...)
- Uterovaginal Anatomic anomaly
- Previous uterine septum with resection

Potentially avoidable

Vaginal birth is not contra-indicated

Avoidable

C-section during labor Not included in the analyze

29. FHR anomalies
30. Obstructed labor
31. No progression
32. Failed induction

Exclusion

Results: Robson (1)

Robson « modified » with birth between 01 to 19 April 2017(n=837)

Groups	C-sections (n)	Women delivered (n)	Relative group size to overall facility (%)	CS rate in each group (%)	Absolute group contribution to overall CS rate (%)	Relative contribution of each of the 10 groups to overall CS rate (%)
1 & 2 Primipara LR*	105	250	29,87	42,00	12,54	22,53
3 & 4 Multipara LR*	56	214	26,57	26,17	6,69	12,02
5 Previous scar	166	166	19,83	100,00	19,83	35,62
6 Primipara breech	19	22	2,63	86,36	2,27	4,08
7 Multipara breech	22	26	3,11	84,62	2,63	4,72
8 Twins	55	59	7,05	92,22	6,57	11,80
9 Transverse	11	11	1,31	100,00	1,31	2,36
10 Under 37 LMP	32	89	10,63	35,96	3,82	6,87
Total	466	837	100	55,68	55,68	100,00

* LR : Low risk

Global rate

Results: Robson (2)

Robson « modified » with birth between 01 to 19 April 2017(n=837)

Groups	C-sections (n)	Women delivered (n)	Relative group size to overall facility (%)	CS rate in each group (%)	Absolute group contribution to overall CS rate (%)	Relative contribution of each of the 10 groups to overall CS rate (%)
1 & 2 Primipara LR*	105	250	29,87	42,00	12,54	22,53
3 & 4 Multipara LR*	56	214	26,57	26,17	6,69	12,02
5 Previous scar	166	166	19,83	100,00	19,83	35,62
6 Primipara breech	19	22	2,63	86,36	2,27	4,08
7 Multipara breech	22	26	3,11	84,62	2,63	4,72
8 Twins	55	59	7,05	92,22	6,57	11,80
9 Transverse	11	11	1,31	100,00	1,31	2,36
10 Under 37 LMP	32	89	10,63	35,96	3,82	6,87
Total	466	837	100	55,68	55,68	100,00

* LR : Low risk

Results: Robson (3)

Robson « modified » with birth between 01 to 19 April 2017(n=837)

Groups	C-sections (n)	Women delivered (n)	Relative group size to overall facility (%)	CS rate in each group (%)	Absolute group contribution to overall CS rate (%)	Relative contribution of each of the 10 groups to overall CS rate (%)
1 & 2 Primipara LR*	105	250	29,87	42,00	12,54	22,53
3 & 4 Multipara LR*	56	214	26,57	26,17	6,69	12,02
5 Previous scar	166	166	19,83	100,00	19,83	35,62
6 Primipara breech	19	22	2,63	86,36	2,27	4,08
7 Multipara breech	22	26	3,11	84,62	2,63	4,72
8 Twins	55	59	7,05	92,22	6,57	11,80
9 Transverse	11	11	1,31	100,00	1,31	2,36
10 Under 37 LMP	32	89	10,63	35,96	3,82	6,87
Total	466	837	100	55,68	55,68	100,00

* LR : Low risk

Practices of C-section

Main indications (n total= 466 C-sections):

- Previous C-section 45% (206/466)
- IVF 14% (67/466)
- Twins 13% (59/466)
- Breech presentation 10% (48/466)

  - ➢ 80% of de C-Sections (380/466)
  - ➢ 4 main groups with 100% C-sections

FLOWCHART for C-section making decision: Degree of contraindications to a vaginal birth

Sources Recommandations: NICE/ CNGOF/ ACOG/ OMS

Vaginal birth is a contraindication

- Previous Vertical Corporeal Hystérotomy
- Previous Polymyomectomy
- Previous utérine ruptured
- Previous strictly more than 2 C-sections
- Présentation transverse, oblique
- Triplet or more
- Abnormal placenta with no possibility for a vaginal delivery
- Macrosomia > 5000 gr without diabete
- Macrosomia > 4500 gr with diabète
- Previous shoulder dystocia with plexus injury AND macrosomia
- HIV > 400 copies VIH/ml
- ColnfectionVIH/VHC (accord expert)
- Previous primo infection HSV AFTER 33 WG

To be discuss on a case by case basis:

- Some fœtal malformations
- Some maternal deseases such avec neuro vascular hemorrhage (malformation)
- Previous fistula OR 3rd or 4th degree perineal tears OR perineal surgery

Not avoidable

Vaginal birth is possible on specific circumstances

- Previous C-section less than 6 months before new pregnancy
- No report available of the previous C-section
- TWINS with T1 in breech P
- Breech presentation
- Macrosomia > 4500 gr without diabète
- Macrosomie > 4250 gr wtih diabète
- Previous shoulder dystocia with plexus injury WITHOUT macrosomia
- Asymmetric pelvis (polio, traumatism...)
- Uterovaginal Anatomic anomaly
- Previous uterine septum with resection

Potentially avoidable

Vaginal birth is not contra-indicated

Avoidable

C-section during labor Not included in the analyze

29. FHR anomalies
30. Obstructed labor
31. No progression
32. Failed induction

Exclusion

C-sections in the flow chart: Synthesis

Half of the CS were potentially avoidable

Low risk groups (1 to 4) and previous C-sections (5):

- The most contributing (85%)

Algorithm	Robson groups 1 & 2	3 & 4	5	6 &7	8	9	10
Contra indicated	3 (2.9%)	15 (26.8%)	7 (4.2%)	3 (7.5%)	2 (3.6%)	12 (100%)	12 (37.5%)
± contraindicated	2 (1.9%)	0 (0.0%)	33 (19.9%)	37 (92.5%)	11 (20.0%)	0 (0.0%)	1 (3.1%)
Potentially avoidable	50 (47.6%)	23 (41.1%)	125 (75.3%)	0 (0.0%)	26 (47.3%)	0 (0.0%)	8 (25%)
During labor	49 (47.6%)	18 (32.1%)	1 (0.6%)	0 (0.0%)	16 (29.1%)	0 (0.0%)	11 (34.4%)
Total	105 (100.0%)	56 (100.0%)	166 (100.0%)	40 (100.0%)	55 (100.0%)	12 (100%)	32 (100.0%)

C-sections in the flow chart: Synthesis

Low risk groups (1 to 4) alone: 161 C-sections

- Nearly are potentially avoidable (n=73)

	Robson groups						
Algorithm	1 & 2	3 & 4	5	6 &7	8	9	10
Contra indicated	3 (2.9%)	15 (26.8%)	7 (4.2%)	3 (7.5%)	2 (3.6%)	12 (100%)	12 (37.5%)
± contraindicated	2 (1.9%)	0 (0.0%)	33 (19.9%)	37 (92.5%)	11 (20.0%)	0 (0.0%)	1 (3.1%)
Potentially avoidable	50 (47.6%)	23 (41.1%)	125 (75.3%)	0 (0.0%)	26 (47.3%)	0 (0.0%)	8 (25%)
During labor	49 (47.6%)	18 (32.1%)	1 (0.6%)	0 (0.0%)	16 (29.1%)	0 (0.0%)	11 (34.4%)
Total	105 (100.0%)	56 (100.0%)	166 (100.0%)	40 (100.0%)	55 (100.0%)	12 (100%)	32 (100.0%)

CS potentially avoidable between groups 1 à 4 (low risk groups)

Nearly half is potentially avoidable (73/161; 45%)

Main groups

- IVF: 30%
- Possible macrosomia: 29%

Indications	Nb
Maternal age	3
Previous Forceps	1
Previous Mort in Utero	4
On demand	5
Diabete	2
IVF	22
Hemorroid	2
High blood pressure	3
Amiotic fluid in excess (ILA 99)	1
Maternal ovarian cyst	1
Suspicion of macrosomia	21
Placenta praevia (> 2cm from the cervix)	1
In utero birth retardation	1
PROM	1
Maternal heigh	5
Total	73

Interviews and informal discussions with health care providers

- Fear of the consequences of patient dissatisfaction
- Afraid of criticism on social networks
- Fear of judicial risks (problem with doctor's status)
- Consultations not long enough to establish a informed shared decision

➢ Lead to systematic decision of C-section

Defensive medecine and attitude of doctors

- Concept appeared in the US during the 90's
- Prescription of unnecessary acts for the sole purpose of covering oneself against possible complaints from patients
- Avoidance of acts that appear to be at risk of failure (or uncertain results)

Defensive medecin on the Net

« Defensive medecine »

- Google: 171000 results
- Google Sholar: 17800 results
- Pubmed: 3005 results

« A bane to healthcare », « Practices revolution », « A cure worth than the disease », « doctors second victims of medical malpractices », «Tunisians doctors paralyzed par risk of malpractice»…

Defensive medecine in US

- Extra cost of health expenses in the USA (National congress)

≈ 34% of extra costs

  - Law reform to better protect medical practice could lead to $ 11 billion in savings

- Tussing (1997): 6% of CS
- Studdert (2005): 6% of CS

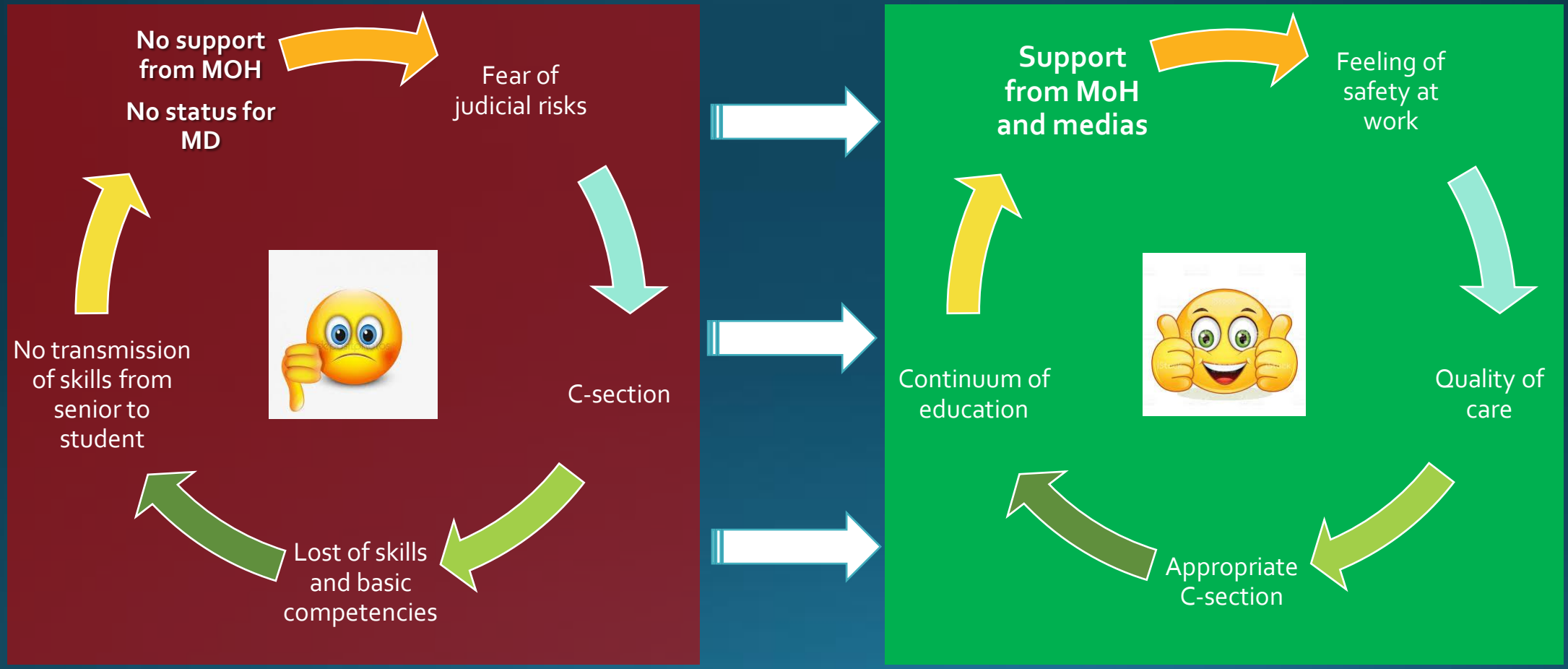
Tracking quality of care

Tracks to follow (Lomas et al):

- Choose a motivated and recognized leader to lead this "mission"
- Establish guidelines in collaboration with other doctors
- Select the group(s) to target (C-section potentially avoidable in groups 1 to 4 +++)
- Set up regular monitoring and evaluation
- Communicating results to the team and in medias
- Rely on the Ministry of Health

→ **Create a dynamic process for the team**

From vicious to virtious circle



Conclusions

- Find motivating and reassuring solutions
- The National has a real asset :
  - Leadership
  - Education
  - Good technical facilities
  - Skilled and well trained staffs
- Limit the loss of knowledge and continue to transmit (eg instrumental delivery)

Merci
Cảm ơn