Indications for referral of pregnant women to adequate institutions according to expected risks

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Reviews

- Normal/low risk pregnancy:
  - healthy mother,
  - Mono fetal pregnancy,
  - healthy fetus,
  - counseling with midwife,
  - delivery in maternity with/without neonatology unit.
- High-risk pregnancy:
  - Maternal disease with pregnancy
  - Complicated pregnancy
  - Fetal congenital abnormalities

High-risk pregnancy ➔ Risks??

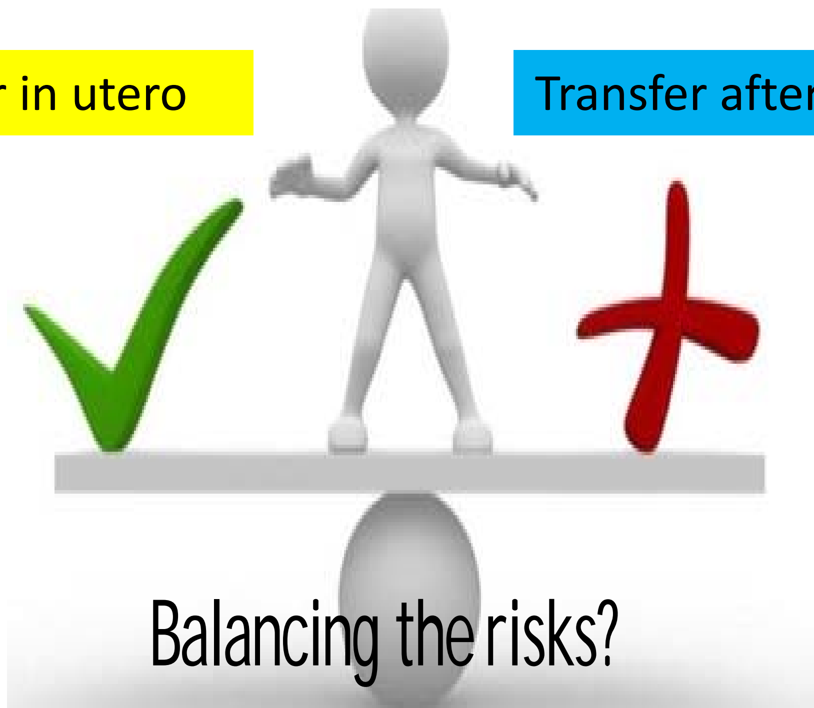
- Maternal risks
- Fetal risks
- Both maternal and fetal risks

Why transfer in utero should be reconsidered??

- ✓ Perinatal mortality
- ✓ Post natal morbidity

Transfer in utero

Transfer after birth



In utero transfer

- It is the transfer of a mother to another maternity unit whose level of care is adapted to mother's health condition or the fetal condition.
- There are maternal and fetal criteria for *in utero transfer.*
- There are also *contraindications* for the transfer.

https://www.has-sante.fr/upload/docs/application/pdf/2013-01/09r26_reco_transfert_en_urgence.pdf

Maternitytype in term of neonatal care in France:

Haute Autorité de Santé. Suivi et orientation des femmes enceintes en fonction des situations à risque identifiées. Recommandations professionnelles. Saint Denis la Plaine : HAS ; 2016.

- Level 1 maternity: >36 weeks
- Level 2A: >34 weeks
- Level 2B: >32 weeks
- Level 3: between 24-31 weeks

https://www.has-sante.fr/upload/docs/application/pdf/2013-01/09r26_reco_transfert_en_urgence.pdf

https://ffrsp.fr/wp-content/uploads/2017/08/Organisation-des-tranferts-in-utero-selon-20-RSP-en-France-m%C3%A9tropolitaine-Memoire-Amandine-Dufour.pdf

Seuils d'âge gestationnel et type de maternités

Réseau Périnatal

Seuil d'AG pour une réanimation

Seuils d'âge gestationnel de prise en charge (SA)

23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 et +

Seuil HAS niveau 3

Niveau 2B

Niveau 2A

Niveau 1

Consignes nationales HAS — 24

FRANCHE-COMTÉ — 24

NEF - NAITRE DANS L'EST FRANCILIEN — 24

RESEAU ELENA LOIRE-NORD ARDECHE — 24

RESEAU NAITRE EN ALSACE — 23 en l'absence de RCIU sévère

Si absence de RCIU sévère

Si ≥ 1000 g et corticothérapie antenatale complète sans chorioamniotite

Si ≥ 1200 g

Si ≥ 1400 g et corticothérapie antenatale complète sans chorioamniotite

Si ≥ 1600 g

Si ≥ 2200 g

RESEAU PERINATAL DES DEUX SAVOIES — 24

RESEAU PERINATAL DU VAL DE MARNE — 23

Pas de niveau 2B

Légende

Maternité de niveau 3

Maternité de niveau 2B

Maternité de niveau 2A

Maternité de niveau 1

Fetal indications for in utero transfer

- 3 main situations justifying maternal transfer to level 3 center for fetal indication
  - The risk of *severe prematurity* (GA < 33 SA)
  - The risk of *fetal death in utero*
  - The fetus carrying *malformation(s)*
- Those indications includes:
  - Preterm labor
  - PROM
  - IUGR
  - Fetal malformation
  - Twin pregnancy, TTTS(Twin to Twin Transfusion Syndrome)
  - Anasarque
  - Triplet pregnancy…

Maternal indications of transfer

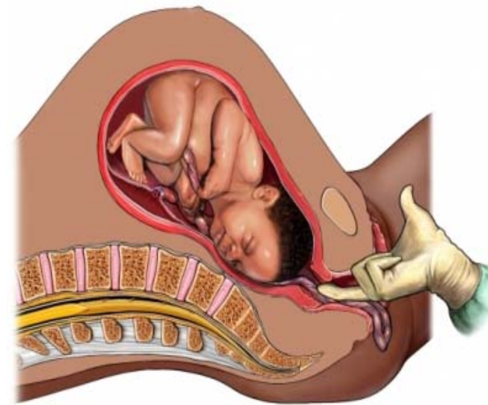
- **Ante partum (in utero)**
  - Placenta accreta/increta/percreta
  - Pre-eclampsia
  - Maternal disease with vital risk or need adequate management
- **Post partum**
  - Severe bleeding
  - Severe pre-eclampsia
  - Decompensated maternal pre existing disease
  - Pulmonary embolism
  - Mother-child separation avoiding

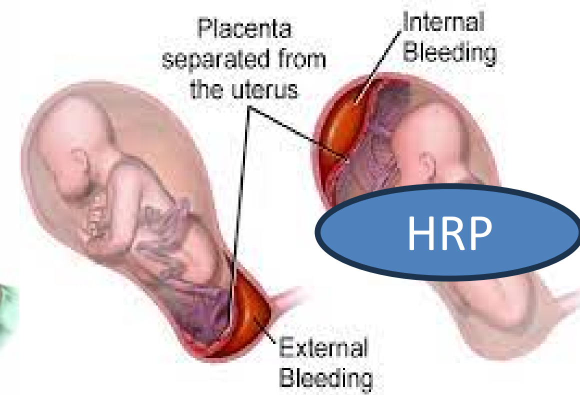
Maternal contraindication of transfer

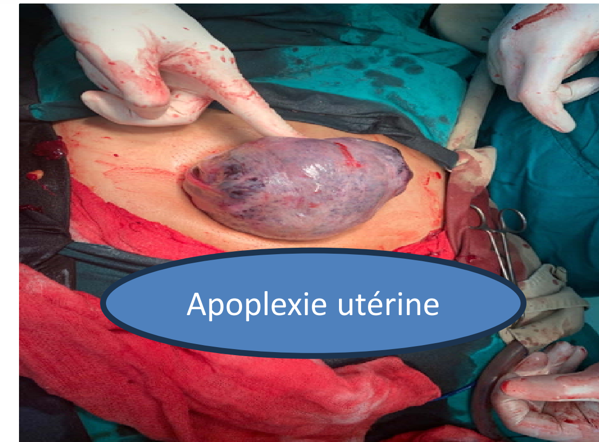
- *Active peri-partum hemorrage* (bleeding praevia placenta)
- *Severe Pre-eclampsia/eclampsia* ➔ need immediate fetal extraction
- *Advanced dilated cervix* in preterm labor (the delivery is imminent and is likely to occur in the ambulance)
- The monitoring of the child imposes an *immediate fetal extraction*
- In these cases, the child may be transferred after birth in adequate conditions and the mother may join the baby, depending on the beds available in the reception structure, secondarily.

Fetal contraindication of transfer

- Placenta abruption
- Perinatal asphyxia
- Imminent delivery



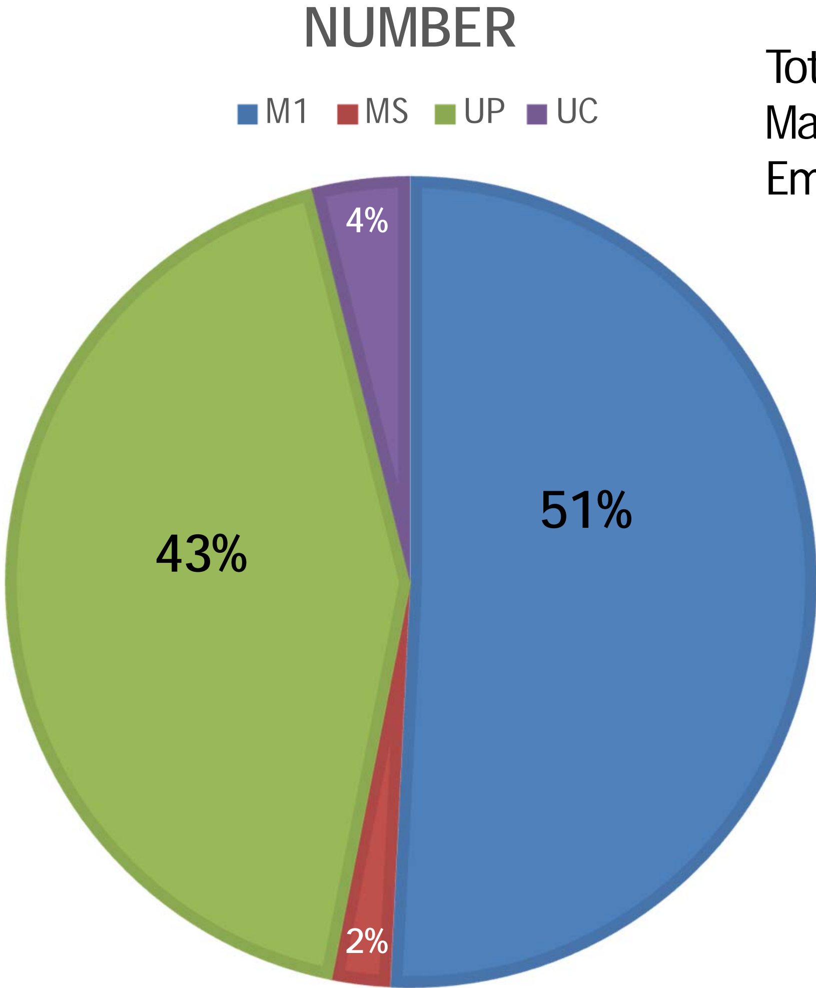




Report from Calmette maternity…

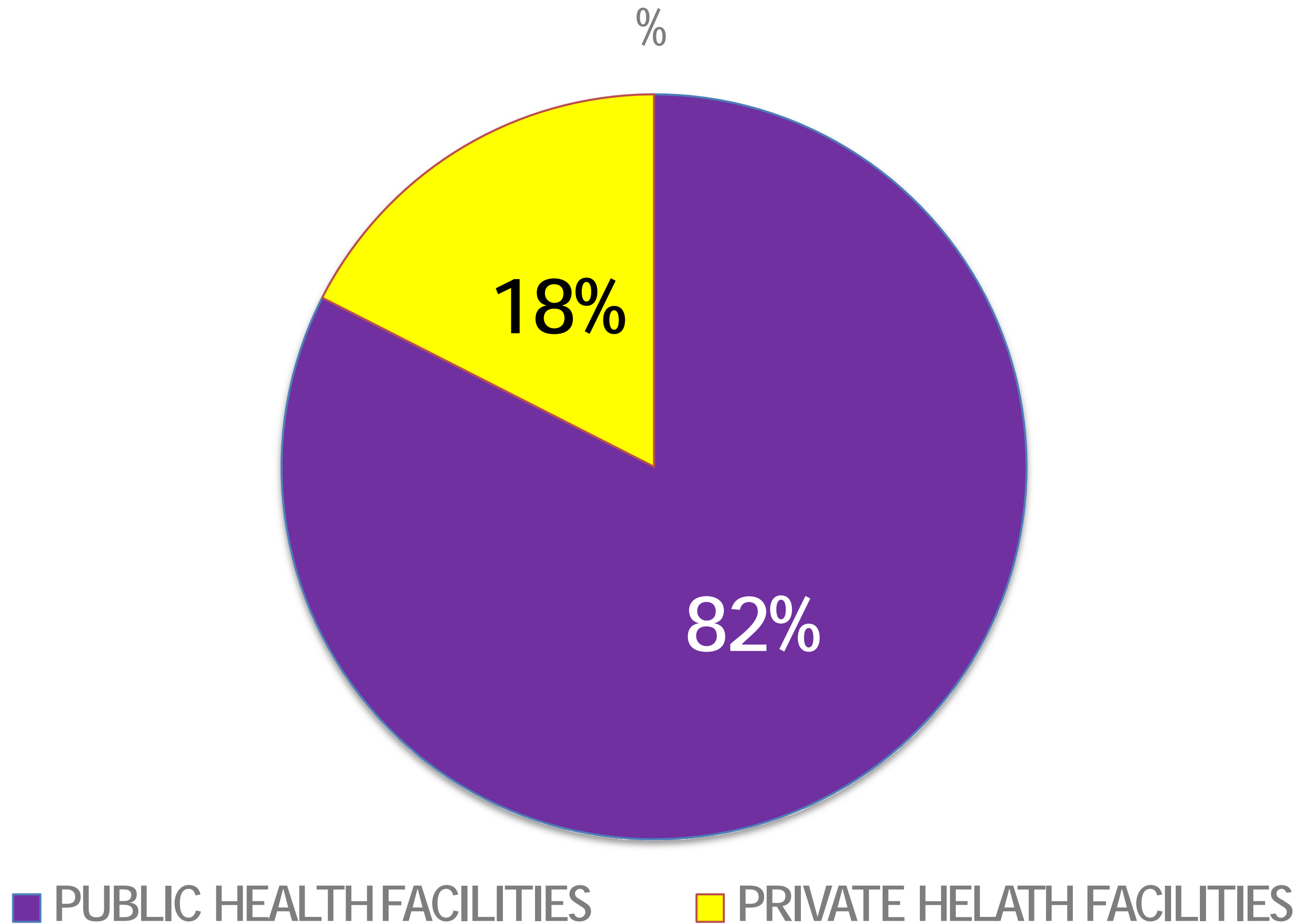
- Level 3 maternity, 244 beds
- NICU level 3, 40 beds, resuscitation >27 weeks of gestation and/or Weight>800grams
- Retrospective descriptive monocentric study
- Total transfer in 2023 (01/01/2023-03/08/2023): 171cases
- Exclude 43 cases due to incomplete information
- Include 128 cases;
- Method: collecting the data of all transfer: public, private, antepartum, postpartum, by all duty doctors in Telegram group.

Destination of transfer

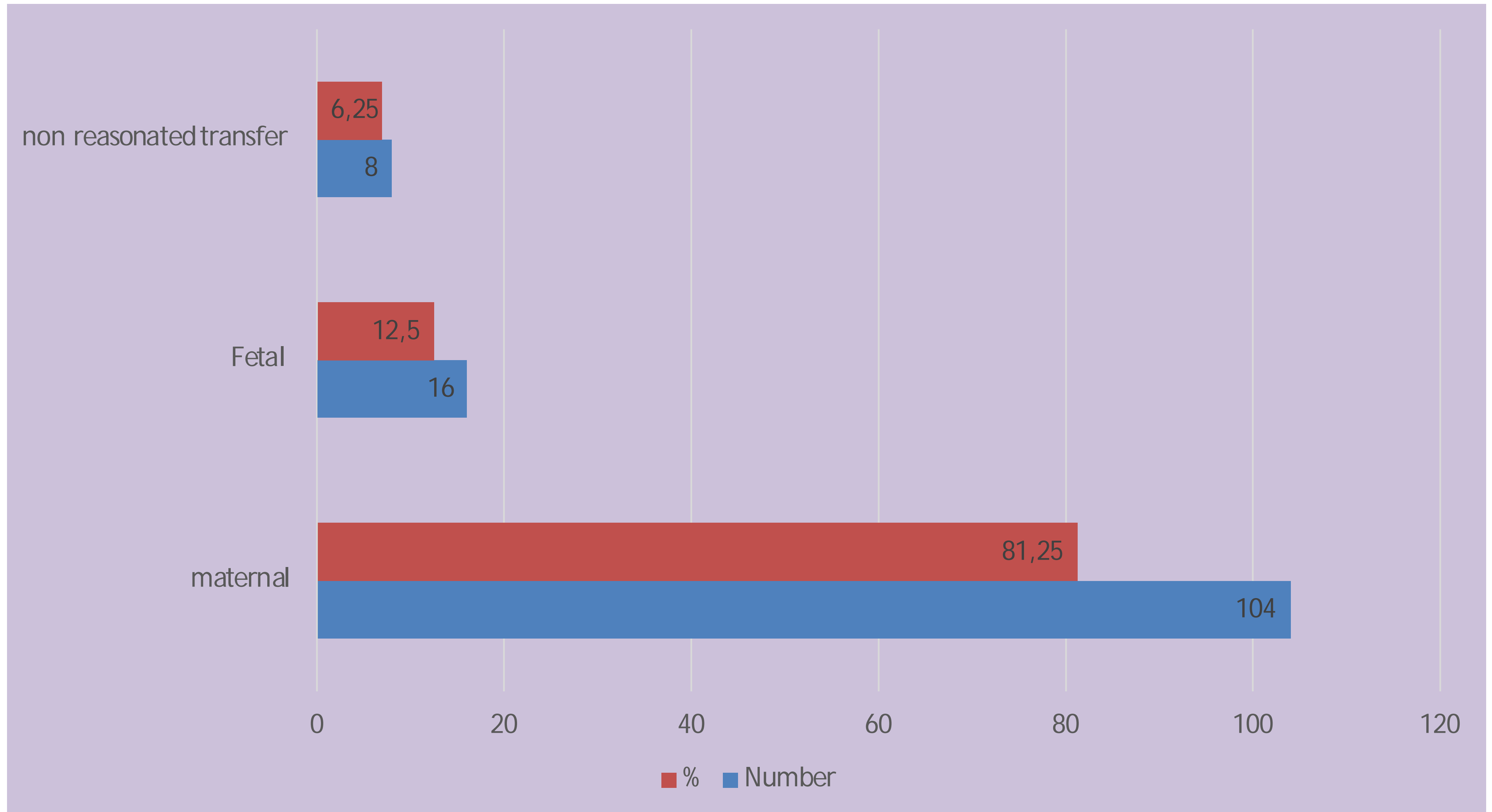


Total: 128
Maternity: 68/128 (53%)
Emergency: 60/128 (47%)

Where are the transfer from?



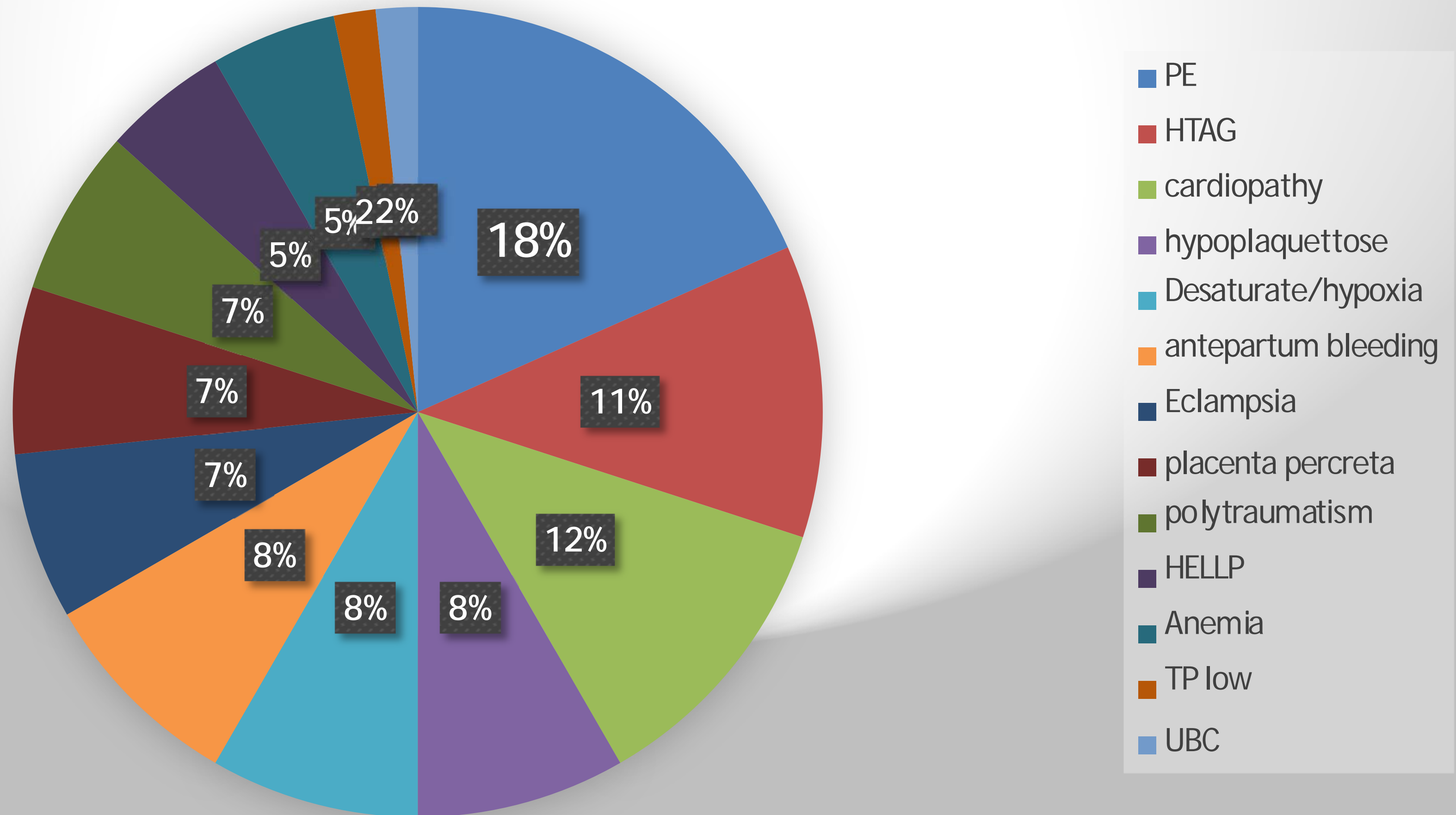
Fetal vs maternal indication of transfer



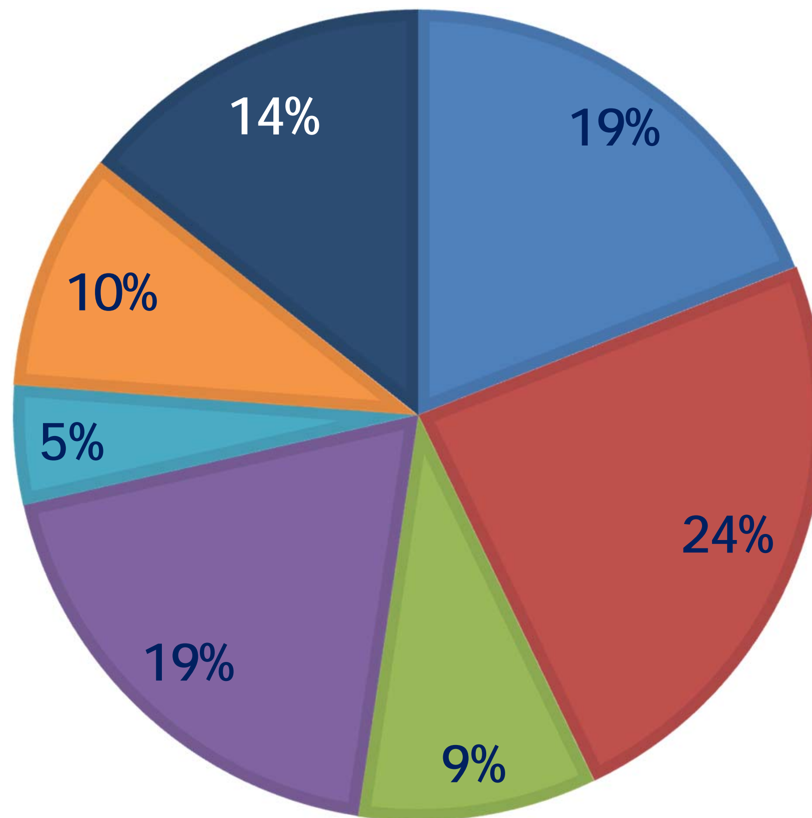
Maternal indication of transfer

Maternal status	Number	%
Post partum J0	19	18%
Post C-section J0	04	4%
TIU > 33 weeks	60	58%
TIU preterm ≤33 weeks	21	20%

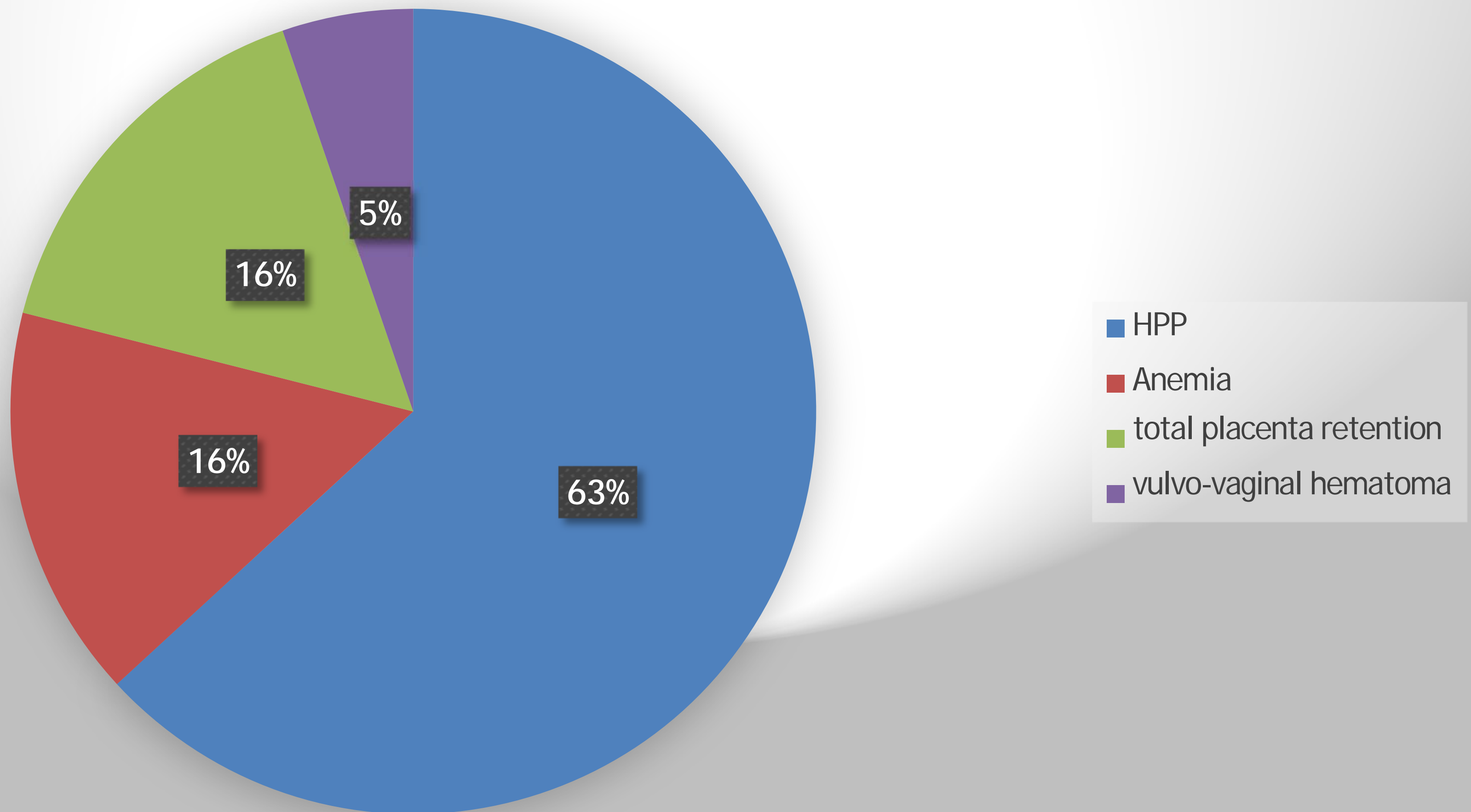
TIU>33weeks



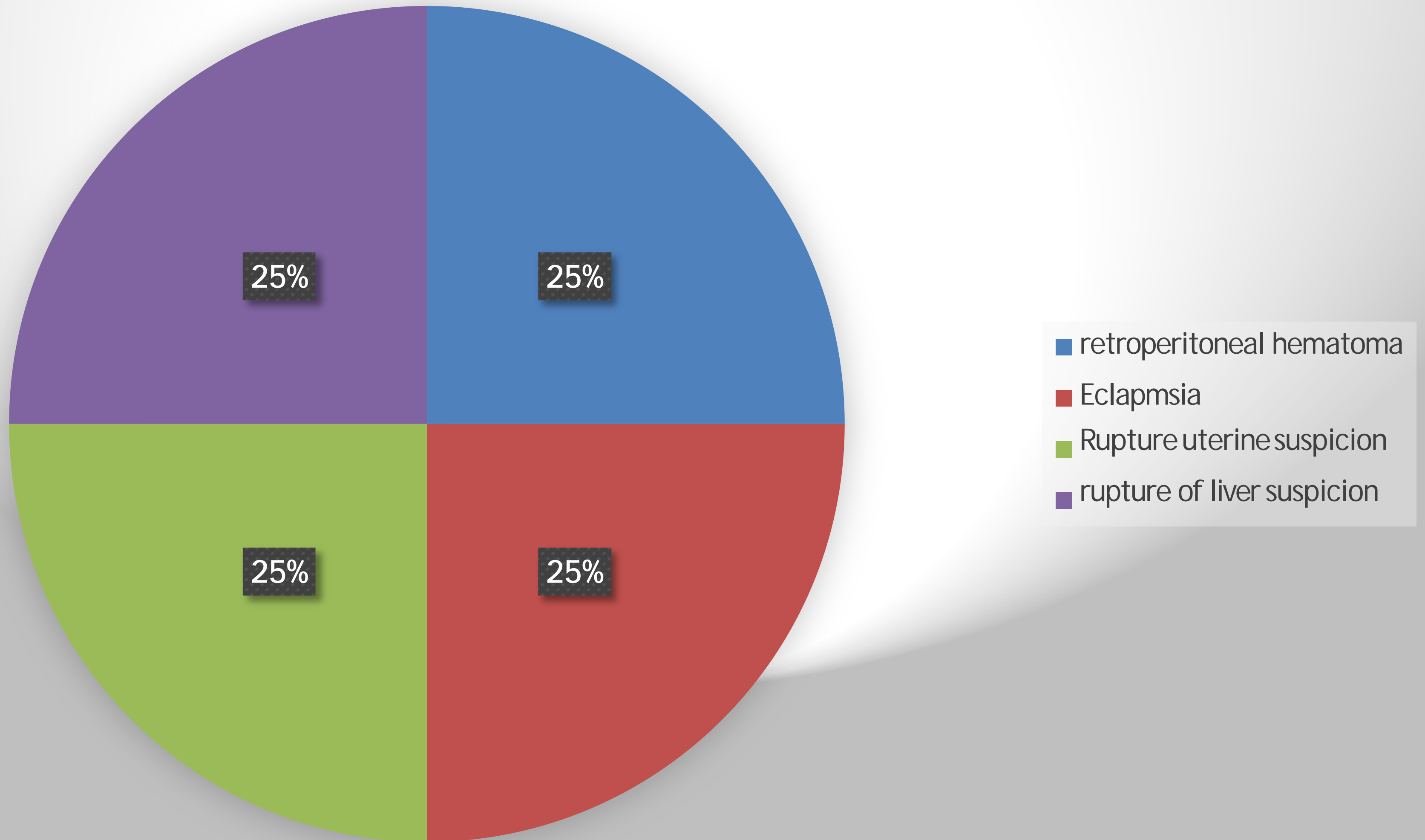
TIU≤ 33weeks



Post partum



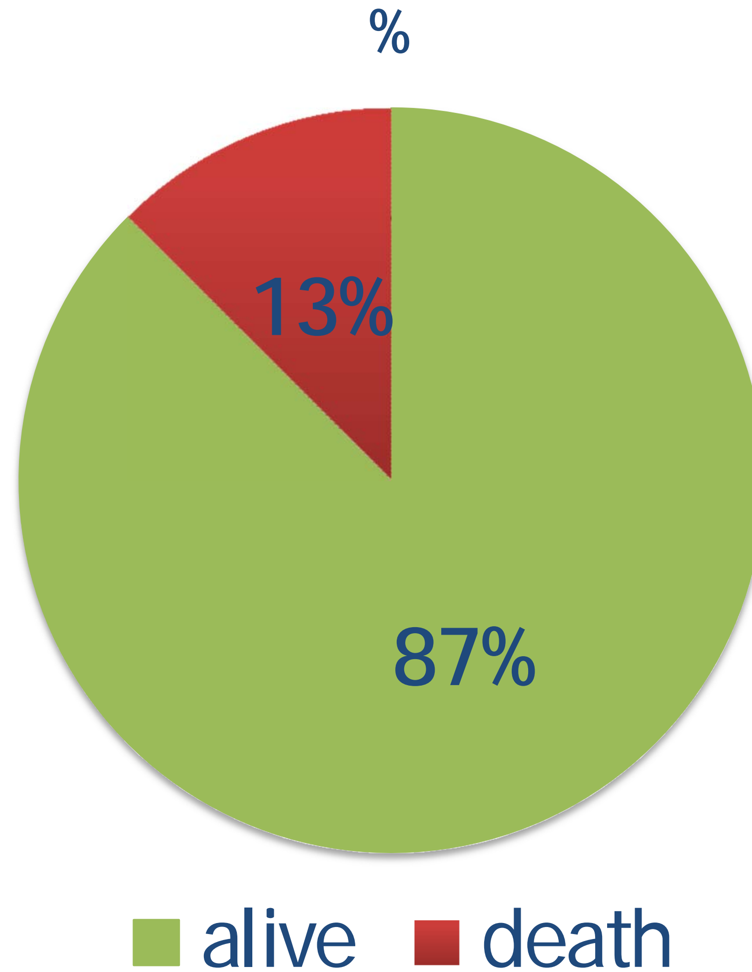
Post C-section



Fetal indication of transfer

Diagnosis	≤ 33weeks	> 33weeks	Total
Preterm labour	4	2	6
PROM	1	4	5
Placenta abruption	2	0	2
Dystocia presentation	0	3	3
Total	7	9	16

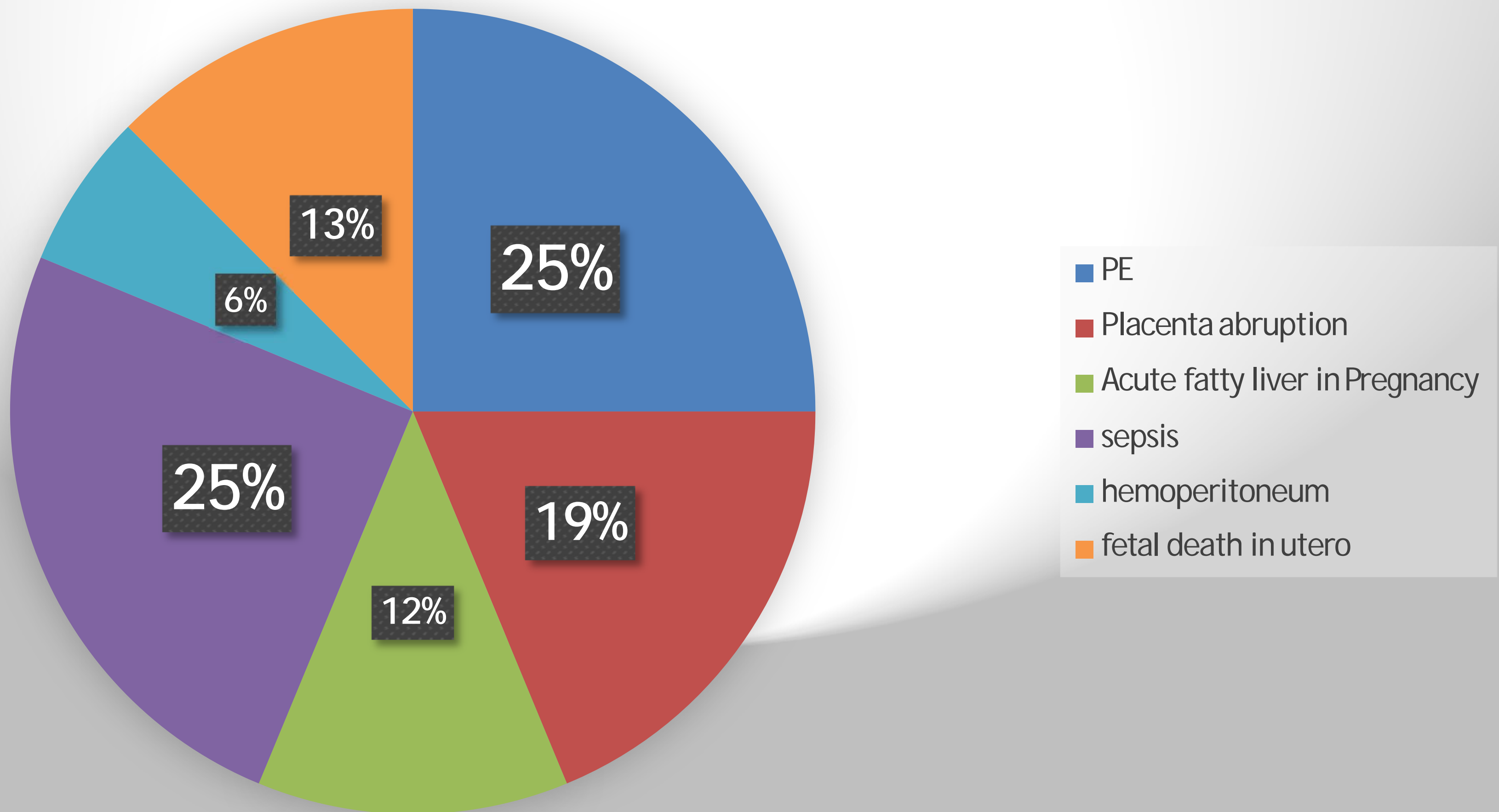
Fetal status at arriving



16 fetal deaths

- 16 cases of fetal death diagnosed at arriving
  - 9 were detected before transfer
  - 2 were seen as critical FHR < 100/min (1 placenta abruption, 1 severe Pre-eclampsia)
  - 5 were unknown/not informed in transferred document.

Diagnosis associated with Fetal death



Discussion

- This workflow is observed in our nowaday health system
- The fetal mortality is about **13%**, screen at arriving destination
- Some transfers are necessary and reasonated
- Some transfers are considered non-resonated and/or delayed
- Some transfers are dangerous for the fetus, for the mother or both
- Most of transfer are medical transfer (with transfer document), some transfer are seen coming by private transportation (most of them no transfer document), which is unsafe for mother and fetus.
- Lack of communication from the original health facilities to the receiving hospital eventhought the hotline number is well distributed.
- Difficult for OBGYN team and Neonate team to manage their patients.

Conclusion

- This is clinical trial to promote and remind our mission as OBGYN to provide the better high quality of care (Patient- centered Care)
- Aims is to reduce the perinatal mortality- morbidity in both fetus and mother.
- Inform our colleague before the transfer (need communication)
- Good communication ➔good collaboration➔ lead to successful management in perinatal care
- Promote the effective health system in our country to reduce the oversea flight.

Thank you 🙏