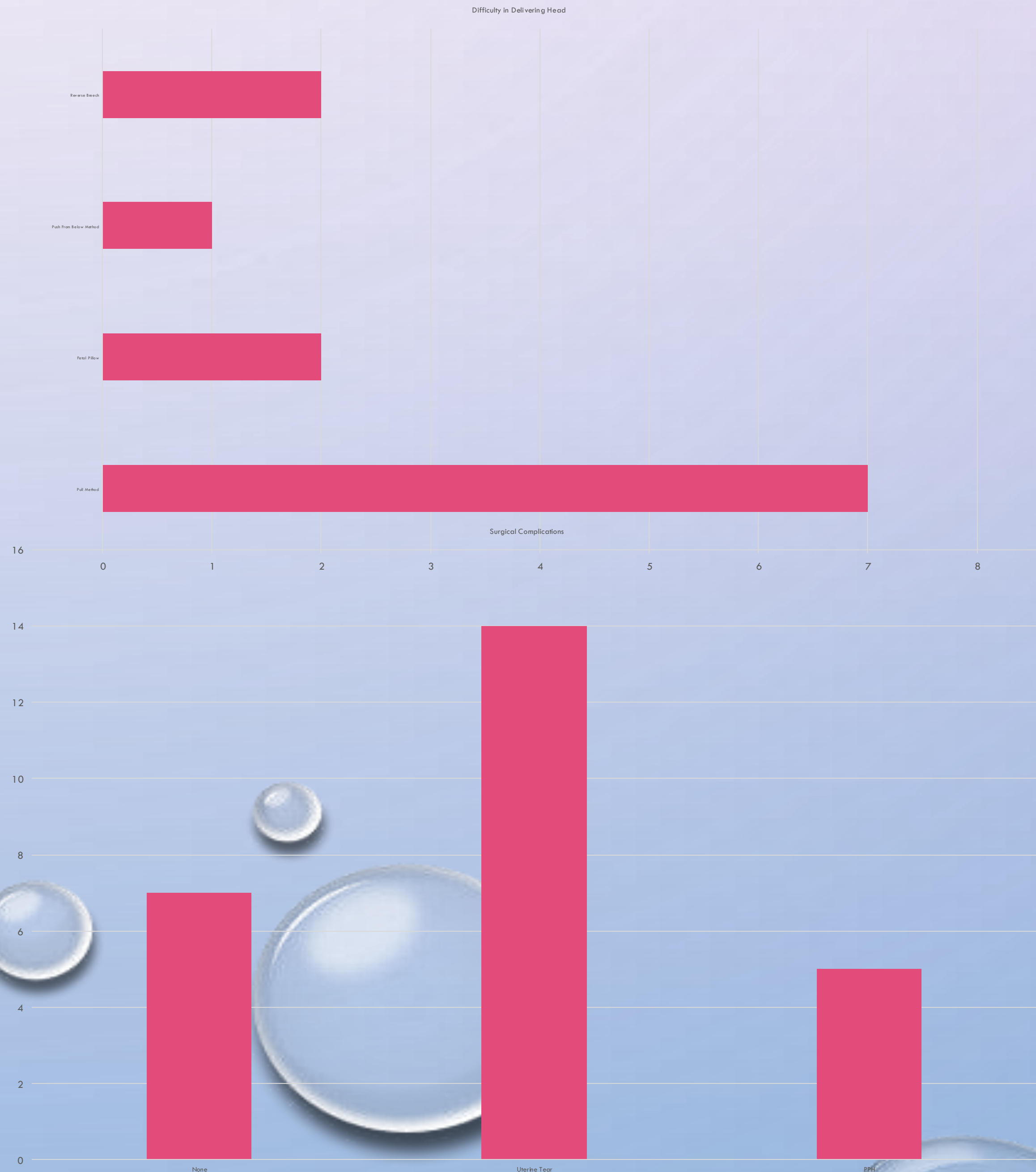
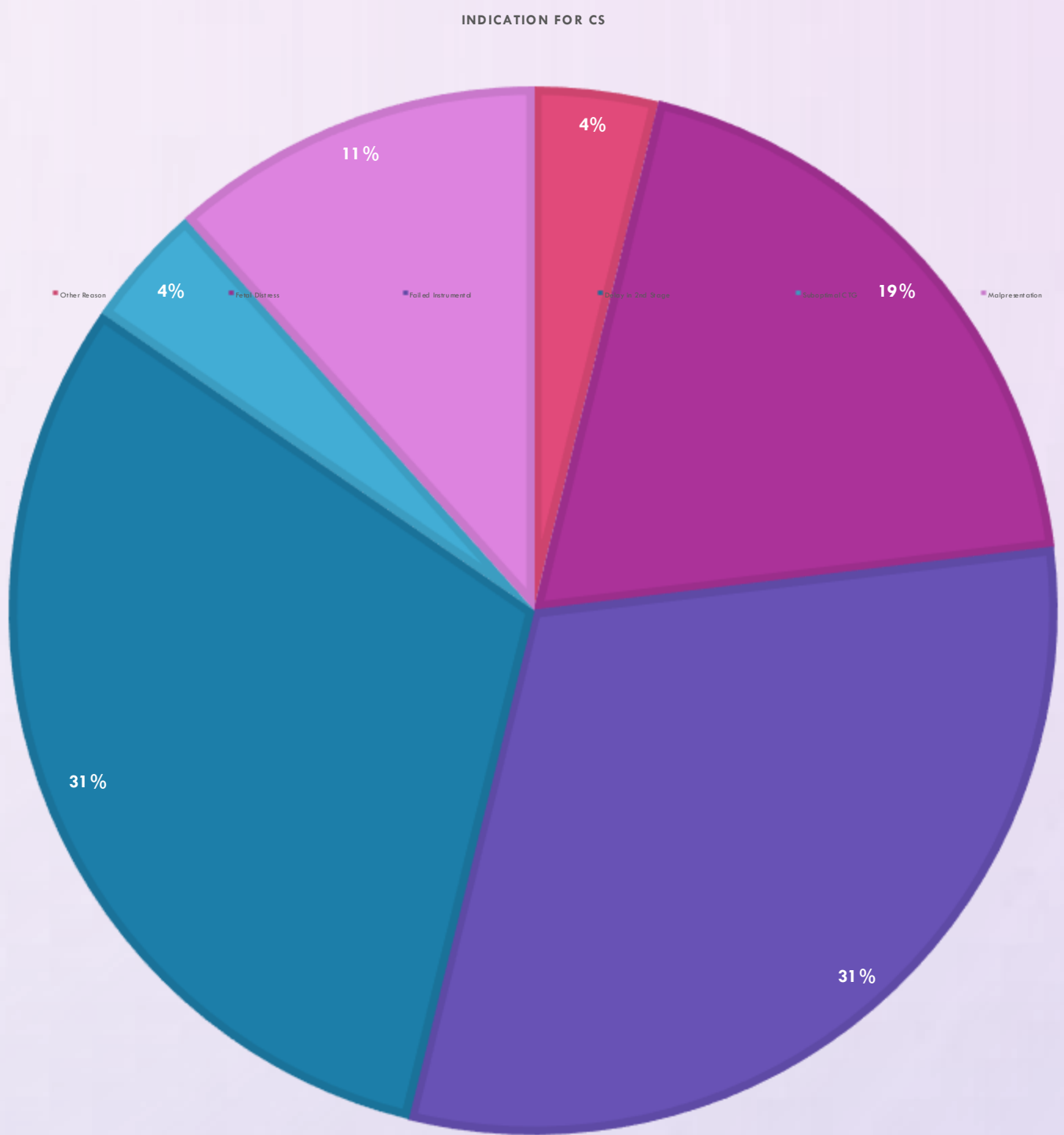


# The Management and Outcomes of Impacted Fetal Head During Emergency Caesarean Section at Full Dilatation

Dr Arooba Saleemi, Dr Khali Ali Miss Saguna Balasundaram

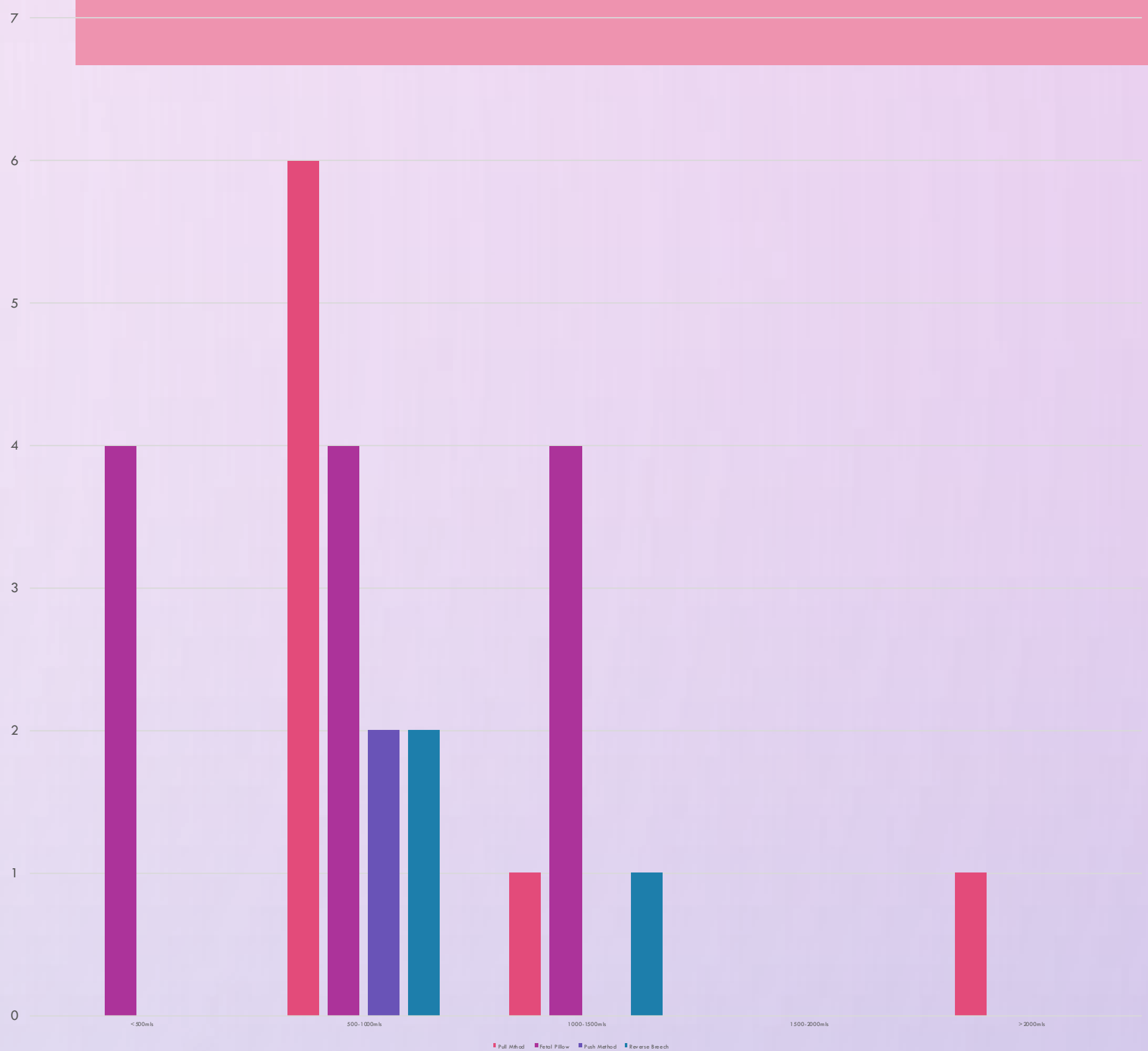
*Impacted Fetal Head at CS*  
*"A Caesarean birth where the Obstetrician is unable to deliver the fetal head with the usual delivering hand and additional maneuverers and/or tocolysis are required to dis-impact the head"*  
*-RCOG Scientific Impact Paper No 73*



## Medicolegal Consequences

Sharp increase of perinatal birth injuries associated with IFH.

NHS resolution has identified IFH as a contributory factor to 10% of the most expensive maternity claims from 2018.



## Introduction:

- Impacted Fetal Head (IFH) is technically very challenging and can have significant outcomes on both mother and baby.
- Worldwide rate of CS is 21%; 30% in MEDC countries; 5% of these happening at full dilatation.
- Increasing number of CS births at full dilatation.
- Increasing incidence of IFH: with it complicating at least 10% of all unplanned CS and accounts for 16% of all 2<sup>nd</sup> stage CS.
- Approx 1/3 of CS at fully may be complicated with IFH
- Risk of IFH is doubled following failed AVD

## Causes and Risk Factors:

- Decreasing skills and confidence of Obstetricians in the use of rotational and mid cavity forceps delivery.
- Decrease in the number of Assisted Vaginal Deliveries (AVD)
- Increased use of regional anaesthesia
- Obesity
- Failed AVD
- Prolonged labour
- Augmentation with Oxytocin
- Obstructed Labour
- Obstetrician experience

## Complications

### ➤ Mother:

- Uterine incision extensions
- Haemorrhage
- Bladder and ureteric injury
- Potential long term consequences in future pregnancies e.g. increased risk of PTB
- Prolonged Hospital stay

### ➤ Fetal:

- Skull fractures
- Subglaeal and Intracranial Haemorrhage
- Delay in birth in an already compromised fetus\
- HIE
- Death

## Dis-Impaction Methods

- Manual Vaginal Dis-impaction
- Abdominal-Cephalic Dis-impaction (Pull Technique)
- Vaginal Dis-impaction (Push Method)
- Reverse Breech Extraction
- Fetal Pillow
- Uterine Relaxation
- Extending Uterine Incision
- Patwardhan Technique

## Not Recommended Methods

- Use of one forcep blade
- Bladder Filling
- Using Ventouse

## Aim

To audit caesarean sections performed at full cervical dilatation and impacted fetal head (IFH).

And evaluate:

- The incidence of caesarean deliveries in the second stage of labour.
- Risk factors of impacted fetal head (IFH) at caesarean section (CS).
- The indication for delivery.
- Associated fetal and maternal morbidity.

with a view to suggesting strategies for improvement in the future.

## Method

We performed a retrospective audit of all emergency caesarean sections over the last 2 years at DCH and identified which caesarean sections were performed at full cervical dilatation and identifying those who had encountered impacted fetal head (IFH).

## Results

26 CS were documented to have had an IFH (34% of EMCS at DCH)

Most common method of disimpaction was use of the fetal pillow (13), followed by using the pull technique (8)

Of the 26 documented IFH, 12 had reported difficulty in delivering the fetal head. The most common technique that was used in these cases was the pull method (7)

Most common indication for CS was failed instrumental and delay in 2<sup>nd</sup> stage (both 8 respectively)

Most common surgical complication was uterine tear (14)

Use of fetal pillow was associated with lower blood loss

Apgars were lower with the reverse breech and push method

Most babies had a fetal weight between 2.5-3.5 kg

Most Obstetricians who experienced IFH were trainees (16)

Most CS with IFH occurred at night

Most patients were not documented to have had a debrief following CS (16)

One woman had who had fetal pillow used for delivery had sepsis

## Discussion

Fetal pillow has been the most used technique in management of IFH at DCH. It was associated with lower EBL and better neonatal outcomes in comparison to the other techniques used for fetal head dis-impaction.

The use of the fetal pillow also allowed for easier delivery of the impacted head compared to other techniques.

It also appears that Obstetricians with less experience seem to encounter more difficulty in delivering the FH.

## Conclusion:

IFH at CS has an increasing incidence and will continue to do so as CS rates also increase.

Management of IFH is extremely important, as it has serious and significant neonatal and maternal outcomes.

Currently there are no clear guidelines as to what is the best way to manage IFH.

Our audit identified that use of the fetal pillow was associated with easier delivery of the IFH, reduced blood loss and better neonatal outcomes.

While the fetal pillow is helpful with second stage CS, it is not clear what is the best method for IFH for a first stage CS or management of an unexpected IFH at CS.

## Recommendations:

Creating local guidelines in the management of IFH

More training in the management of IFH e.g. incorporating an IFH station at PROMPT training.

Better documentation

Improving debriefing patients following CS