

# Maternal outcomes of women attempting vaginal birth after caesarean section (VBAC) at a tertiary maternity hospital in Queensland

C Wang<sup>1</sup>, V Wong<sup>2</sup>

1. Gold Coast University Hospital and Robina Hospital, QLD, Australia  
Contact: chuanwangmbbs@gmail.com

## BACKGROUND

Women with a previous caesarean birth may, in their second pregnancy, choose either an attempt at vaginal birth after caesarean (VBAC) or an elective repeat caesarean delivery (ERCD). The success rate for trial of labour after one prior lower uterine segment caesarean section (LUSCS) has been quoted to be between 60 to 80%<sup>1, 2, 3</sup>.

The aim of this study is to report the maternal outcomes of women attempting VBAC after one previous LUSCS at a tertiary maternity hospital in Queensland.

## PATIENT CHARACTERISTICS

Characteristics	Total (n = 331)	Successful VBAC (n = 227)	Emergency CS (n = 104)	P-value
Maternal Age				
- Mean ± SD (years)	30.9 ± 5.0	30.8 ± 5.1	31.2 ± 4.8	<i>P</i> = 0.484
Booking BMI*				
- Mean ± SD (kg/m <sup>2</sup> )	25.0 ± 5.5	24.3 ± 4.8	26.4 ± 6.5	<i>P</i> < 0.05
- BMI ≥ 30 (%)	14.5% (48/331)	11.0% (25/227)	22.1% (23/104)	<i>P</i> < 0.05
Birthweight				
- Mean ± SD (g)	3536 ± 439	3513 ± 433	3586 ± 451	<i>P</i> = 0.164
- Weight ≥ 4000g (%)	14.2% (47/331)	12.3% (28/227)	18.3% (19/104)	<i>P</i> = 0.151

\* 2 successful VBAC women did not have booking BMI recorded

## OUTCOME

### Primary Outcome:

- Rate of vaginal births and emergency caesarean sections in women attempting VBAC

### Secondary Outcomes:

- Rate of complications including uterine rupture, PPH ≥ 1L, OASIS, maternal death

## METHODS

### Design:

- Retrospective audit using data gathered from the Maternity Information System (MATIS) and Electronic Medical Records (EMR)

### Population:

- Between 01/07/2014 to 31/12/2017, **331** women with a previous LUSCS planned to have a VBAC in their second pregnancy at tertiary maternity hospital on the Gold Coast, Queensland

### Exclusion Criteria:

- Multiple pregnancies
- delivery at gestational age ≤ 36 weeks
- IUFD prior to delivery

## RESULTS

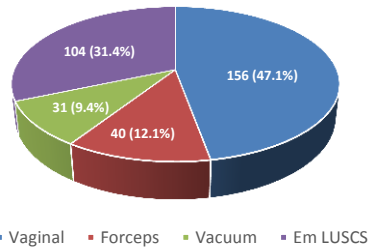
### Primary Outcome:

- Rate of successful vaginal delivery: 68.6% (227/331)**
- 68.7% (156/227) had a non-instrumental vaginal birth. 12.1% (40/227) had forceps delivery, and 9.4% (31/227) had vacuum.

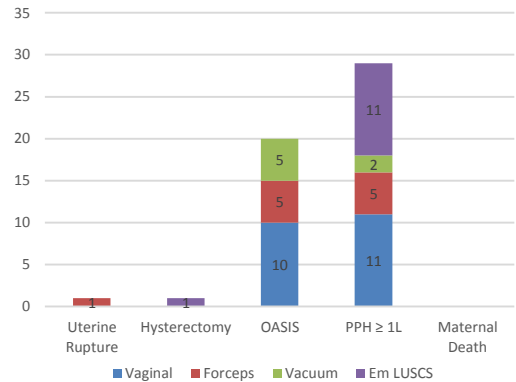
### Secondary Outcomes:

- Rate of uterine rupture: 0.3% (1/331)**
  - The case occurred with forceps delivery
- Rate of hysterectomy: 0.3% (1/331)**
  - Subtotal hysterectomy due to uncontrollable haemorrhage from angle extension during emergency LUSCS
- Rate of OASIS: 8.8% (20/227)**
  - 10 cases with vaginal births, 5 with forceps, and another 5 with vacuum.
- Overall rate of PPH ≥ 1L: 8.8% (29/331)**
- No maternal deaths**

## Delivery Outcomes



## Maternal Complications after VBAC



## CONCLUSION

- Our VBAC success rate is similar to international statistics. However, almost a third of those with a successful VBAC will require operative vaginal delivery, which can be associated with other morbidities and complications.
- There appears to be a high OASIS rate in women that had a successful VBAC, which will require further investigation, and comparison to nulliparous women after their first delivery to see if VBAC is an independent risk factor for OASIS.
- Women with unsuccessful VBAC tend to have a higher BMI.
- These results will provide clinicians important local data on the rate of success and associated complications, which will enable comprehensive antenatal counseling of women considering VBAC.