

## Improving Obstetric Debriefing: An Interventional Study

C.M. McCarthy, N.E. Russell

Cork University Maternity Hospital, Wilton, Cork, Ireland.

### Abstract

#### **Aims**

We aimed to improve rates of obstetric debriefing following operative deliveries.

#### **Methods**

Utilising a prospective interventional design over a four-month period, we compared rates of documented Obstetric debriefing before and after an intervention. The intervention consisted of two 20-minute staff education sessions and dissemination of relevant literature.

#### **Results**

There were 292 pre-intervention cases and 318 post-intervention cases. There was a statistically significant improvement in the documentation of debriefing rates ( $p < 0.001$ ) from 24.6% ( $n=71$ ) to 59.6% ( $n=190$ ). There was an improvement in documentation by all categories of Non-Consultant Hospital Doctors (144%), with Senior House Officers, Junior Registrars and Senior Registrars improving by 1060% (7% vs 81.2%), 173% (21.2% vs 57.9%) and 118% (28.6% vs 62.5%) respectively ( $P < 0.001$ ).

#### **Conclusion**

We demonstrate how a simple, cost-neutral intervention can improve debriefing rates. Further work needs to examine the content of postnatal debriefing to ensure consistency and to assess their acceptability for women.

### Introduction

Pregnancy and childbirth can have significant positive and negative implications for the health and wellbeing of women, both physically and psychologically.<sup>1</sup> While even a medically uncomplicated spontaneous vaginal delivery can be traumatic for women<sup>2</sup>, births which involve increased medical intervention such as an operative vaginal delivery (OVD) and emergency Caesarean section (CS) are associated with increased psychological morbidity<sup>3</sup>.

In order to combat this, strategies to improve patient knowledge and understanding have been introduced including the provision of antenatal classes.<sup>4</sup> Providing healthcare providers with additional communication skills training and reinforcing concepts such as active listening and recognising cues from women may be integral in creating a positive postnatal experience.<sup>5</sup>

Interestingly, even though interventions are performed by Obstetric doctors, there is a paucity of data on the role of medical, or doctor-led debriefing following obstetric interventions in labour.

The analysis of midwifery-led debriefing has found minimal<sup>6</sup> or no significant benefit as a strategy to combat post-traumatic stress disorder,<sup>7</sup> hence it is not recommended by the Cochrane collaboration.<sup>8</sup> There is evidence that early postpartum counselling for women following emergency CS can decrease post-traumatic stress reactions compared to those who do not receive counselling.<sup>9</sup> Numerous professional bodies have advocated debriefing and review of women following adverse obstetric events (such as stillbirth,<sup>10</sup> collapse<sup>11</sup> and postpartum haemorrhage<sup>12</sup>). However, any delivery, even if deemed obstetrically “uncomplicated” may be viewed by a woman as an adverse event, and thus may be relevant in these scenarios. Furthermore, postnatal discussion gives women the opportunity to discuss their delivery with their care providers and provides an opportunity for health promotion and education.<sup>13</sup>

In this study, we aimed to assess rates of debriefing following OVD and emergency CS in our institution. We hypothesized that rates were low and therefore designed a cost-neutral intervention with the aim to increase rates of debriefing.

## Methods

We conducted a quality improvement initiative examining debriefing rates of postnatal women by doctors in a tertiary level university maternity hospital over a sixteen-week period from February to May 2018. The primary outcome measure of our study was to improve debriefing rates utilising a cost-neutral intervention.

Our pre-intervention phase (PRIP) data collection involved the sampling of all OVDs and CS’ over a defined six-week period in women attending public combined antenatal care. Once inclusion criteria were applied, deliveries were sourced from birth registers. Utilising the electronic chart system, patient charts were assessed, and post-delivery documentation was reviewed. 14 parameters were collected during this study phase.

Following this, the quality improvement initiative consisted of an intervention phase which involved a twenty-minute presentation to all Non-Consultant Hospital Doctors, as well as two electronic mail newsletters both of which included information on debriefing, its’ purpose and role in obstetrics. The presentation and email discussed the initial results from the PRIP, and the importance of reviewing a woman following operative delivery (for example allowing the woman to make sense of her birth story by explaining what happened and answering her questions, exploring her potential negative feelings of having “failed” to have a spontaneous vaginal birth leading to a more positive labour experience ). Ongoing support and information were also offered to improve documentation of debriefing visits if this was a perceived obstacle. The electronic mail newsletter was sent initially at the time of the presentation and then two weeks’ later. This time interval was chosen to act as a refresher for staff.

Four weeks following the initial presentation and email, the post-intervention phase (POIP) data collection was performed prospectively over a six-week period. The same methods and parameters were collected during this time period. Doctors were blinded to the timeframe of the collection periods to eliminate this as a potential confounder.

Exclusion criteria for our study were all women who attended a consultant privately for their antenatal care, as these women are reviewed in the postnatal period by their booked consultant or nominated substitute and are offered a routine 6-week postnatal appointment.

Following the two phases of data collection, data was analysed using Microsoft Excel and Predictive Analytics Software in each group; Descriptive analyses were performed and both groups were then compared to assess the percentage and rate of change following the intervention.

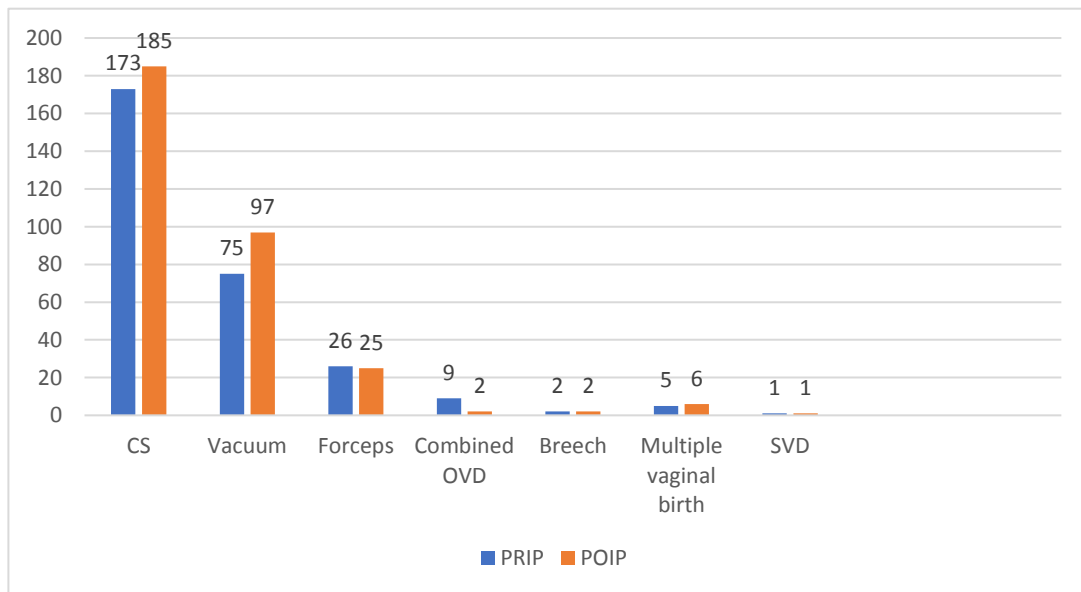
Ethical approval was received from the South/South West Local Information Governance Group.

## Results

### Demographic information

During the twelve-week data collection phases, there were 609 CS or OVDs for analysis (291 in PRIP and 318 in POIP). The majority of deliveries were conducted by registrars during both PRIP and POIP (91.9%; n=560), with consultants present (either supervising or conducting the delivery) in 6.2% (n=38) of cases. There were a similar number of CS and OVD between both time periods (CS: 59.4% (n=173) vs 58.1% (n=185); Graph 1). There were also similar numbers of neonatal admissions to the Neonatal unit in both data collection phases (16.4% (n=48) vs 16.9% (n=54)).

**Graph 1. OVD and CS rates during PRIP and POIP.**



### Pre-intervention Phase

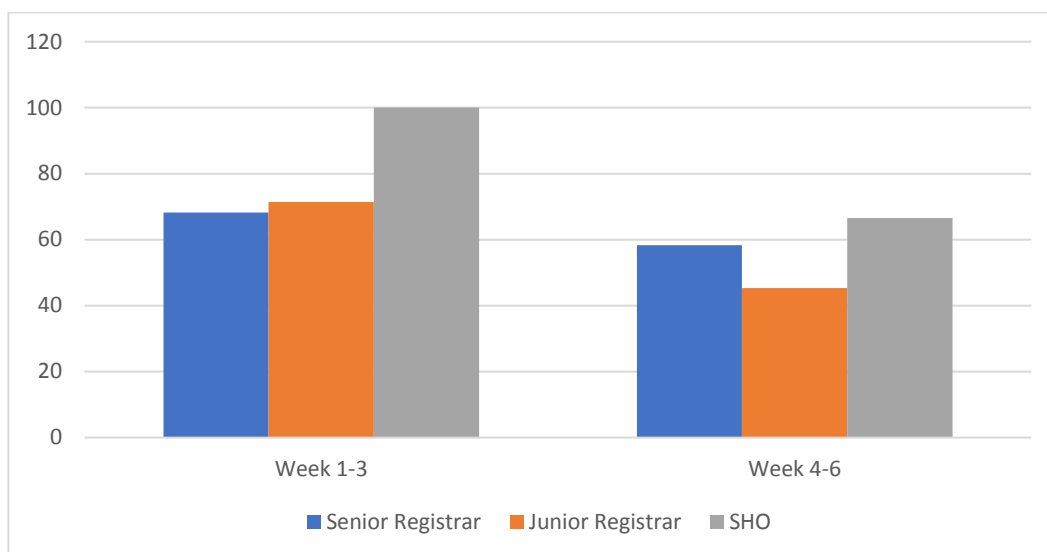
During PRIP, the overall debriefing rate was 24.4% (n=71), with Senior Registrars (SR) more likely to debrief than their Junior Registrar (JR) or Senior House Officer (SHO) colleagues (28.6% (n=35) vs 21.2% (n=31) vs 7.0% (n=1); p= NS ). Debriefing visits were most likely to be conducted on day 1 or 2 post-delivery (80%, n=112). Women were most likely to be reviewed twice in the postnatal period. In addition, debriefing was carried out by 38 doctors who were not present at the delivery, 14 of whom were Consultant debriefs. These typically occurred where women were admitted to the High Dependency Unit on the Labour Ward following delivery for observation for maternal reasons.

A postnatal outpatient appointment was arranged for 6.8% (n=20) of women.

### Post-intervention Phase

The overall debriefing rate during the POIP was 59.7% (n=190), with an SHO more likely to debrief than their registrar colleague (81.2% (n=13) vs 62.5% (n=65) vs 57.9% (n=109); p=NS)). When this time period was divided into the first three weeks vs the second three weeks, there is a visible reduction between periods (Graph 2). Similar to PRIP, debriefing visits were most likely to be conducted on day 1 or 2 post-delivery (45.9%, n=146); however more women were debriefed on the date of delivery (10%; n=19). Women were most likely to be visited only once in the postnatal period. In addition, debriefing was carried out by 33 doctors who were not present at the delivery. Postnatal follow-up appointments were offered to 13 women (4.1%).

**Graph 2.** Rate of Change in debriefing rates during POIP.



### Comparison of PRIP and POIP

Debriefing rates improved overall from 24.4% (n=71) to 59.7% (n=190) following our intervention ( $p < 0.01$ ), most marked in the initial three weeks following training. As is demonstrated in Table 1, an improvement was seen in the documentation of debriefing by all categories of doctors. Women were also more likely to be reviewed sooner after their delivery (Day 0 or Day 1) in the POIP compared to the PRIP (where there was no woman debriefed on Day 0). Documentation of discussion of future mode of delivery in those eligible for a trial of labour following CS also improved between PRIP and POIP (8.7% vs 34.7%,  $p < 0.01$ ).

**Table 1.** Changes in debriefing rates between PRIP and POIP.

	Debriefed PRIP % (n)	Debriefed PROP % (n)	Percentage Change between PRIP and PROP	P value
Senior Registrar	28.6% (35)	62.5% (65)	+ 118%	<0.0001
Junior Registrar	21.2% (31)	57.9% (109)	+173%	<0.0001
Senior House Officer	7% (1)	81.2% (13)	+1060%	<0.0001
Overall	24.4% (71)	59.6% (190)	+144%	<0.0001

### Discussion

Our results show how a simple intervention can have a significant improvement in the number of women who received a debriefing visit from their delivering doctor in the postnatal period. While there was a dramatic change in the rates of debriefing, it was evident that when comparing the two time periods of the POIP, there was a reduction in the number of debriefing visits that occurred as time advanced. This attritive trend has been previously described in the formation of new skills, for example when examining the management of emergency situations.<sup>14</sup> In these studies, psychomotor skills have been shown to reduce dramatically in the first month, and then stabilise, but remain above pre-training levels.<sup>15</sup> It demonstrates the importance of continuing professional development, the distribution of circulars to staff and the need to successively reinforce practices and policies that should be adhered to in the healthcare environment.

This study has a number of notable strengths. It is a novel topic which has been infrequently explored in the literature. It highlights an area of postnatal care that is often overlooked, yet an area that can have significant implications on women's and their families lives going forward.

However, there are a number of limitations of our study. It fails to take into account that debriefing may have occurred but was not documented. However, an important standard of care is the documentation of its' provision.<sup>16</sup> The quality of debriefing is not examined in this study, and we are not aware if the debriefing process was a positive factor in a woman's postnatal journey. Therefore, qualitative work is needed to explore women's experience on the quality and content of the debrief. Given the brief period of time encompassed by this study, it is difficult to determine the true effect of the intervention or if there is an element of Hawthorne's effect. Therefore, repeated assessments would improve the validity of the intervention.

While Bastos et al's systematic review did not find high quality evidence to support debriefing, this was based on only seven trials.<sup>8</sup> However, they note that women who have a higher rate of obstetric intervention may require increased emotional care. This is echoed by findings that women who experience an adverse outcome occasionally attribute the perceived failure to themselves, and fear failure in future pregnancies.<sup>17</sup> Previous recommendations include evaluations to assess the efficacy of debriefing using targeted approaches,<sup>18</sup> which also needs to encompass content and timing of debriefing. Thus, the paucity of evidence does mandate that further research is conducted into content and timing of debriefing. There is some evidence that the introduction of a debriefing tool can improve women's satisfaction.<sup>19</sup>

Clinical tools already in use could be adapted for this purpose, such as the A.S.S.I.S.T model of communication developed by the Medical Protection Society to aid staff in discussion of adverse events.<sup>20</sup> This focusses on listening prior to finding solutions for the issues that have been highlighted. It has been demonstrated that active listening practices aid focus on the woman's agenda.<sup>21</sup> Thus, we suggest the postnatal debrief should be structured around an actively listening clinician, allowing a woman to re-tell their story from their perspective. This will allow the identification of any area that she found distressing or difficult, in order to come to a resolution before it becomes an issue in the long-term.

This study has demonstrated that a cost-neutral and time-efficient intervention can have a significant effect on the number of women who have a debriefing visit by the doctor who assisted with their birth. It supports recommendations from numerous guidelines regarding the provision of debriefing for women, and potentially the documentation of a debriefing visit may become an auditable topic and standard of care for women.<sup>10-12</sup> It highlights a large area for which future research can be focussed, including the value of doctor-led debriefing, the optimum timing for debriefing and the maternal effect of doctor-led briefing. Further follow-up studies would also allow us to ascertain the value of doctor-led debriefing, the optimum timing for debriefing and the maternal effect of doctor-led briefing, with the overall aim of improving the care we provide to women.

**Declaration of Conflicts of Interest:**

The authors have no conflicts of interest to declare.

**Corresponding Author:**

Claire M. McCarthy

Rotunda Hospital,

Parnell Square,

Dublin 1.

Email: [clmccarthy@rotunda.ie](mailto:clmccarthy@rotunda.ie)

## References:

1. Karlstrom A, Hystedt A, Hildingsson I. The meaning of a very positive birth experience: focus groups discussions with women. *BMC Pregnancy Childbirth* 2015; 15: 251
2. Milosavljevic M, Tosezski DL, Soldaatovic I, Vukovic O, Miljevic C, Peljto A et al. Posttraumatic Stress Disorder after Vaginal Delivery at Primiparous Women. *Sci Rep* 2016; 6: 27553
3. DiMatteo MR, Morton SC, Lepper HS, Damush TM, Carney MF, Pearson M et al. Caesarean childbirth and psychosocial outcomes: A meta-analysis. *Health Psychol.* 1996;15:303–14.
4. Hillier CA, Slade P. The impact of antenatal classes on knowledge, anxiety and confidence in primiparous women, *J Repro Infant Psych* 199;7:1,3-13, DOI: 10.1080/02646838908403566
5. Gunn J, Southern D, Chondros P, Thomson P, Roberston K. Guidelines for assessing postnatal problems: introducing evidence-based guidelines in Australian general practice, *Family Practice*, Volume 20, Issue 4, August 2003, Pages 382–389,
6. Gamble J, Creedy D, Moyle W, Webster J, McAllister M. Effectiveness of a counselling intervention after a traumatic childbirth: a randomised controlled trial. *Birth* 2005; 32 (1): 11-9
7. Small R, Lumley J, Donohue L, Potter A, Waldenstrom U. Randomised controlled trial of midwife led debriefing to reduce maternal depression after operative birth. *BMJ* 2000; 321 (7268): 1043-1047
8. Bastos MH, Furuta M, Small R, McKenzie-McHarg K, Bick D. Debriefing interventions for the prevention of psychological trauma in women following childbirth. *Cochrane Database of Systematic Reviews* 2015, Issue 4. Art. No. CD007194
9. Ryding AL, Wijma K, Wijma B. Postpartum counselling after an emergency Caesarean. *Clin Psych Psych* 1998; 5: 4: 231-237
10. RCOG Green Top Guideline No. 55. Late Intrauterine Fetal Death and Stillbirth. RCOG October 2010
11. RCOG Green Top Guideline No. 56. Maternal Collapse in Pregnancy and the Puerperium. RCOG Jan 2011
12. RCOG Green Top Guideline No. 52. Postpartum Haemorrhage, Prevention and Management. RCOG Dec 2016
13. World Health Organisation 2013. *Counselling for Maternal and Newborn Health Care: A Handbook for Building Skills.*
14. Ali J, Cohen R, Adam R, Gana TJ, Pierre I, Ali E et al. Attrition of Cognitive and Trauma Management Skills after the Advanced Trauma Life Support Course. *Journal Trauma: Injury, Infection and Critical Care* 1996; 40 (6): 860-866
15. Madden C. Undergraduate nursing students' acquisition and retention of CPR knowledge and skills. *Nurse Educ Today.* 2006;26:218–27.
16. Health Service Executive Standards and Recommended Practices for Healthcare Records Management QPSD-D-006-3 V 3.0. May 2011. HSE National Healthcare Records Management Advisory Group
17. Schneider DA. Birthing Failures: Childbirth as a Female Fault Line. *J Perinat Educ.* 2018;27(1):20–31. doi:10.1891/1058-1243.27.1.20
18. Reynolds JL. Post-traumatic stress disorder after childbirth: The phenomenon of traumatic birth. *CMAJ* 1997 156(6), 831–835
19. Dougan C, Smith E, Ploski J, Johnston K, McNally A. Patients at the centre of care: A quality improvement project on debriefing patients after Caesarean section. *AJOG. Proceedings at SMFM 2018.* S539
20. HSE Quality Improvement Division and State Claims Agency. *Managing Open Disclosure Discussions using The MPS A.S.S.I.S.T model.* Nov 2016
21. Tallman K, Janisse T, Frankel RM, Hee Sung S, Krupat E, Hsu JT. Communication practices of physicians with high patient-satisfaction ratings. *Perm J.* 2007;11(1):19–29.