Reducing Swab Retention Never Events in Maternity

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Introduction

In the UK retained swabs after vaginal birth and perineal suturing have to be reported and are classed as "never events" [1]. Vaginal swabs accounted for 33 of the 107 retained foreign object never events reported in 2015/2016 [2]. Retained vaginal swabs were more common than surgical swabs or any other category of foreign object [2].

The impact of retained vaginal swabs can be severe. Women may experience serious physical and psychological complications including infection, secondary post-partum haemorrhage, sepsis, depression, lack of bonding with their baby and loss of trust in the NHS [3].

Aim of the project

To reduce the incidence of vaginal swab never events and near misses.

Methods

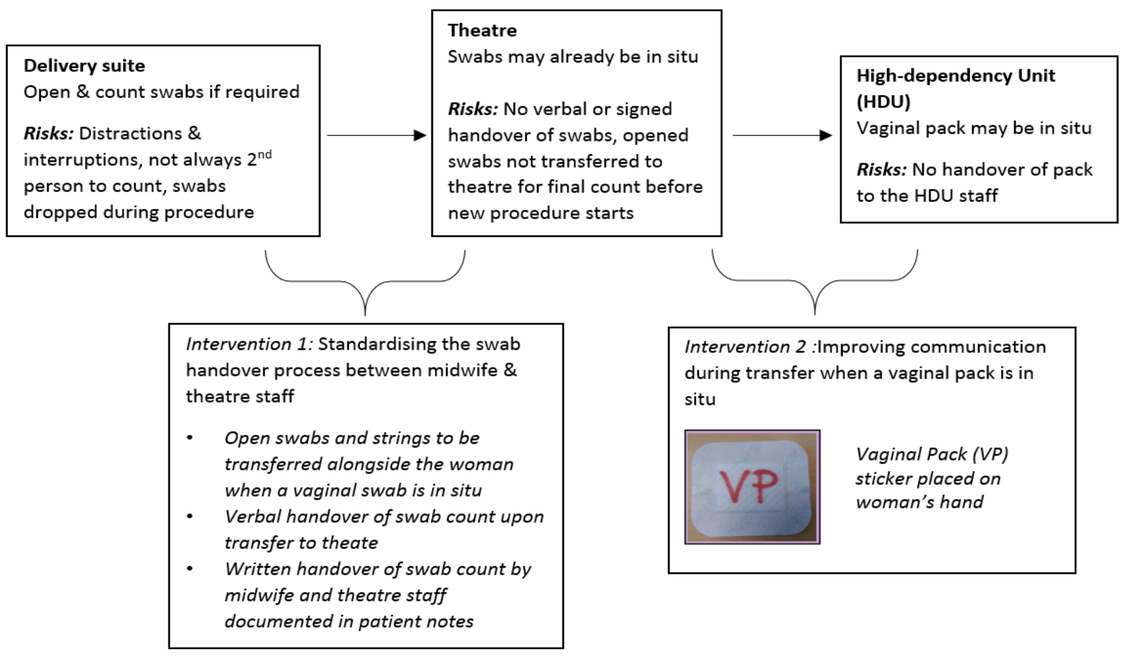
The project was undertaken in a large UK maternity unit with 13 birthing rooms, three theatres and a high-dependency unit. There are over 600 births a month in the unit.

An analysis of incident reports for two retained swab never events, defined as retained swabs detected post-discharge, and three near misses, defined as retained swabs detected by staff pre-discharge, over the past four years (2012- 2015) was conducted. A common theme in the incidents was transfers and handovers suggesting that these were points of particular vulnerability in the care process. All of the near misses highlighted failures of communication between professionals.

A multidisciplinary team was brought together in September 2015 to map the process which highlighted:

- The role of distraction and interruptions in the counting process
- Failures of communication during handover to theatre and to the high-dependency unit
- Lack of staff to conduct second counts and inconsistencies in how and where counts were recorded.

Simplified Version of process map:



Improving handover from delivery suite to theatre with a swab in situ

- The policy changed so that if a swab was placed in the vagina in the delivery suite, all other swabs and strings had to accompany the woman upon transfer to theatre. A paper bag was introduced into the delivery packs to facilitate this.
- Secondly the swabs needed to be counted and signed for in the patient notes by both the primary midwife and theatre staff at handover (see figure 1) .

Improving handover of vaginal packs in situ from theatre to HDU

- The local swab policy was amended requiring a sticker with "VP" printed on it to be placed on the hand of all women with a pack in situ for the duration in which the pack remains in place.

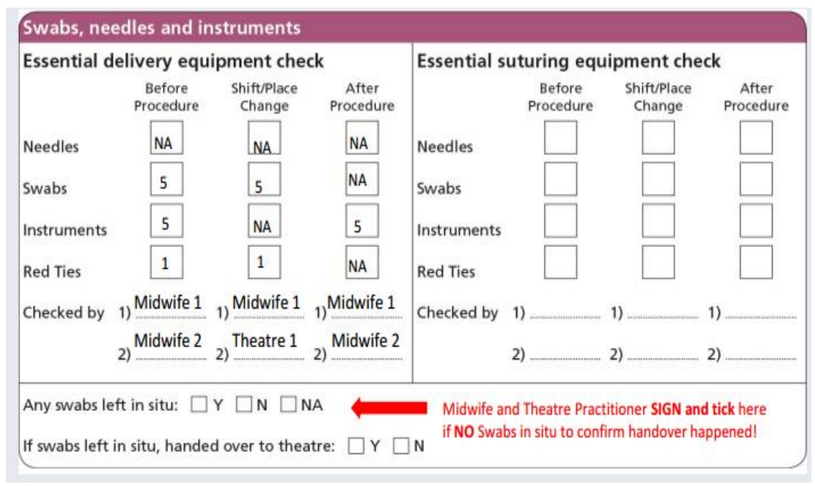


Figure 1

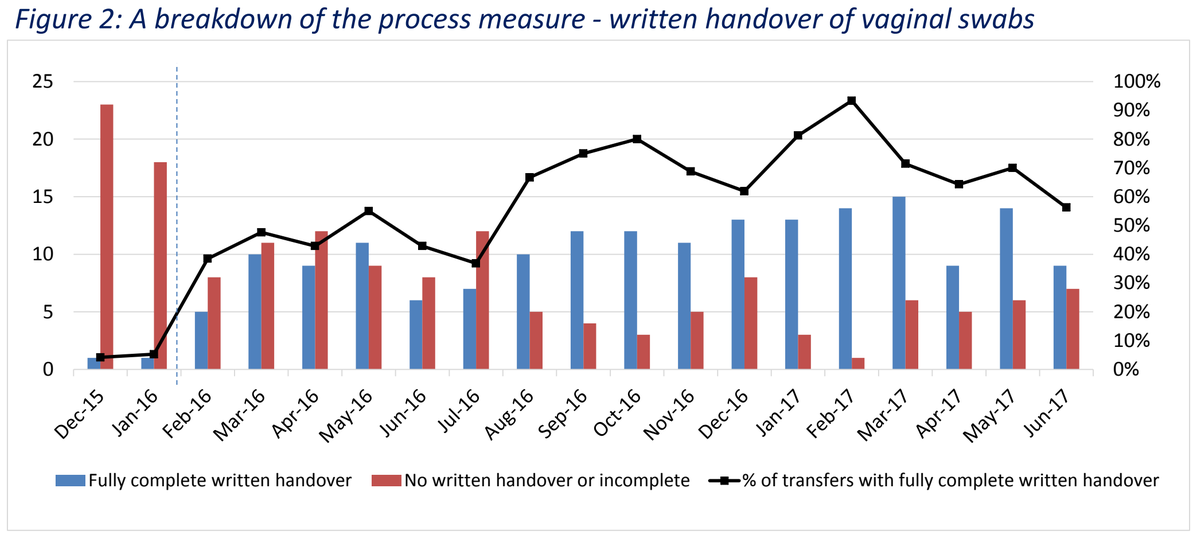
Results

The table below shows the compliance rates for the interventions that were introduced.

Intervention	Process measure	Date implemented	Baseline*	Post-intervention**	P
1. New policy for swab handover from delivery suite to theatre	Completed verbal handover for all transfers to theatre	8/2/16	13/45 (28.8%)	227/291 (75.6%)	p<0.0001
	Completed signed handover for all transfers to theatre	8/2/16	2/45 (4.4%)	183/291 (62.9%)	p<0.0001
	Three aspects of swab policy followed when swabs are in situ upon transfer	8/2/16	N/A	67/88 (76.1%)	-
2. Improve communication for transfer of a vaginal pack	Percentage of women with a vaginal pack in situ who had a "VP" sticker in place on handover	5/12/16	N/A	52/56 (92.9%)	-

**Baseline data is take from the 30/11/2015 - 7/2/2016*
***Post-intervention data is taken from the date of implementation to 30/06/2017*

Figure 2: A breakdown of the process measure - written handover of vaginal swabs



Incidents of retained swabs and near misses

- There were four near misses in the two months baseline period (December 2015– January 2016). Post-intervention there has been one near miss in 15 months. There was a significant reduction in near misses for women transferred to theatre with swabs in situ from a baseline of 33.3% (4/12) to 98.9% (87/88) post-intervention (p<0.0001).
- There were two retained swab never events in the four years preceding the project (January 2012 – January 2016), one in March 2012 and another in September 2013. There have been no retained swab never events in the 15 months since the project began.

Discussion

- Retained swabs in maternity are a major patient safety concern [3]. This project identified handovers and transfers as a key point of vulnerability in the swab counting process. Clear policies for communication at handover and transfer were introduced and compliance audited weekly.
- Whilst fastidious counting of instruments, swabs and needles is now embedded in the culture of theatre staff including maternity services, this project demonstrates that vulnerabilities remain in swab counting procedures especially when women are transferred to or from theatre with swabs in situ.
- Raising the profile of swab count procedures amongst midwives was a key factor in the success of the project. The most important practice change is that midwives now transfer all opened swabs and strings to theatre for a final count whenever a swab is in situ.

Strengths and Limitations

- A major strength of the project was the multidisciplinary approach both in diagnosing the risks and vulnerabilities in the swab counting process and in ensuring the policy changes were adhered to. Clinical leadership from both the delivery suite co-ordinator and from the senior theatre nurse was crucial to ensuring that all staff were aware of the policy changes.
- A limitation is the relatively short time period for collecting outcome data on retained swab never events: because of the rarity of these events, it is difficult to directly assess the impact of these interventions on the incidence of retained swabs. However, the incidence of near misses has clearly reduced.

References

1. NHS England. Never Events List 2015/2016. 2015.
2. NHS Improvement. Never Events reported as occurring between 1 April 2015 and 31 March 2016 – final update. 2017.
3. Mahran MA, Toeima E, Morris EP. The recurring problem of retained swabs and instruments. Best Pract Res Clin Obstet Gynaecol. 2013;27(4):489-95.

This study has been submitted to the European Journal of Obstetrics and Gynaecology and is currently under review.
Thank you to all the midwives and obstetricians who work so hard to improve outcomes for women in this project.