

Transforming postpartum haemorrhage management in a busy tertiary obstetric unit: more than just paperwork

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INTRODUCTION

Postpartum haemorrhage (PPH) can be associated with significant morbidity, including transfusion, hysterectomy and intensive care admission.^{1,2} The 2018 MBRRACE enquiry highlighted deficiencies in care compared to guidelines in up to 90% of cases.¹ In line with the extensive work by the OBSCymru team,² we set out to improve local PPH management in three domains: **risk assessment**, **earlier recognition of bleeding** through measured blood loss and **earlier staged intervention**.

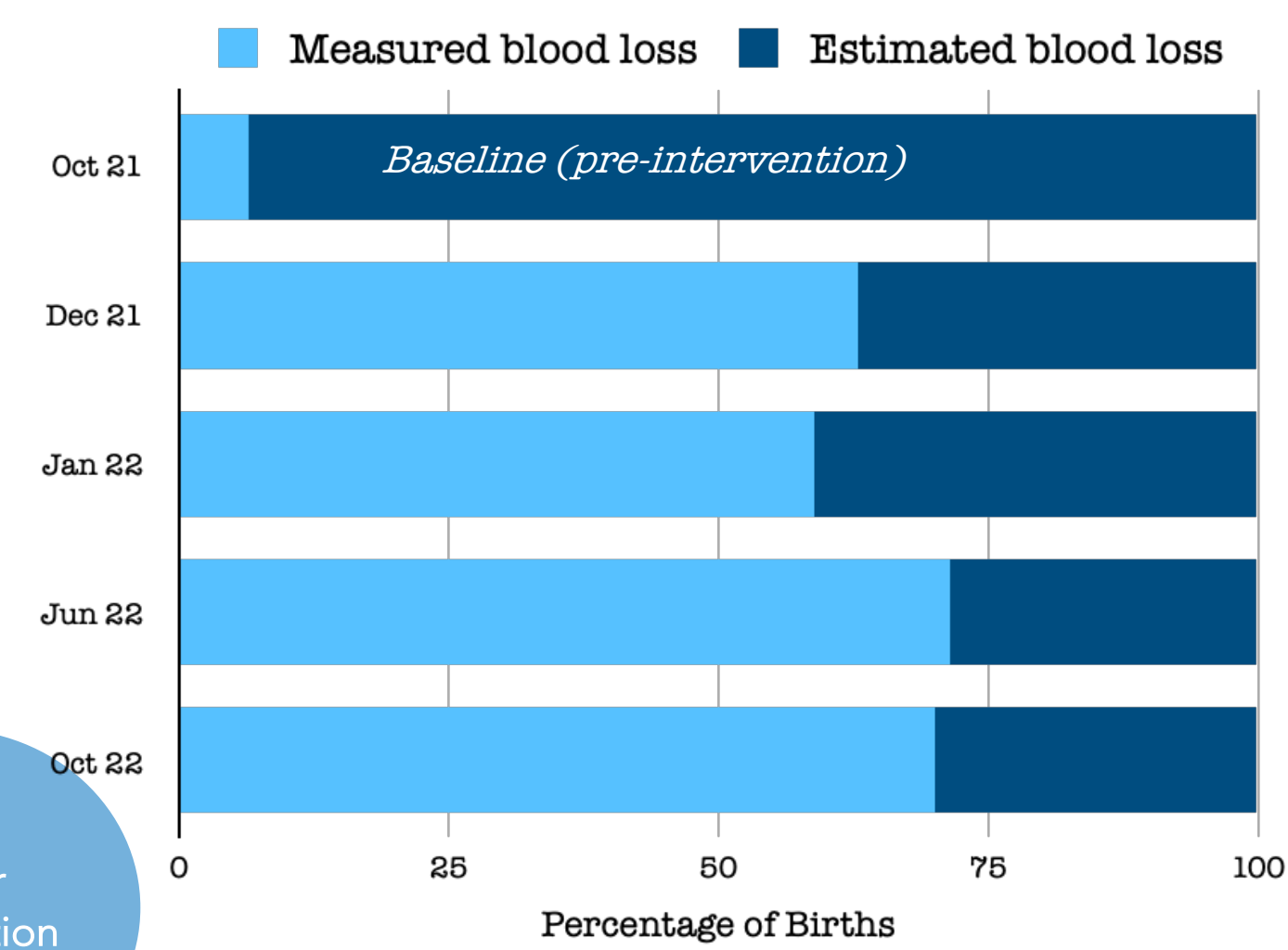
METHODS

Our multi-professional colleagues led the transition in practice from estimating (EBL) to **measuring blood loss** (MBL) by weight and volume. This was communicated via posters and emails, with reusable wall charts including standard 'dry' weights provided. The importance of **contemporaneous** and **serial** measurements **whilst bleeding is ongoing** was highlighted.

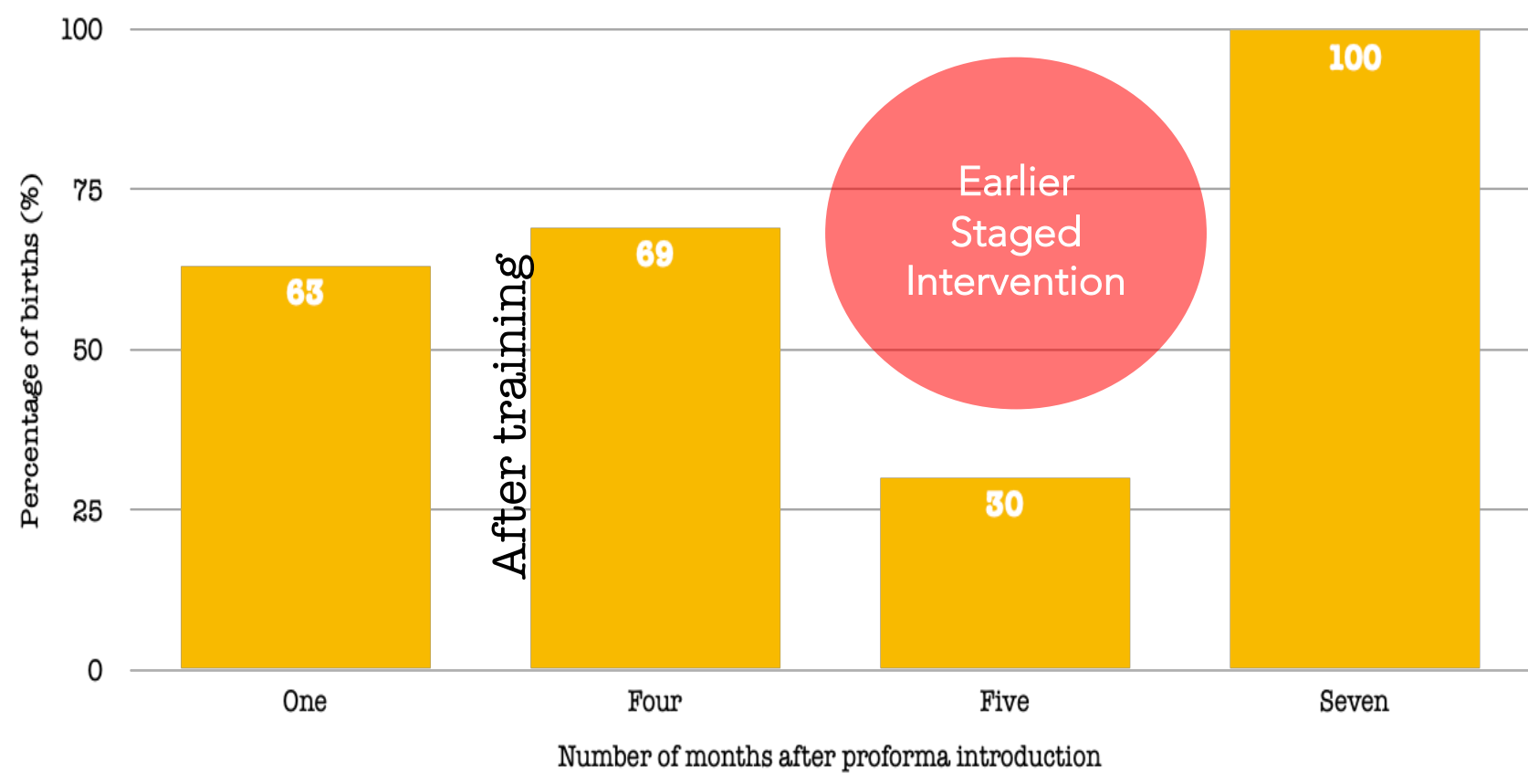
Seven months later we introduced our new PPH proforma. It includes an **evolving risk assessment** to be completed for all patients. The design relies upon timely MBL as **blood loss volume triggers staged interventions**. It structures our existing guideline-based practice; emphasising **multi-professional involvement**, haemorrhage protocol activation, **escalation to seniors** and earlier use of near-patient coagulation testing. It introduced taking into account the **patient's weight** when assessing blood loss severity.

After proforma introduction, user feedback was obtained and revisions made to the design. This was followed by ad-hoc multi-professional training delivered to staff during their shift on labour ward. The teaching included a video and case example.

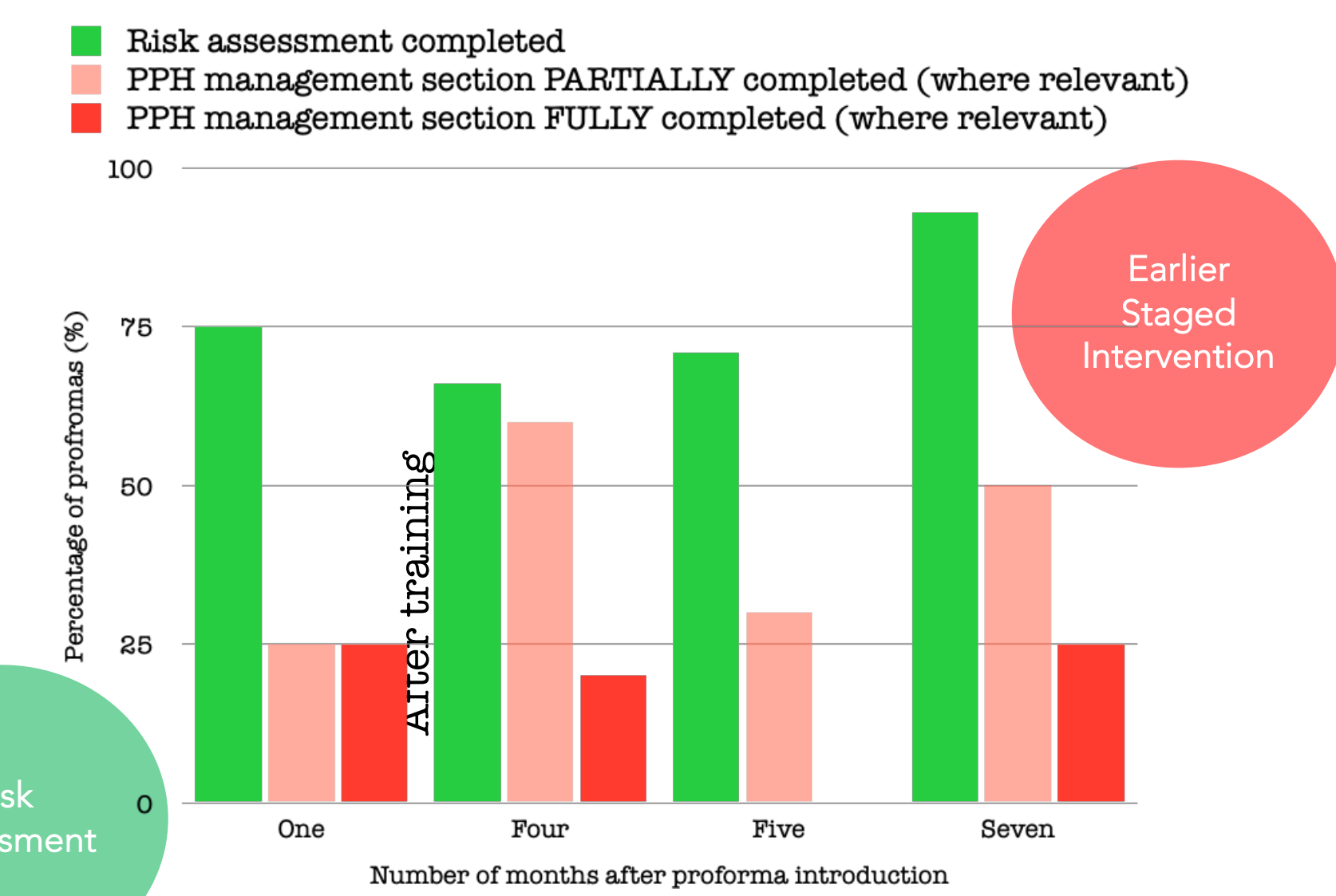
1. Percentage of births with MEASURED or estimated blood loss recorded



2. Percentage of births containing a PPH proforma in notes



3. Accurate completion of PPH proforma (where one was found in notes)



• MBL transition was audited with 24 hour snapshots [table 1]. Post-intervention, MBL was recorded in 66% of births on average (6% at baseline).

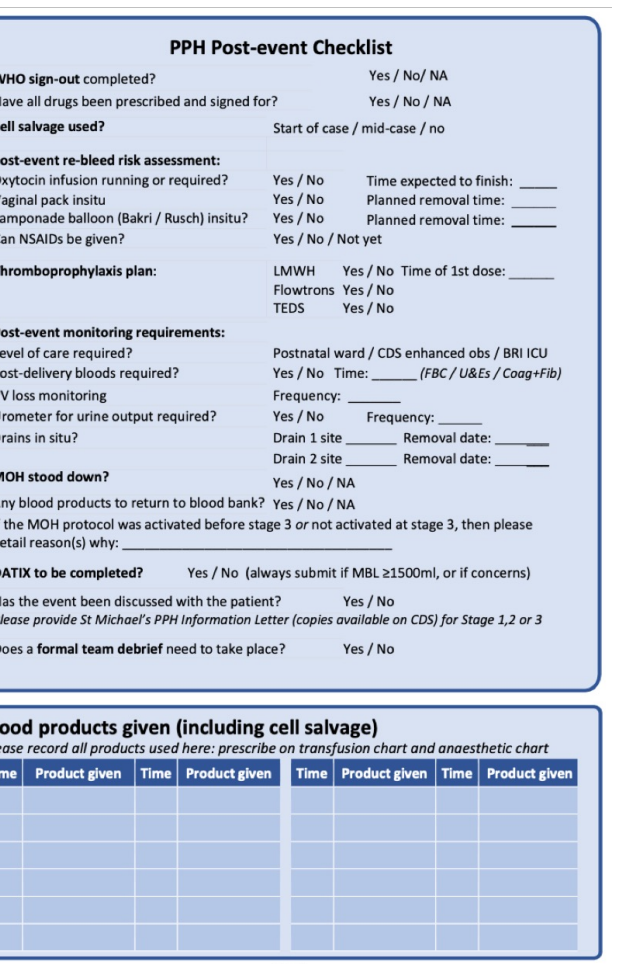
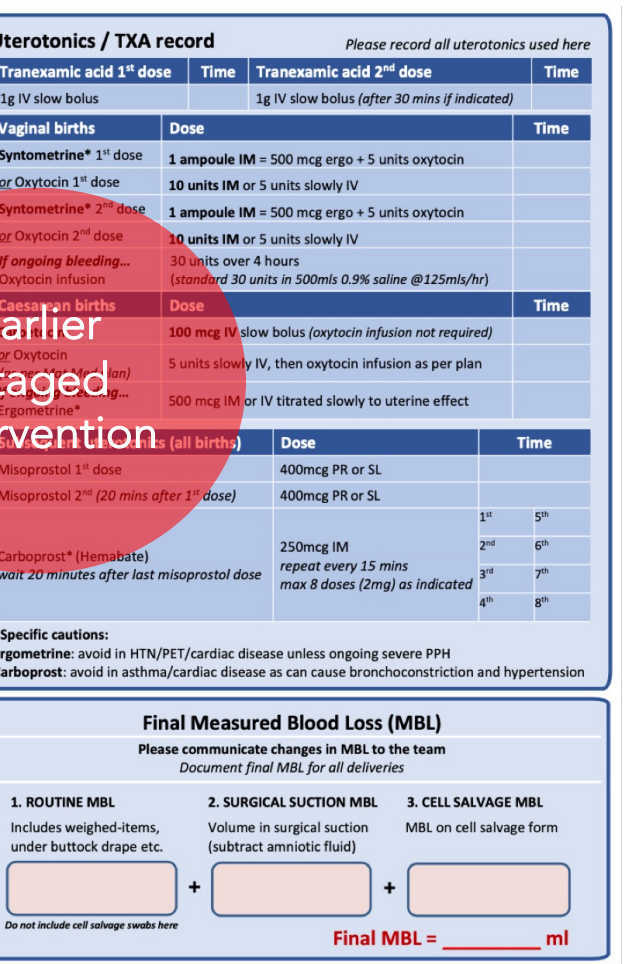
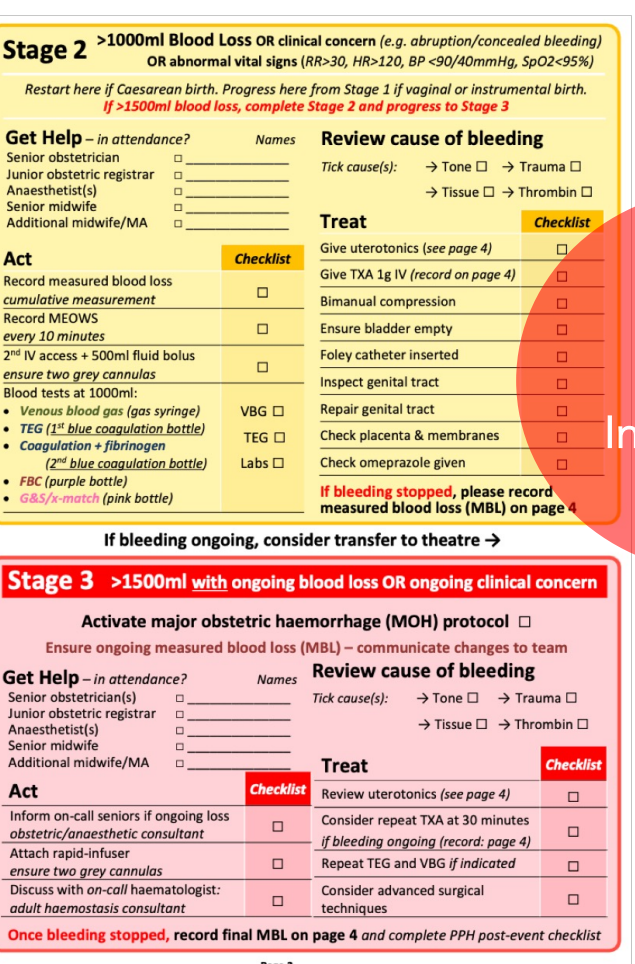
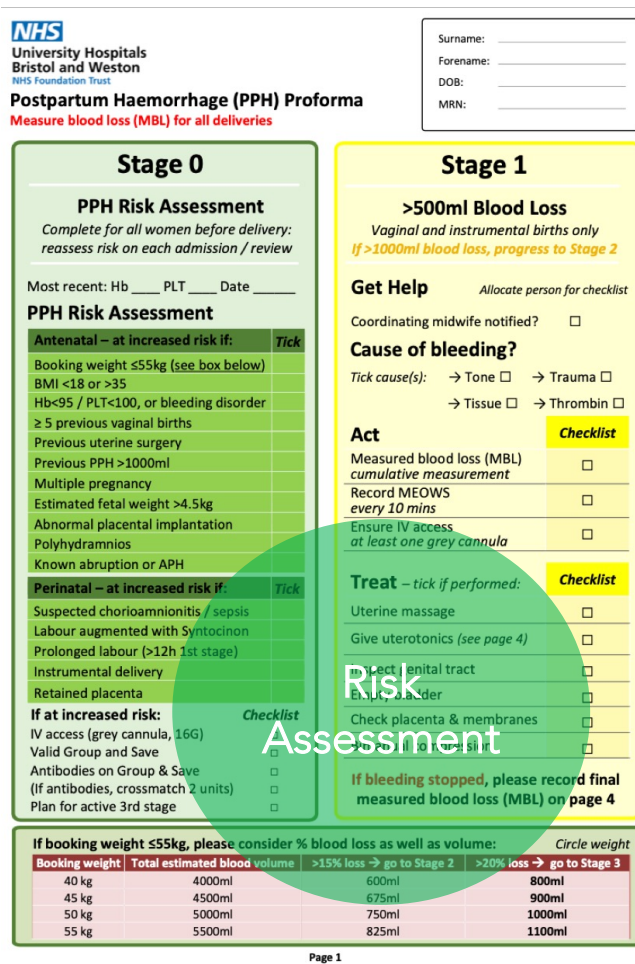
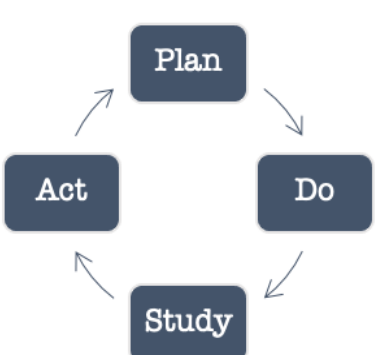
- Usage of the new PPH proforma was audited with 24 hour snapshots.
- Engagement with the proforma remained poor despite training.
- Commonly no proforma was found in the notes [table 2]. Where one was found, completion was often incomplete or inaccurate [table 3].

- Initial user feedback themes: lack of training, poor communication, proforma design issues.
- After training and design changes: positive comments regarding risk assessment and patient's weight-based blood loss. Negative comments on proforma design and uncertainty over the need for change.

DISCUSSION

Prompt recognition of ongoing bleeding allows more timely intervention. These, in turn, may reduce morbidity and mortality associated with massive obstetric haemorrhage.^{1,3} Simply put: *if you don't know it's happening you can't stop it*. We have demonstrated a **positive move to MBL** in our unit.

Despite using a design with an evidence basis for success,² **shifting the structure** of embedded PPH management alongside a change in paperwork has been met with **resistance**. Delaying training until after introduction likely affected **multi-professional 'buy-in'**. The results from our project so far demonstrate the **difficulty of large-scale changes** in a multi-professional workforce and that introducing paperwork alone will not change practice. Our next steps are to form a collaborative working party to adapt the proforma and then lead formalised training with multi-professional champions.



ACKNOWLEDGEMENTS: This project was inspired by OBSCymru* with permission given for local adaptation of their paperwork. We would also like to thank key members of the multi-professional team at St Michael's Hospital for their ongoing hard work.

REFERENCES: 1. Knight M, Bunch K, Tuffnell D, et al. Saving lives, improving mothers' care: Lessons learned to inform maternity care from the UK and Ireland confidential enquiries into maternal deaths and morbidity 2014-16. MBRRACE-UK. 2. Bell S, Collis RE, Pallman P, et al. Reduction in massive postpartum haemorrhage and red blood cell transfusion during a national quality improvement project, obstetric bleeding strategy for Wales, OBS Cymru: an observational study. BMC Childbirth 21, 377 (2021). 3. The American College of Obstetricians and Gynaecologists (ed.). Quantitative Blood Loss in Obstetric Hemorrhage. Committee Opinion: Number 794; 2019.