

OBS UK trial: Implementing a postpartum haemorrhage care bundle

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Introduction

The NIHR-funded Obstetric Bleeding Study (OBS) UK trial is investigating the impact of implementing a postpartum haemorrhage (PPH) care bundle as a quality improvement (QI) initiative. The care bundle is based on previous work undertaken in Wales.¹

The trial will explore clinical and cost effectiveness and incorporates an embedded process evaluation.²

In total, 36 maternity units across England, Scotland and Northern Ireland have enrolled into the stepped-wedge cluster randomised controlled trial design (Figure 2). Sites have been randomised into six sequences. Sites within each sequence have a nine-month 'implementation period' to embed the bundle into their maternity units.

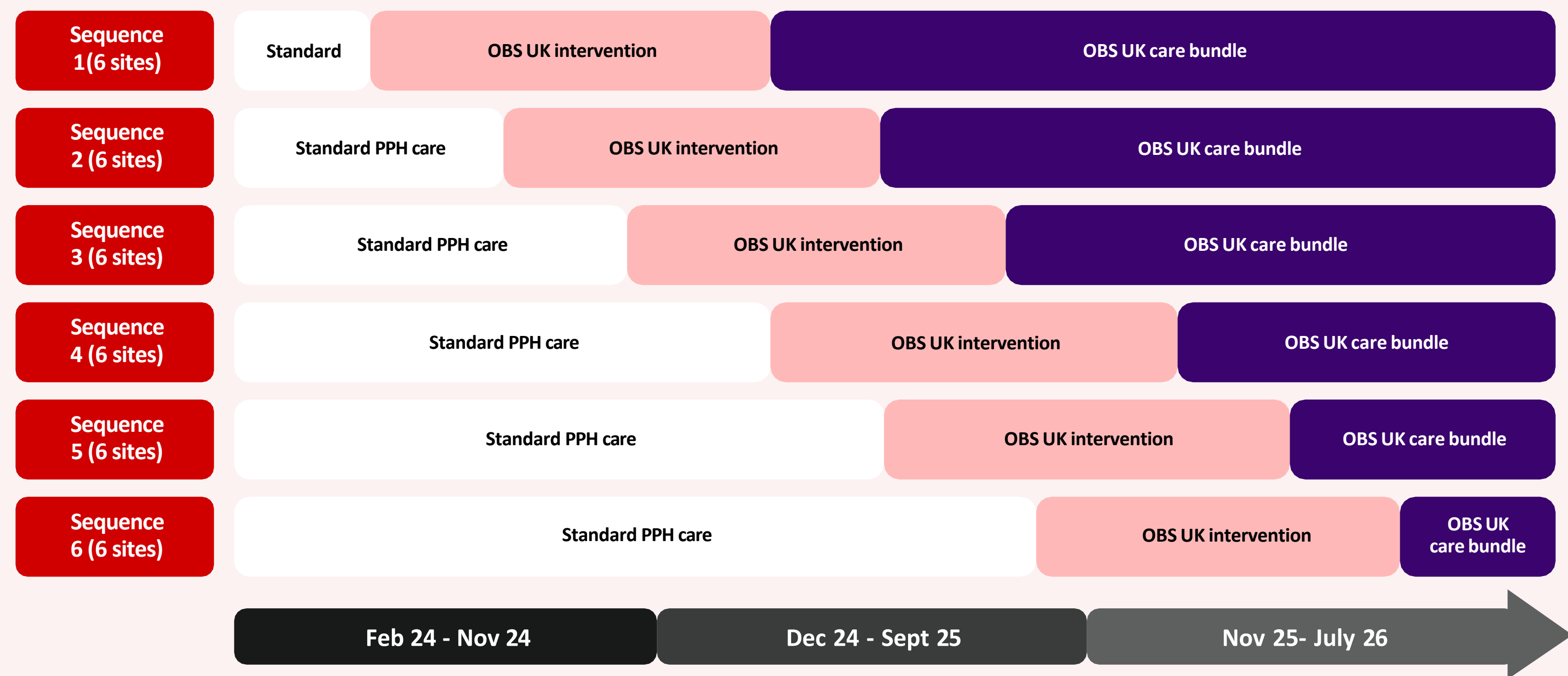


Figure 2: OBS UK trial stepped-wedge cluster randomised controlled study design

The objective of this project is to describe the implementation strategy of rolling out a OBS UK PPH care bundle into participating units across the UK.

Method

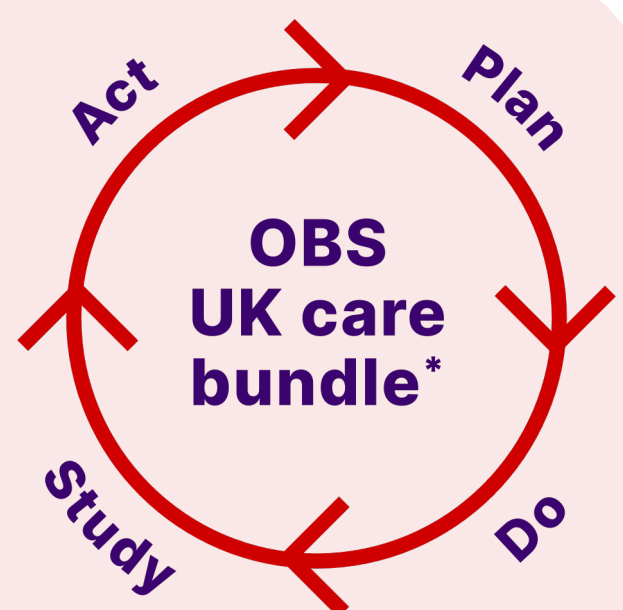
An OBS UK national implementation team comprising obstetric, anaesthetic, midwifery and haematology specialists are leading the QI initiative. The methodology for the 9-month OBS UK implementation period has been informed by Medical Research Council recommendations, the implementation of OBS Cymru in Wales in 2016-18, and QI methodology guidance.^{1,3}

References

1. Bell, SF, Collis, R, Pallmann, P, Bailey, C, James, K, John, M, 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. SSRN Electron J. 2020;
2. Bell, SF. Effectiveness of a maternity improvement programme to reduce excess bleeding and need for transfusion after childbirth: the Obstetric Bleeding Study UK (OBS UK). ISRCTN 2024. <https://doi.org/10.1186/ISRCTN17679951>
3. Skivington, K, Matthew, L, Simpson, SA, Craig, P, Baird, J, Blazeby, JM et al. A new framework for developing and evaluating complex interventions: an update of Medical Research Council guidance. BMJ 2021. <https://doi.org/10.1136/bmj.n2061>

Results

At the start of each implementation period, the OBS UK national implementation team meet with local specialty leads for midwifery, obstetrics, anaesthetics and haematology at each site to map the nine-month implementation period. The driver diagram in Figure 3 outlines the implementation process.



OBS UK implementation process

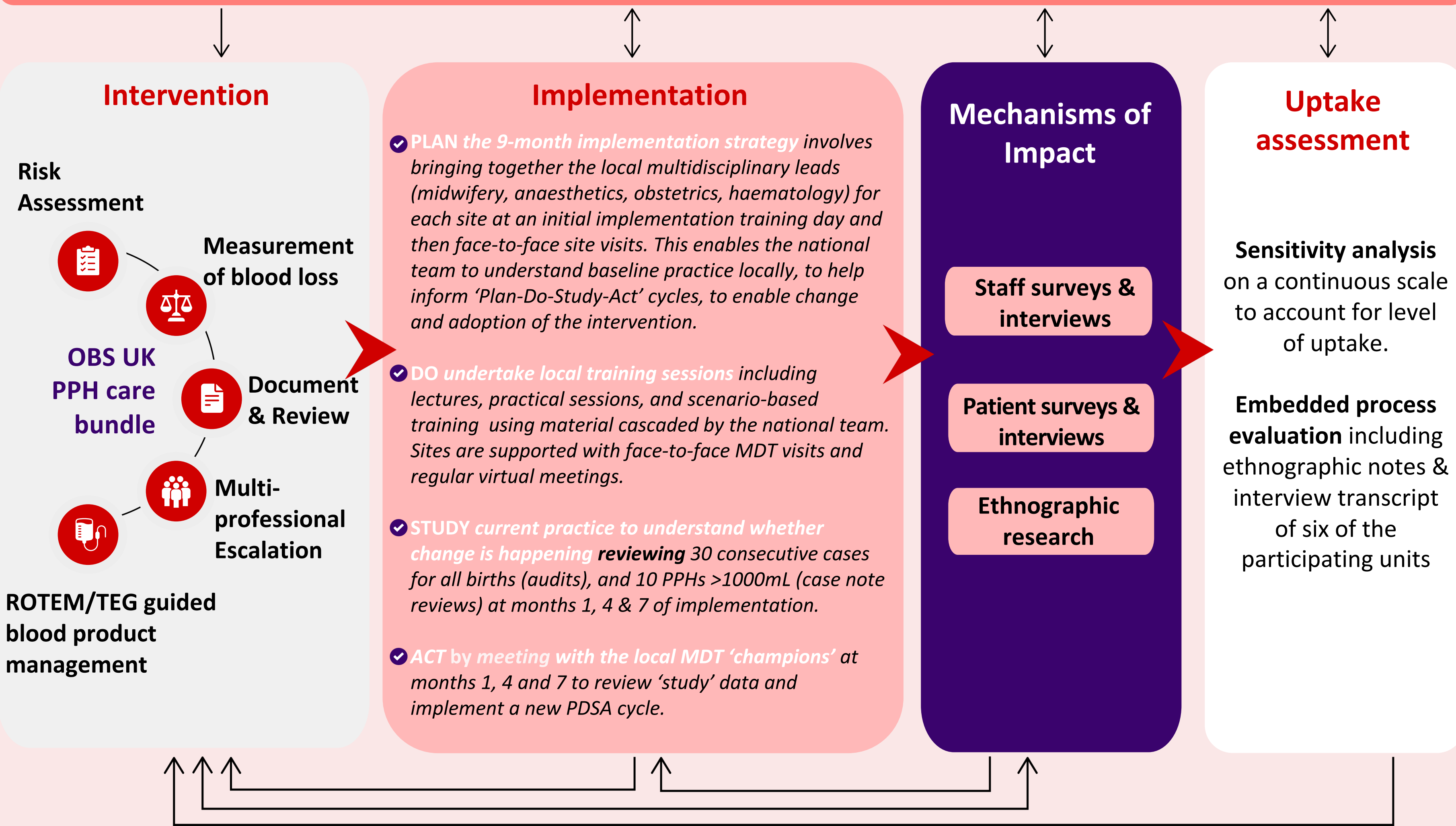


Figure 3. Driver diagram describing the implementation process

Progress to date

By May 2025, Sequence 1 & 2 (12/36 units) have completed their nine-month implementation period, with Sequences 3, 4 and 5 (18/36 units) at months 1, 4 and 7 of implementation, respectively.

Next steps

The final Sequence (6) will begin their nine-month implementation period in August 2025, before joining the remaining sites into the post-implementation – 'OBS UK care' – period in April 2026 until July 2026, when the trial will be completed.

Discussion

- ✓ The OBS UK trial provides a unique opportunity to understand the process of implementing a complex intervention (the OBS UK PPH care bundle) as a QI project.
- ✓ This trial offers a unique opportunity to integrate quantitative and qualitative measures to fully understand adoption of the PPH care bundle.
- ✓ There are significant challenges in implementing modern day complex maternity interventions; high staff turnover, increasing pressures on services, geographic constraints, and increasingly complex patient population. Systemic change requires 'buy in' from all multi-professional maternity stakeholders.
- ✓ The embedded mixed methods process evaluation will provide a crucial insight into the implementation of this complex intervention. This includes analysis of resource allocation locally (i.e. midwifery time, SPA allocation etc), and the impact of utilising a national implementation team to help adoption at a local level.

Conclusion

- ✓ The OBS UK trial began in February 2024 and is due to finish in July 2026. The mixed methods process evaluation will assess the implementation strategy, including barriers and facilitators to successful implementation. This is required to fully understand implementation of the complex intervention in the 36 diverse UK maternity units participating in the trial.
- ✓ The results of this process evaluation will help inform the implementation of other complex interventions in maternity, and more widely across other healthcare settings.