



Standard Operating Procedure (SOP) for
weighing blood loss

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1.0 Introduction

Postpartum haemorrhage (PPH) is one of the leading causes of maternal death worldwide (Knight et al, 2020). This frequently occurs during the third stage of labour following expulsion of the placenta. During this time, the midwife or obstetrician will estimate the amount of blood lost. Whilst visual estimation of blood loss is generally accepted to be the most practical way to quantify blood loss, it is found to be generally inaccurate, particularly at higher volumes. Estimates have been found to be less than half of the measured blood loss (MBL). Studies have reported no correlation between EBL compared with MBL, confirming that the extent of underestimation increases as the volume of blood loss increases (Diaz et al, 2018). Studies also report a tendency to underestimate blood loss at lower volumes using visual estimation (Diaz et al, 2018).

2.0 Objective

It is vital that accurate methods are used to measure blood loss as visual estimation is found to have the potential for large errors. This SOP is required to provide a standardised procedure for measuring blood loss. Weighing blood loss has been found to significantly improve accuracy. Accurate and timely recognition of excessive blood loss leads to the prompt initiation of further steps to prevent further blood loss, improving maternal outcomes.

3.0 Scope

This SOP applies to all medical, midwifery and theatre staff working within the maternity unit and maternity theatres.

4.0 Procedure for measuring blood loss:

Blood loss should be measured throughout the procedure or during an Antepartum Haemorrhage (APH)/PPH by the appointed suitable healthcare professional at the time. This will primarily be the named midwife or midwifery support worker or the theatre team when in theatre.

4.1 Procedure for weighing blood loss

- Following birth, immediately remove the initial absorbent / draw sheet if it appears to be mainly liquor
- Replace with fresh sheet and sanitary pad as all subsequent blood loss must be measured
- Add all blood-soaked items to the scale and weigh
- Use the measured blood loss chart to document the measured blood loss volume
- Remember to include the dry weight of **all** the items used
- Measured blood loss is calculated using the following formula:

Weighted blood loss = Wet Weight of all items – [dry weight x number of items]

Where 1g (gram) weighed blood = 1ml (millilitre) blood loss.

- The Blood-soaked items can be discarded appropriately once weighed and documented
- In theatre, the theatre team will note the amount of liquor in the suction container and deduct this from the total amount of fluid in the suction container
- A cumulative total of the weight of blood loss should be clearly documented on the measured blood loss chart and partogram
- The obstetric team must make an individualised plan considering total weighed blood loss and the clinical condition of the woman

4.2 Measured blood loss chart

Measured Blood Loss Chart

Date:		Time:	
A/N Hb:		P/N Hb:	
Type of Del:			

Patient Details Stickers

Item	Wet Weight grams (WWg)	Dry Weight grams (DWg)	No of Items N items	Total Dry Weight (DWg x N items)	Measured Blood Loss (MBLg) = WWg - [DWg x N items]
Large Swabs 36 cm x 11cm (Default swab)		5 = 50g			
Extra-Large Swabs 45 cm x 45cm		5 = 200g			
Sanitary Pad (Single pack, orange packaging)		20g			
Sanitary Pad (Multipack, purple packaging)		15g			
Tampon		10g			
Inco Sheet		80g			
BHNFT Pink Nightie		260g			
Theatre Gown		300g			
Bed Sheets		645g			
Draw Sheets		395g			
Pillowcase		125g			
Towel		240g			
Green Blanket		790g			
Blue Blanket		1130g			
White Baby Blanket (from del pack) 58 cm x 87cm		120g			
Purple Baby Blanket		170g			
Green Sterile Drape 90 cm x 75cm		40g			
Under Buttock Drape 75 cm x 100 cm		55g			
Surgical Drape 170 cm x 170 cm		180g			
Lithotomy Leggings		165g			
Under Bed Bucket					
Theatre Suction Bottle					
Total Measured Blood Loss Volume - millilitre (TMBLml) (MBLg = MBLml)					ml
Maternal Booking Weight kg: x 100 = Estimated Blood Volume (EBVml):				Name:	
TMBLml: ÷ EBVml: X 100 = % Blood Loss:				Signature:	

5.0 Roles and responsibilities:

5.1 Midwives, Midwifery support workers and Obstetricians

Outside of theatre, to ensure blood loss is weighed as per the operating procedure. In theatre, to support the theatre team to ensure blood loss is weighed as per the operating procedure.

5.2 Anaesthetists and the Theatre team

To support the team to ensure that blood loss is weighed as per the operating procedure.

6.0 Associated documents and references

Ambardekar S, Shochet T, Bracken H, Coyaji K, Winikoff B. Calibrated delivery drape versus indirect gravimetric technique for the measurement of blood loss after delivery: a randomized trial. *BMC Pregnancy and Childbirth* 2014;14(1):276.

Diaz V, Abalos E, Carroli G. Methods for blood loss estimation after vaginal birth. *Cochrane Database of Systematic Reviews* 2018, Issue 9. Art. No.: CD010980. DOI: 10.1002/14651858.CD010980.pub2. Accessed 22 September 2021.

Knight M, Bunch K, Tuffnell D, Shakespeare J, Kotnis R, Kenyon S, Kurinczuk JJ (Eds.) on behalf of MBRRACE-UK. *Saving Lives, Improving Mothers' Care - Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2016-18*. Oxford: National Perinatal Epidemiology Unit, University of Oxford 2020.

Larsson C, Saltvedt S, Wiklund I, Pahlen S, Andolf E. Estimation of blood loss after caesarean section and vaginal delivery has low validity with a tendency to exaggeration. *Acta Obstetrica Et Gynecologica Scandinavica*. 2006;85:1448–52.

Newton M, Mosey LM, Egli GE, Gifford WB, Hull CT. Blood loss during and immediately after delivery. *Obstet Gynecol*. 1961;17:9–17.

Patel A, Goudar SS, Geller SE, Kodkany BS, Edlavitch SA, Wagh K, et al. Drape estimation vs. visual assessment for estimating postpartum hemorrhage. *Int J Gynecol Obstet*. 2006;93:220–4.

Razvi K, Chua S, Arulkumaran S, Ratnam SS. A Comparison Between Visual Estimation and Laboratory Determination of Blood Loss During the Third Stage of Labour. *Aust N Z J Obstet Gynaecol*. 1996;36:152–4.

7.0 Training and resources

Training will be delivered as outlined in the Maternity Training Needs Analysis. This is updated on an annual basis.

8.0 Monitoring and audit

Any adverse incidents relating to the Standard Operating Procedure (SOP) for weighing blood loss will be monitored via the incident reporting system. Any problems will be actioned via the case review and root cause analysis action plans. The action plans are monitored by the risk midwife to ensure that improvements in care are made. The trends and any root cause analysis are discussed at the monthly risk meetings to ensure that appropriate action has been taken to maintain safety.

The Standard Operating Procedure (SOP) for weighing blood loss will be audited in line with the annual audit programme, as agreed by the CBU. The audit action plan will be reviewed at the monthly risk management meetings on a quarterly basis and monitored by the risk midwife to ensure that improvements in care are made.

9.0 Equality and Diversity

The Trust is committed to an environment that promotes equality and embraces diversity in its performance as an employer and service provider. It will adhere to legal and performance requirements and will mainstream equality, diversity and inclusion principles through its policies, procedures and processes. This Standard Operating Procedure should be implemented with due regard to this commitment.

To ensure that the implementation of this Standard Operating Procedure does not have an adverse impact in response to the requirements of the Equality Act 2010 this policy has been screened for relevance during the policy development process and a full equality impact assessment is conducted where necessary prior to consultation. The Trust will take remedial action when necessary to address any unexpected or unwarranted disparities and monitor practice to ensure that this policy is fairly implemented.

This Standard Operating Procedure can be made available in alternative formats on request including large print, Braille, moon, audio, and different languages. To arrange this please refer to the Trust translation and interpretation policy in the first instance.

The Trust will endeavor to make reasonable adjustments to accommodate any employee/patient with particular equality, diversity and inclusion requirements in implementing this Standard Operating Procedure. This may include accessibility of meeting/appointment venues, providing translation, arranging an interpreter to attend appointments/meetings, extending policy timeframes to enable translation to be undertaken, or assistance with formulating any written statements.

9.1 Recording and Monitoring of Equality & Diversity

This section is mandatory for all Trust Approved Documents and must include the statement below:

The Trust understands the business case for equality, diversity and inclusion and will make sure that this is translated into practice. Accordingly, all Standard Operating Procedures will be monitored to ensure their effectiveness.

Monitoring information will be collated, analysed and published on an annual basis as part of Equality Delivery System. The monitoring will cover the nine protected characteristics and will meet statutory employment duties under the Equality Act 2010. Where adverse impact is identified through the monitoring process the Trust will investigate and take corrective action to mitigate and prevent any negative impact

Appendix 1 Glossary of terms

SOP- Standard Operating Procedure.
 EBL- Estimated Blood Loss.
 PPH- Postpartum hemorrhage.
 BBC- Barnsley Birthing Centre.
 ANPN- Antenatal/Postnatal Ward

Appendix 2

Maintain a record of the document history, reviews and key changes made (including versions and dates)

Version	Date	Comments	Author
1	add	New SOP- 1 st edition	Sarah Warren (RM)

Review Process Prior to Ratification:

Name of Group/Department/Committee	Date
Reviewed by Maternity Guideline Group	add
Reviewed at Women's Business and Governance meeting	add
Approved by CBU 3 Overarching Governance Meeting	add
Approved at Trust Clinical Guidelines Group	add
Approved at Medicines Management Committee (if document relates to medicines)	N/A

Trust Approved Documents (policies, clinical guidelines and procedures)

Approval Form

Document type	Standard Operating Procedure (SOP).
Document title	Standard Operating Procedure (SOP) for weighing blood loss.
Document author (Job title and team)	Lizzie Nixon
New or reviewed document	New
List staff groups/departments consulted with during document development	Maternity Staff/ department & Practice Educator Midwife.
Approval recommended by (meeting and dates):	21/10/2022
Date of next review (maximum 3 years)	02/11/2022
Key words for search criteria on intranet (max 10 words)	Post-Partum Haemorrhage, PPH, Blood loss, EBL, Bleeding, Weighing.
Key messages for staff (consider changes from previous versions and any impact on patient safety)	First edition- to improve quantifying blood loss and improve maternal outcomes.
I confirm that this is the <u>FINAL</u> version of this document	Name: Molly Claydon Designation: Governance Support Co-ordinator

FOR COMPLETION BY THE CLINICAL GOVERNANCE TEAM

Approved by (group/committee):	CBU 3 Overarching Governance Meeting
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