

# BLOOD LOSS MEASUREMENT AND RECORDING IN THE OPERATING SUITE - CHW PROCEDURE <sup>®</sup>

## DOCUMENT SUMMARY/KEY POINTS

- Blood loss is measured during a surgical procedure to provide the anaesthetist and the surgeon with an estimation of the blood lost during the procedure.
- Measuring of patients' blood loss throughout a surgical procedure is an estimation used by the anaesthetic and surgical teams to adequately replace the patient's surgical blood loss.
- The measurement of blood loss is performed by the circulating nurse in the operating room.
- Blood-soaked x-ray detectable swabs and sponges are weighed and calculated using weighing scales.
- Any blood accumulated in a suction canister or Accu-measure<sup>®</sup> canister is calculated and any fluid that is used for irrigation is subtracted from the total measured losses.
- A progressive calculation of blood loss is written on the whiteboard and communicated to the anaesthetist.

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

<b>Approved by:</b>	SCHN Policy, Procedure and Guideline Committee	
<b>Date Effective:</b>	1st November 2023	<b>Review Period:</b> 3 years
<b>Team Leader:</b>	Registered Nurse	<b>Area/Dept:</b> Operating Suite CHW

## CHANGE SUMMARY

- Document due for mandatory review. No Changes made.

## READ ACKNOWLEDGEMENT

- All perioperative nurses are to read and acknowledge they understand the contents of this policy.

## TABLE OF CONTENTS

<b>Introduction .....</b>	<b>3</b>
<b>Equipment and Supplies .....</b>	<b>3</b>
<b>Procedure.....</b>	<b>4</b>
Procedure for Calibration .....	4
Procedure for Weighing one (1) Swab/Sponge.....	4
Method for Weighing Swabs/Sponges in Multiples of five (5) .....	4

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## Introduction

The aim of measuring blood loss during a procedure is to provide the anaesthetist and the surgeon with an estimation of the blood lost during the surgical procedure. Measuring blood loss during a procedure is performed when requested by the anaesthetist or surgeon. Measuring of patients' blood loss throughout a surgical procedure is an estimation used by the anaesthetic and surgical teams to adequately replace the patient's blood loss.

The measurement of blood loss is performed by the circulating nurse in the operating room. Blood-soaked x-ray detectable swabs and sponges are weighed using the weighing scales available for operating room use.

The blood accumulated in the suction canister or Accu-measure® canister is included as part of the blood loss calculation. The Accu-measure® is only used for patients under 10kg when significant blood loss is expected, that is greater than 10% of the patient's estimated blood volume. Patients over 10kg would rarely require the Accu-measure®. On occasion the anaesthetist may request the Accu-measure® to be used.

A progressive calculation of blood loss must be performed. As part of this calculation, any fluid that is used for irrigation must be subtracted from the total measured loss.

Care must always be taken to avoid splashing and splattering of blood when measuring blood loss. Staff must utilise standard precautions and wear personal protective equipment (PPE) which includes gloves, protective eyewear, and a mask as there is a high risk of splashing and splattering of blood.

All accountable items are managed according to the NSW Health Policy Directive 'Accountable Items Used in Surgery and Other Procedures' (PD 2023\_002).

## Equipment and Supplies

- Weighing scale (located in the liver transplant trolley)
- Small trolley
- Small plastic drape (to cover the weighing scale and trolley)
- Two kidney dishes (one for the weighing scale and one for the transfer of swab or sponge to the weighing scale)
- A single bowl stand
- Clear plastic bags
- Rampley sponge holding forceps
- Accu-measure® (if applicable)
- Whiteboard marker

## Procedure

### Procedure for Calibration

1. Prepare the weighing scale by placing it on top of a small trolley, ensuring the scale is in a position to avoid disturbances that may affect the operation of the scale.
2. Place a small plastic drape over the weighing scale.
3. Place the kidney dish on the scale, press the 'On' switch, a '0' will appear on the display screen.
4. Place a dry swab or sponge in the kidney dish, press 'Tare', a '0' will appear on the display screen.
5. Remove the dry swab or sponge and keep to ensure the count is correct as per policy.
6. Scale is now ready to be used.
7. The grams (g) shown on the display window equals to the millilitres (ml) of blood loss. For example, 1g equals to 1ml of blood loss.

NB: If you have calibrated using a swab you cannot weigh a sponge unless you calibrate again. If you calibrate using a sponge, you cannot weigh a swab unless you calibrate again.

### Procedure for Weighing one (1) Swab/Sponge

1. Transfer the blood-soaked swab or sponge to the weighing scale using the kidney dish and rampley sponge holding forceps.
2. Record the weight (in mls) of the swab or sponge on the whiteboard – The weight should be rounded up to the nearest whole gram.
3. Record blood loss from the suction canister or Accu-measure® canister as seen.
4. Progressively deduct any irrigation fluid used intraoperatively.
5. Inform anaesthetist after each calculation.
6. When blood loss is large, and/or the patient is under 10kg, measurements should be made frequently, as guided by the anaesthetist.
7. The entries on the whiteboard must not be erased until the anaesthetist and surgeon have viewed the final calculations.

### Method for Weighing Swabs/Sponges in Multiples of five (5)

1. For surgical procedures in which blood loss is excessive, swabs and sponges can be calculated in multiples of five.
2. For swabs, weigh one swab and multiply this by 5. This is the total weight of 5 dry swabs. Record this on the whiteboard away from the progressive count. For example, 1 swab weighs 3g, multiply 3g x 5 swabs, therefore your total of 5 dry swabs will be 15g.

3. The average weight of one sponge appears on the manufactured packet. Multiply this weight by 5. Record this on the whiteboard away from the progressive count.
4. Weigh 5 blood-soaked swabs or sponges (whichever is being calculated at the time) deduct the weight of the 5 dry swabs or sponges from the weight of the blood-soaked swabs or sponges. For example, 5 dry swabs weigh 15g and 5 blood-soaked swabs weigh 35g, therefore your total blood loss will be 20g.
5. Place your 5 blood-soaked swabs or sponges into a bag and write the total blood loss on the outside of the bag.
6. Record the weight (in mls) of the swabs or sponges on the whiteboard.
7. Record blood loss from the suction canister or Accu-measure® as seen.
8. Progressively deduct any irrigation fluid used.
9. Inform anaesthetist after each calculation.
10. When blood loss is large, and/or the patient is under 10kg, measurements should be made frequently, as guided by the anaesthetist.
11. The entries on the whiteboard must not be erased until the anaesthetist and surgeon have viewed the final calculations.

### Example

#### Recording of Blood Loss on the whiteboard

Time	Weight Swab/Sponge (ml)	Progressive Count	Suction Total (ml)	Irrigation Total (ml)	Total (ml)
0900 hours	10	10			
0910 hours	15	25	20		45
0920 hours	10	35	30		65
0930 hours	10	45	60	20	85
0940 hours	15	60	70	20	110
0950 hours	10	70	80	20	130
1000 hours	15	85	85	20	150
1010 hours	10	95	90	20	165

- The weight of swabs and sponges are progressively counted by adding the weight to the previous progressively counted item.
- The total of fluid in the suction canister is recorded as seen. The anaesthetist is to view how much blood is lost at the time of recording.

- The progressive count is added to the suction total and the sum placed in the total column.
- When irrigation is used, the total irrigation is recorded in the irrigation column.

NB: This is the actual irrigation used not the amount poured into the jug.

- The total irrigation used is deducted from the sum of the progressive count and the suction total to provide an accurate blood loss.
- Irrigation must be deducted at each entry following the initial use.

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