

Blood sampling volume audit 2019

Introduction

Iatrogenic anaemia is a term applied to the anaemia that results from blood loss due to repeated blood sampling to obtain specimens for laboratory testing. Strategies to reduce iatrogenic blood loss include altering of test ordering behaviour (limiting the number of tests ordered), micro-sampling, reinfusion of blood drawn from indwelling devices and point of care microanalysis (National Blood Authority (NBA) 2014). For every 100 mL of blood withdrawn, there is a decrease of 7 g/L in haemoglobin.) A reduction in iatrogenic blood loss reduces the risk of anaemia and potentially the need for blood transfusion (NBA 2018). The use of micro-sampling has been shown to significantly reduce the volume of blood loss and has been associated with a significant reduction in blood transfusion (Tinmouth 2008). Implementing strategies to reduce iatrogenic blood loss in an organisation requires strategic planning, communication and implementation with relevant stakeholders such as medical staff, laboratory scientist and nursing staff.

In 2017 Blood Matters undertook a snapshot audit of health service practices that could minimise iatrogenic anaemia associated with blood sampling.

This audit (2019):

Aims

- To identify policy and practice changes that have occurred since 2017 audit.
- To assess total blood volume taken from patients for samples (testing & discard) in a designated clinical area for seven consecutive days.

Method

This audit comprises of two parts:

Part A: Desktop audit of policy and procedures

Part B: Bedside prospective audit of practice – of all patients in one selected clinical area for one week (7 days).

Audit open from 1 August 2019, with data entry to be completed by 20 September 2019.

Please complete all health service data entry by Friday 20 September 2019

Links to audit tools:

Part A: <https://dhhsvic.limequery.com/318161?newtest=Y&lang=en>

Part B: bedside data collection sheets

Data entry submission to Blood Matters

These tools can be found <https://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/speciality-diagnostics-therapeutics/blood-matters/transfusion-audits>

Instructions

Part A: Desktop audit of policy and procedures

This part of the audit is to be completed by Blood Management, Transfusion, Laboratory or appropriate Risk management staff.

The audit is submitted online via LimeSurvey

<https://dhhsvic.limequery.com/318161?newtest=Y&lang=en>

Part B: Bedside prospective audit of practice

This part of the audit is to assess health services current blood sampling practices, and will record the volume of blood taken from patients for testing and discard. Clinical staff will be required to record volumes at the time of blood sample collection.

The health service is requested to select one clinical area, e.g. ICU, haematology, or other clinical area for auditing. All patients in the selected clinical area to have a record of all blood sampling events documented for a 7-day period (within the audit timeframe 1 August to 6 September – Complete data entry by 20 September).

Print out the attached audit tool for bedside documentation of blood sampling. Include only one patient's information per sheet, however one patient may need multiple sheets.

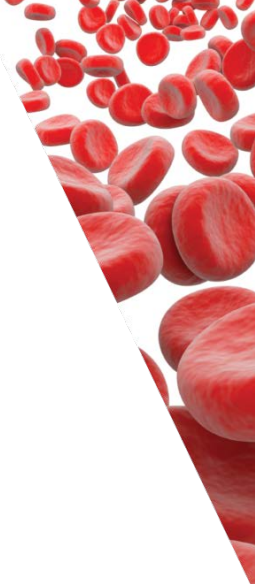
Patient details for health service use only, are entered at the top. Do not include patient identifiers, other than gender and age, when submitting data to Blood Matters.

For clinical staff at the bedside:

A separate row needs to be completed for each sample draw. For example, if blood cultures are taken from a central line and other samples are taken from a peripheral IV at the same time, two separate rows would need to be completed.

- Total volume withdrawn = the total volume of any blood taken for samples, to clear lines and discard
- Volume line clearance = any blood withdrawn to clear the line of other fluids before taking specimens for testing, whether discarded or returned
- Reason for blood sampling
 - Routine – any routine testing that would regularly occur for that patient e.g. daily U&E, FBE
 - Medical request – any sampling that is in addition to usual routine testing requirements e.g. patient has melena and a FBE is requested to check Hb
 - Laboratory request (zero tolerance) – where specimens have been rejected by the laboratory, for any reason, and a new specimen requested, or additional bloods required by the laboratory to complete testing.
 - Other – any other reason blood testing is taken
- Sample collection method:
 - Vacutainer - where specimens are collected directly into the sample tubes.
 - Syringe - collection using a syringe to collect blood either from a line or for a peripheral stab
 -

Please ensure that if pathology collectors or medical staff are collecting blood samples from the patient, the required information is entered on the data collection tool.



For the data entry to Blood Matters:

On completion of the audit, data is to be entered into an excel file and emailed to bloodmatters@redcrossblood.org.au

The Excel file contains multiple tabs. The first tab provides a summary page allowing entry of basic information about your health service. It also provides a summary of the data as it is entered into the individual patient tabs.

The summary section cannot be directly edited, but allows easy navigating to patient data entry tabs and provides a quick overview of all data entered to check for accuracy.

The Excel file allows data submission of up to 50 blood collections per patient, for up to 50 patients. For sites with more than 50 patients a second Excel file will be needed. Use one tab per patient for data entry. All blood collections for the patient, during the audit period go into the one tab.

References:

Tinmouth, A, McIntyre, L, Fowler, R. Blood conservation strategies to reduce the need for red cell transfusion in critically ill patients, CMAJ 2008;178: 49-57.

National Blood Authority Patient Blood Management Guidelines Companions No 17 Reduce iatrogenic blood loss (2014) <https://www.blood.gov.au/patient-blood-management-guidelines-companions>

National Blood Authority 'Use of small volume tubes to reduce blood loss case study: Flinders Medical Centre.' (2018) <https://www.blood.gov.au/system/files/SVTs-at-FMC-case-study-v2-with-endnote-references.pdf>

'True Blood' The Critical Care Story: An audit of blood sampling practice across three adult, paediatric and neonatal intensive care settings, Australian Critical Care 29 (2016) 90-95.