



NATIONAL BLOOD AUTHORITY
AUSTRALIA

NATIONAL PATIENT BLOOD MANAGEMENT IMPLEMENTATION STRATEGY

2017-2024

Better management of patients' blood...

Better patient outcomes



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Introduction

The promotion of safe, high quality management and use of blood and blood products is a primary objective of the National Blood Agreement. The *Statement on national stewardship expectations for the supply of blood and blood products* (the Stewardship Statement) outlines the expectations of health service organisations with regard to the responsible, sustainable and appropriate use of blood and blood products.

Patient Blood Management (PBM) improves patient outcomes by ensuring that the focus of the patient's medical and surgical management is on optimising and conserving the patient's own blood. PBM is not an intervention or an alternative to allogeneic blood transfusion; it is sound evidence-based clinical practice.

The operational and cultural change required to implement best practice clinical outcomes at a health provider level are significant and sometimes require complex changes in business process and clinical practice. There are also a range of wider environmental challenges (such as organisation buy in, funding pressures and clinical and executive champions) confronting jurisdictions and health service organisations seeking to implement the change.

The *National Patient Blood Management Implementation Strategy 2017-2024* (the Strategy) takes a patient-centred approach intended to optimise clinical outcomes and improve patient safety.

Regular updates on progress against items identified in this Strategy will be available online at www.blood.gov.au/patient-blood-management.

Definitions

The Australian Commission on Safety and Quality in Health Care (ACSQHC) *National Safety and Quality Health Service Standards*, inclusive of the *Blood and Blood Products (and the revised Blood Management Standard) Standard* (the Standard). The Strategy aligns with the Standard (including the revised Standard) in its definition of blood and blood products and patient blood management.

Transfusion *'covers the administration of all blood and blood products, regardless of their route of administration'.*

Blood management *'is a process that improves outcomes for patients by improving their medical and surgical management in ways that boost and conserve their own blood, and ensure that any blood and blood products they receive are appropriate and safe'.*

Patient Blood Management *'views a patient's own blood as a valuable and unique resource that should be conserved and managed appropriately. Appropriate patient management requires a patient's blood (haemopoietic and circulatory system) to be considered in the same way as the management of all other body systems.*

PBM takes an individualised, multidisciplinary approach to the management of a patient's blood, through assessment and the development of a management plan to:

- *optimise a patient's own blood (identify and address the health conditions that if not managed appropriately might lead to a blood transfusion, such as anaemia or iron deficiency)*
- *minimise blood loss (such as minimal blood draw techniques, point of care diagnostic testing, pharmacological strategies, cell salvage and surgical techniques that reduce blood loss)*
- *optimise tolerance of anaemia (with appropriate management, the body can be supported to tolerate anaemia without resorting to blood transfusion).*

Patient Blood Management should be the standard of care applied by all clinicians for patients facing a medical or surgical intervention who are at risk of blood loss'.

A National Patient Blood Management Strategy

The goal of the Strategy is to optimise clinical outcomes and improve safety for patients. PBM should be the standard of care applied by all clinicians for patients facing a medical or surgical intervention who are at risk of blood loss, bleeding, coagulopathy or may require a blood product as part of their treatment, recognising that there may be more appropriate ways of using and administering blood and blood products to manage disorders.

When choosing treatment options, the following should be taken into account by patients and clinicians:

- the clinical condition
- benefits and risks
- length of treatment and amount of product needed
- availability of treatment options
- coexisting conditions
- other therapies or interventions
- monitoring
- outcomes
- costs – for the individual, the community and the health system

Scope

The scope of the Strategy covers the principles of PBM and all elements in the blood management and clinical transfusion process for blood and blood products. The priority will be on labile products.

Principles of Patient Blood Management

PBM views a patient's own blood as a valuable and unique resource that should be conserved and managed appropriately. This recognises that for many patients the best and safest blood is their own circulating blood. Appropriate patient management requires a patient's blood (circulatory system) to be considered in the same way as the management of all other body systems.

Reducing inappropriate use

Appropriate use of product within a blood management framework would mean that red blood cell (RBC) transfusions characterised as 'appropriate' on the basis of a pre-transfusion haemoglobin, could be rendered unnecessary if a patient's iron deficiency is treated and patients are allowed adequate time to generate their own red cells and haemoglobin in preference to transplanting another person's red blood cells.

PBM is a multidisciplinary, evidence-based approach to optimising the care of patients and represents best practice for transfusion medicine. Appropriate use of blood and blood products should therefore take into account a patient's modifiable risk factors that may reduce the use of transfusion as a treatment option.

Partnering with consumers

The Standard aims to ensure that patients (and carers) are engaged in decisions about their management and, if they receive blood and blood products, they do so appropriately and safely. Information should be provided to patients about optimising their own blood, PBM strategies and the potential need for blood and blood products, including all treatment options, risks and benefits.

When developing PBM materials it is important to:

- ensure patients and carers are involved in developing information and local resources
- ensure that the information is current, and that clinicians have ready access to it
- provide information in a format that is easy to understand and able to be adapted to local needs and level of health literacy
- seek feedback from patients, health professional and health service organisations about the information provided using surveys or informal discussions, and make changes to ensure it is understood and meaningful

Health service organisations should establish effective systems to support clinicians to communicate with patients and carers. Conversations should consider the patient's values and preferences and include an appropriate informed consent process.

Objectives

The objectives of the national strategy are to:

1. Increase awareness and understanding of PBM by engaging with patients, consumers and healthcare professionals through effective communication, education and training
2. Consolidate, review and evaluate existing activities for PBM to identify gaps in knowledge and care
3. Implement effective PBM practices through consultation and collaboration across healthcare settings to ensure appropriate prescribing, authorising, dispensing and administration of blood and blood products
4. Implement effective systems and processes for appropriate prescribing, authorising, dispensing and administration are in place
5. Improve national reporting on adverse events to reduce the number of transfusion related complications and improve patient safety
6. Implement nationally coordinated measures and outcomes for PBM
7. Reduce variation in clinical practice through benchmarking and reporting
8. Agree a national research agenda for PBM
9. Facilitate the development of frameworks to support the sustainability of PBM initiatives
10. Make it simple for health service organisations to access reference documents for PBM

Partners in Patient Blood Management

The National Blood Authority (NBA) will consider a number of stakeholders in the health sector as partners in delivering PBM including primary health networks, the Health Roundtable, Australian & New Zealand Society of Blood Transfusions Ltd (ANZSBT), Australian College of Rural and Remote Medicine (ACCRM) and other relevant colleges and societies, consumer organisations, private health service organisations, and general practitioners. Opportunities to partner with national campaigns such as those by NPS MedicineWise and Choosing Wisely will also be considered.

More broadly, key partners could include:

- those who assist people in learning more about PBM (information about the importance of a patient's own blood)
- those who may need blood and blood products
- those who provide health services (public and private) for people who may need blood and blood products
- those who prescribe blood and blood products
- those who produce, report and publish information about blood and blood products
- those who manufacture, market and distribute blood and blood products
- local, state/territory and federal governments

Supporting Activities for Patient Blood Management

The over-arching coordination of all strategic activities and development and adoption of national reference tools will be guided by the PBM Steering Committee, consisting of jurisdictional and relevant experts drawn from across the sector.

There are a number of existing activities that have been rolled over from the previous strategies that are underway at the national level that directly or indirectly, support implementation of PBM. Activities under this strategy are intended to build on or augment these existing initiatives.

New and rolled over activities can be categorised into six key themes:

1. Guidelines,
2. Tools and Resources,
3. Education and Training,
4. Promotion and Communication,
5. Data, and
6. Research and Development.

The strategies to implement PBM under each of these broad themes are described below.

1. Guidelines

The six PBM Guidelines modules were completed in April 2016. The NBA will now consider a broader scope for the review and update process across the entire suite of modules rather than each module being updated fully in an isolated and iterative process. The review process will also include a comprehensive communication and dissemination plan to inform stakeholders of any updates or changes to the recommendations within the current guidelines. The aim is to transition to a methodology that will enable more rapid updates i.e. to a 'living guideline' model.

	2017	2018	2019	2020	2021	2022	2023	2024
PBM Guidelines								
Blood Product Guidelines								
Publication in journals								
PBM Guidelines App								

2. Tools and Resources

The NBA will coordinate, through the PBM Steering Committee, the identification and development of tools and resources that can be modified and branded by health service organisations to support PBM implementation in their own institution. The NBA will use a collaborative approach to the development of the tools, drawing on relevant jurisdictional and stakeholder expertise or associated work already completed.

The PBM Steering Committee will assist the NBA by monitoring the progress of the tools and resources, identifying current tools needing review and proposing future tools and resources.

Priority will be given to tools that will support health service organisations to implement the Standard such as patient materials, case studies, policy guidance, guidance for local data collection and analysis, clinical standards and audits.

	2017	2018	2019	2020	2021	2022	2023	2024
Review and update current tools								
Anaemia management in particular Iron Deficiency Anaemia								
Informed consent								
National prescription chart that includes national clinical indicators								
PBM program implementation toolkit								
PBM business case template and guidance for implementation of key activities								
Website/ database for accessing information about PBM								

3. Education and Training

The PBM Steering Committee will oversee a nationally coordinated approach to education and training to support the development of PBM knowledge across all health care settings.

General practitioners play a key role in managing anaemia and iron deficiency. The NBA will explore educational partnerships to develop materials such as educational audits and media or events to enhance competencies of general practitioners and the general practice team in the identification, diagnosis and management of iron deficiency and iron deficiency anaemia.

	2017	2018	2019	2020	2021	2022	2023	2024
Key Learning Area Framework								
BloodSafe eLearning Australia Modules								
Education for junior medical officers								

	2017	2018	2019	2020	2021	2022	2023	2024
Education for general practitioners								
Investigate multiple approaches to explore partnerships with relevant organisations for implementing education and training								
Education for Nurse Practitioners								
Prescribing forum for healthcare professionals								
Work with relevant organisations to implement PBM in curriculums for doctors and nurses at tertiary institutions								

4. Promotion and Communication

The NBA, with the support of the PBM Steering Committee, will design and undertake promotional/communication campaigns that target specific groups of health service organisations and patients to enhance awareness of PBM. These campaigns will be undertaken in conjunction with clinicians, jurisdictions, patient advocacy groups and other stakeholders where relevant.

	2017	2018	2019	2020	2021	2022	2023	2024
PBM for consumers/patients								
Conference attendance								
PBM awareness week								
Investigate multiple approaches to explore partnerships with relevant organisations for								

implementing communication protocols								
Development and promulgation of a communication and marketing strategy								

5. Data

The NBA, in conjunction with the PBM Steering Committee, will develop national outcome and performance measures relating to the initiatives in the PBM Guidelines and to support the PBM principles.

Data can be used to support benchmarking to facilitate and enable measurement of practice improvement.

	2017	2018	2019	2020	2021	2022	2023	2024
National outcomes and performance measures agreed								
National clinical indicators developed and implemented								
National audits designed and initiated								
Benchmark health service organisations								

6. Research and Development

A nationally coordinated effort in research and development is required to address evidence gaps in the blood sector and to enable responses to emerging evidence and new technologies.

During the development of the PBM Guidelines, research gaps and priorities were identified. The NBA will work with the sector to identify further research gaps as part of the review of the PBM Guidelines.

	2017	2018	2019	2020	2021	2022	2023	2024
Horizon scanning framework developed and implemented								
Identify PBM evidence and process gaps								

	2017	2018	2019	2020	2021	2022	2023	2024
and identify priorities								

Evaluation and Success Measures

A comprehensive evaluation will mirror the objectives and supporting activities outlined in the Strategy. Evaluation should be designed to provide an overview of progress towards PBM and appropriate use of blood and blood products in Australia. This may reflect a combination of initiatives implemented by many groups.

Outcomes of activities in the Strategy will inform the development of the next set of strategies. An analysis of the key NBA activities that were priorities for the *National Education and Training Committee 2013-16* and the *PBM Guidelines Implementation Strategy 2013-17* is at **Previous Strategies** below.

The evaluation will use indicators that:

- Provide quantitative data on the PBM and appropriate use initiatives
- Research the use of qualitative data on clinician and consumer understanding of PBM initiatives and blood product transfusion Determine progress made towards achieving the objectives outlined in the strategy

Previous Strategies

This Strategy draws on the experiences and outcomes of the *National Patient Blood Management Guidelines Implementation Strategy 2013-2017* and the *National Blood Sector Education and Training Strategy 2013-2016*.

Since the launch of the PBM Guidelines and accompanying implementation strategy, Australia has seen a significant reduction in the use of red blood cells. The implementation of the Standard (a dedicated hospital accreditation standard for Blood and Blood Products and the revised Blood Management Standard) has also contributed to this decline in the use of red blood cells. This reduction in use would not have occurred however, without the concerted effort of jurisdictional programs, clinical PBM champions and a willingness by healthcare professionals to adopt a patient focus rather than a product focus and using blood and blood products more appropriately and safely. As an example, the demand for red blood cells over the last four years has fallen by over 21%, realising a saving to governments of \$94 million. PBM is a major driver of these savings, noting that a reduction in wastage also contributed. The NBA estimates there remains significant scope for consolidation of gains already made and further penetration of PBM in clinical practice.

The core element of the strategy was to facilitate activities and development of materials at a national level that support implementation at a health provider level. The four main elements covered in the previous strategy included:

- PBM tools
- Education and Training
- Promotion
- Data

The status against each activity in the previous strategies is highlighted below.

Legend:

	<i>To be completed and funding approved as part of the PBM Implementation Strategy 2013-17</i>
	<i>Priority amended and reallocation to PBM Implementation Strategy 2017-21</i>
	<i>In progress - NBA progressing these activities</i>

Priority	Activity Status	Outcome
National Patient Blood Management Guidelines Implementation Strategy 2013-2017		
PBM Tools	Determine requirements for a National PBM Reference Tool Set	The PBM Resource Guide identifies the tools that have been commissioned, developed, consulted on and published.
	Adapt available existing tools for the PBM Reference Tool Set	Existing tools adapted where possible to reduce duplication
	Develop a searchable online database to access information	The tool needs further investigation
	Commission development of tools to address gaps	The PBM Resource Guide identifies the tools that have been commissioned, developed, consulted on and published
	Publish tools to address gaps	The PBM Resource Guide identifies the tools that have been commissioned, developed, consulted on and published
	Review and update National PBM Reference Tool Set	Evaluation of current tools underway
Education and Training	Extend eLearning PBM courses	BloodSafe eLearning Australia has courses on PBM Guidelines modules for Critical Bleeding, Perioperative, Medical, Critical Care, Obstetrics and Maternity to be released June 2017 and Neonatal and Paediatrics June 2018
	Investigate and support hospital based education and training	Junior Medical Officer (JMO) toolkit under development
	Education for general practitioners	Preoperative anaemia as a modifiable risk factor was targeted in the 'Fit for Surgery Campaign' in 2015. A Continuing Professional Development (CPD) audit is planned for 2017.
	PBM training for specialist practitioners	Australian and New Zealand College of Anaesthetists (ANZCA) has endorsed the PBM Guidelines and the BloodSafe e Learning Australia

Priority	Activity Status	Outcome
		(BEA) critical Bleeding Course as activities under their CPD standard
Promotion/ Communication	Targeted PBM Campaigns:	
	- restrictive transfusion/single unit policy	Single unit guidance was developed and promoted to healthcare professionals via the NBA website and at conferences
	- fit for surgery	Fit for Surgery materials for both patients and clinicians were developed in collaboration with NPS MedicineWise. The tools were promoted on both the NBA and NPS MedicineWise websites and at Conferences such as GP15
	- the cost of blood	The project is still under development
	Supporting PBM Network	The NBA held a series of symposiums in conjunction with the jurisdictions in 2013, a PBM symposium with WA in 2014 and the ACSQHC in 2015
	Conferences	The NBA has promoted PBM at conferences – refer to the NBAs Annual Reports for the list each year
Data to support PBM quality improvement	Determine transfusion/PBM data sets required	The project is still under development
	Develop peer review reports	The project is still under development
	Determine data access rules specific to report audiences	The project is still under development
	Develop electronic audit tools	The NBA has developed two excel based audit tools for red cell usage and massive transfusion
National Blood Sector Education and Training Strategy 2013-2016		
<i>One</i>	NEAT Committee established	Seven meetings held

Priority	Activity Status	Outcome
Identifying and addressing gaps and reducing unnecessary duplication	Completed consultancy to analyse and identify duplication and gaps. NEAT Committee working group established to define required competencies.	Identification of gaps completed. Identification of competencies determined to be too complex. Redefined as key Learning Areas (KLA).
	Minimum standards and competencies identified	Competencies to be determined by educational providers. NEAT to recommend KLA
<i>Two</i> Improving coordination of online learning and web based information	A range of additional online training materials developed. A comprehensive promotion program established including advertising and conference promotion. Project to establish a common national reference library of materials initiated for completion in 2015-16.	BloodSafe eLearning Australia and Blood Service program of activities. Availability and awareness of training materials increased. Coordination to reduce duplication improved.
<i>Three</i> Creation of networking opportunities	Networking National Priority setting group Planned activities by all group members provided.	Four teleconferences held. Ongoing - quarterly teleconferences planned for 2016 and 2017 Review of activities to reduce duplication.
	Prescribing forum planned 2017	Ongoing
<i>Four</i> Engaging patient groups and supporting their educational requirements	Deliver patient and carer educational requirements in appropriate formats and languages	Ongoing
	Training for health professionals in obtaining informed consent	Ongoing

