



NATIONAL BLOOD AUTHORITY  
AUSTRALIA



## WORKING SMARTER TO MANAGE BLOOD AND BLOOD PRODUCTS APPROPRIATELY

- > A NATIONAL BLOOD PRODUCT MANAGEMENT IMPROVEMENT STRATEGY 2018-2022

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## Version control

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Locked Bag 8430  
Canberra ACT 2601  
Phone: 13 000 BLOOD (13 000 25663)  
Email: [inventory.management@blood.gov.au](mailto:inventory.management@blood.gov.au)  
[www.blood.gov.au/wastage](http://www.blood.gov.au/wastage)

# Introduction

Health service organisations across Australia use blood and blood products every day to save lives. The availability of blood and blood products is facilitated by the generosity of voluntary blood donors and funded by Australian governments. Each year governments invest over \$1.3 billion in collection, processing, procuring and distributing these products through the Australian Red Cross Blood Service (Blood Service) and other suppliers to health providers.

As such, all parts of the supply chain for blood and blood products have a responsibility to ensure that all aspects of the supply chain including transport, storage and inventory management minimise unnecessary wastage and ensure blood and blood products are available to meet clinical needs.

A certain level of discards of blood and blood products, particularly fresh blood products with short expiry dates is both inevitable and appropriate to ensure that products are available where and when they are clinically necessary. However, there is a proportion of discards of blood and blood products that is neither inevitable nor appropriate. This Strategy focuses on eliminating this proportion of avoidable discards, known as wastage, and ensuring blood and blood products are available to meet clinical need.

In November 2010, Australian Health Ministers endorsed the *Statement of National Stewardship Expectations for the Supply of Blood and Blood Products*. The Stewardship Statement outlines measures that Health Ministers expect all health providers to adopt within their organisation. This includes the requirement to manage blood and blood products in ways that ensure:

- All blood products are used in a clinically appropriate manner in accord with relevant professional guidelines and standards;
- Informed patient consent procedures are implemented for all patients;
- Processes, programs and facilities are in place to minimise the wastage of blood products;
- Facilities are accredited with the appropriate bodies to meet all quality and safety obligations;
- Transfusion related adverse event information is collected and managed according to jurisdictional requirements;
- Health providers have an ordering and receipt verification process in place which provides adequate financial accountability as required by governments; and
- Inventory data is provided on a regular and timely basis to assist in supply and demand planning, especially in times of national shortages.

This is consistent with the *National Safety and Quality Health Service (NSQHS) Standard 7, “Blood Management” 2<sup>nd</sup> edition*, which requires health service organisations to effectively manage the availability and safety of blood and blood products, as noted in the following actions.

Item	Action required
Prescribing and administering blood and blood products	7.6 The health service organisation supports clinicians to prescribe and administer blood and blood products appropriately, in accordance with national guidelines and national criteria
Storing, distributing and tracing blood and blood products	7.9 The health service organisation has processes: <ul style="list-style-type: none"> <li>a. that comply with manufacturers’ directions, legislation and relevant jurisdictional requirements to store, distribute and handle blood and blood products safely and securely</li> <li>b. to trace blood and blood products from entry into the organisation to transfusion, discard or transfer</li> </ul>
Availability of blood	7.10 The health service organisation has processes to: <ul style="list-style-type: none"> <li>a. manage the availability of blood and blood products to meet clinical need</li> <li>b. eliminate avoidable wastage</li> <li>c. respond in times of shortage</li> </ul>

## A NATIONAL BLOOD PRODUCT MANAGEMENT IMPROVEMENT STRATEGY

This Strategy seeks to reduce wastage and ensure blood and blood products are available to meet clinical need through three streams of work:

1. **Manufacturing and distribution efficiencies** from the point of collection to the point of issue of blood and blood products to health providers from suppliers and distributors;
2. **Improving health provider inventory management** from the point of receipt of blood and blood products to the transfusion of these units to patients; and
3. **Engaging with health providers** to reduce inappropriate use and wastage of blood and blood products in the sector.

Regular updates on progress against items identified in this Strategy will be available online at [www.blood.gov.au/wastage](http://www.blood.gov.au/wastage) . We will review this Strategy on a regular basis to ensure its ongoing effectiveness in the campaign to eliminate unnecessary wastage and ensure blood and blood products are available to meet clinical needs.

## SCOPE

The scope of the Strategy covers elements in the supply chain for blood and blood products.

The Strategy excludes supplier efficiencies as these are handled by contract management obligations between the National Blood Authority (NBA) and suppliers.

## RELATIONSHIP TO OTHER NBA STRATEGIES AND PROGRAMS

The NBA has a number of strategies and programs that address performance improvement and governance in the blood sector; and support the Stewardship Statement, namely the:

- National Immunoglobulin Governance Program;
- National Patient Blood Management Implementation Strategy 2017-2021;
- Guidelines for the Management of Haemophilia in Australia;
- Revised Patient Blood Management Guideline Review Project;
- National Blood Sector Data and ICT Strategy; and
- Strategic Framework for National Haemovigilance Program.

This Strategy will consider and support the activities identified in these strategies and programs to ensure there is consistent implementation.

## PARTNERS

The NBA will consider a number of stakeholders in the health sector as partners in delivering efficiencies in the supply chain, including the Australian & New Zealand Society of Blood Transfusions Ltd (ANZSBT), suppliers and distributors, public and private health service organisations, health providers and general practitioners.

More broadly, key partners could include:

- those who assist people in learning more about blood management;
- those who handle 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; and
- local, state/territory and federal governments.

# Current position

The implementation of the *National Blood and Blood Product Wastage Reduction Strategy 2013-2017* (2013-17 Strategy); fresh blood product discard rate targets; and the Fate module in BloodNet (the national online ordering and inventory management system operated by the NBA), have successfully saved governments over \$28 million as highlighted in Table 1.

Implementation of the Fate module in BloodNet in 2016-17 covers approximately 99% of national fresh blood product issues.

Table 1: Savings achieved with introduction of wastage reduction strategy 2012-13 to 2016-17

Financial Year	NET Units Issued	Units Discarded	DAPI	Discard Cost	Savings compared to 2012-13 FY
2012-13	1,153,907	83,937	7.3%	\$28,161,793	
2013-14	1,067,001	83,768	7.9%	\$26,191,588	\$1,970,205
2014-15	1,025,545	69,990	6.8%	\$22,060,486	\$6,101,307
2015-16	995,131	57,822	5.8%	\$19,816,715	\$8,345,078
2016-17	973,786	52,414	5.4%	\$16,201,500	\$11,960,293
<b>Total</b>					<b>\$28,376,883</b>

Red Blood Cell (RBC) national discards as a percentage of issues (DAPI) decreased from 5.0% to 2.3%.

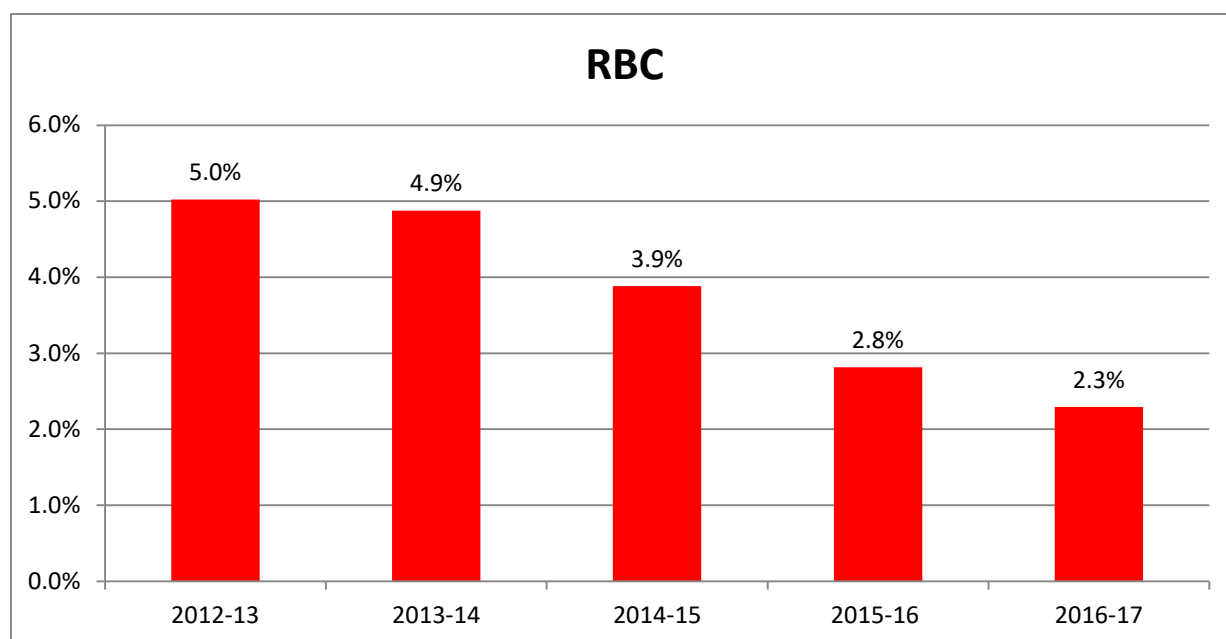


Figure 1: RBC DAPI from 2012-13 to 2016-17

While the previous Wastage Strategy has been successful, a certain level of discards of blood and blood products, particularly fresh products with short expiry dates is both inevitable and appropriate to ensure that products are available where and when they are clinically necessary.

# Supporting Activities

The NBA will continue to work collaboratively with all Australian governments and suppliers to improve the efficiency of the supply chain. The over-arching coordination of all strategic activities and development and adoption of national reference tools will be guided by the Jurisdictional Blood Committee (JBC), and through health provider engagement.

There are a number of existing activities that have been rolled over from the previous strategy that are underway at the national level that directly or indirectly, impact blood product management improvement in the supply chain. Activities under this strategy are intended to build on or augment these existing initiatives.

New and rolled over activities are categorised into six key themes:

1. Data and System Enhancements;
2. Guidelines and Governance;
3. Tools and Resources;
4. Education and Training;
5. Promotion and Communication; and
6. Research and Development.

The strategies to implement blood product management improvements in the supply chain under each of these broad themes are described below.

## DATA AND SYSTEM ENHANCEMENTS

Reporting from BloodNet will continue to be enhanced to provide a suite of reports relating to inventory levels, alerts, maximum stock levels, unit discards and associated costs, at the levels of health provider and organisational unit (e.g. a Local Health District or Pathology Service). These reports will be made available on demand to health providers and their use within existing governance frameworks in health providers and States and Territories will be strongly encouraged.

Expanding the current voluntary collection of discard data to cover all blood and blood product discards by all health providers. Data relating to discards of non-fresh blood products will occur when commercial suppliers are implemented in BloodNet.

Public release through the NBA website of high level summary discard data by health provider will enhance transparency and accountability. The NBA will continue to work with all jurisdictions to establish targets for discard rates for blood products for the public and private sectors for 2018-19 onwards.



The performance data will help target waste reduction initiatives and is consistent with the National Safety and Quality Health Service (NSQHS) 2<sup>nd</sup> edition, Standard 7, “Blood Management” which requires health service organisations to have systems to monitor wastage of blood and blood products.

Activities	2018	2019	2020	2021	2022
Further detailed discard analysis and updated targets for fresh blood products; including consideration of return time wastage					
Enhanced BloodNet reporting					
Publication of discard data at levels agreed with jurisdictions					
Develop targets for non-fresh products					
Continue to implement the national barcoding policy					
Continue to implement the BloodNet / LIS interface					
Continue to implement the BloodNet and Blood Service NBMS integration					

## GUIDELINES AND GOVERNANCE

The second edition of the *Managing Blood and Blood Product Inventory: Guidelines for Australian Health Providers* has been published and is available from the [NBA website](#). The new edition was endorsed by the Royal College of Pathologists of Australia (RCPA) and the Australian and New Zealand Society for Blood Transfusion (ANZSBT) and supported by the National Association of Testing Authorities, Australia (NATA).

The Guidelines are currently under review and will have an additional chapter included “Improving Compliant Storage”. Three further modules (Red Blood Cells, Managing Retrieval Services Inventory and Platelets) to support the core guideline are under development.

To support the *National Safety and Quality Health Service (NSQHS) Standard 7, “Blood Management” 2<sup>nd</sup> edition*, which requires health service organisations to effectively manage the availability and safety of blood and blood products, the NBA will develop a guide to assist health providers manage products in times of shortage.

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. Identifying key contributory factors to unnecessary wastage will be a high priority, with specific proposals to be developed to address (where possible) systemic issues.



Key issues identified for early consideration include product transfer arrangements between health providers (with a view to maximising the potential for product transfer thus minimising wastage) of all types, the use of thawed clinical fresh frozen plasma and issues relating to clinical fresh frozen plasma bags being damaged during handling and splitting upon thawing for use.

Activities	2018	2019	2020	2021	2022
Continue to develop modules <i>for Managing Blood and Blood Product Inventory: Guidelines for Australian Health Providers</i>					
Provide guidance for Health Providers on Contingency Management					
Identify systematic issues and provide guidance where required, e.g. packaging for frozen products and short shelf life products					
Review and improve product transfer arrangements					
Provide guidance to assist in the implementation of NSQHS Standard 7					
Continue to implement the Australian Health Provider Blood and Blood Products Charter (Charter)					
Provide guidance if required for the outcomes of the Medicare Benefits Schedule (MBS) Review					

## TOOL AND RESOURCES

The NBA will coordinate, through the jurisdictions, the identification and development of tools and resources that can be modified and branded by health service organisations to support blood product management improvements 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 NBA will monitor the progress of the tools and resources, identifying current tools needing review and proposing future tools and resources.

The development of the evidence-based *Managing Blood Product Inventory: Guidelines for Australian Health Providers*, supported by a toolkit of better practice tools that can be modified, branded and adopted by health providers will further support health providers and will provide a suitable benchmark for those accrediting health providers and pathology laboratories.

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

Existing inventory management projects, including the National Inventory Management Framework (NIMF) collaborative project with the Blood Service and the National Blood Authority, will continue enable better practice inventory management across the sector.

Activities	2018	2019	2020	2021	2022
Continue to implement the National Inventory Management Framework					
Review current tools and update where required					
Further development and dissemination of case studies					
Development of tools to support inventory management, including tools to set minimum and maximum bands for AHP inventory					
Develop and implement audits of usage and wastage					
Identify tools and resources to develop to assist in the implementation of NSQHS Standard 7					
Develop a website / database for accessing information about blood product management improvements and toolkits					

## EDUCATION AND TRAINING

In the context of practice improvement, education and training programs are frequently employed interventions to inform and influence health care professionals about best practice, and inform health care consumers about the options for treatment. Best practice management, with regard to the use of blood and blood products, is critical to optimise patient outcomes, minimise adverse events and ensure judicious use of a precious, limited resource.

The (NSQHS) Standards have identified education and training as an improvement initiative to ensure that health service organisations deliver safe, effective and reliable health care. A major focus of this strategy is to ensure education and training requirements are identified, and programs are developed to support the implementation of NSQHS Standard 7 – Blood Management.

Continue to develop core training and assessment requirements for staff managing blood and blood product inventories along with training resources to enable staff to meet those requirements.

The National Blood Authority will work with key stakeholders in this area to feature training in inventory management in existing training programs and courses.

Activities	2018	2019	2020	2021	2022
Core training and assessment requirements for inventory management staff defined					
Incorporate core training in existing training programs					
Training to assist in the implementation of NSQHS Standard 7					
Investigate multiple approaches to explore partnerships with relevant organisations for implementing education and training					

## PROMOTION AND COMMUNICATION

The NBA will design and undertake promotional/communication campaigns that target specific groups of health service organisations to enhance awareness of blood product management improvement through the supply chain. These campaigns will be undertaken in conjunction with jurisdictions, and other stakeholders where relevant.

Further developing existing collaborative networks and champions across the blood sector will be key to ensuring the widespread adoption and successful implementation of wastage reduction measures and better practise inventory management. The NBA will utilise existing consultative arrangements and networks including *The Conversation* (online discussion forum), system user groups (such as the BloodNet User Reference Group) to engage with health provider staff in both formal and informal means.

Targeted engagement with the private sector (both health providers and pathology organisations) will continue as a priority, given that 28% of fresh blood product issues nationally are currently issued by suppliers to the private sector.

The National Blood Authority's role in assisting jurisdictions and health providers to address unnecessary wastage is one of coordination and enablement. The National Blood Authority's approach is to continue to develop a range of data, tools and collaboration mechanisms to enable health providers to examine their own practice and choose from the suite of tools for local customisation, branding and adoption where appropriate.

Recognising the existing strong relationships between public health providers and the State and Territory governments, State and Territory governments will continue to take the lead in coordination and communication with public health providers with the National Blood Authority acting in a supporting capacity. The National Blood Authority will assume a greater role with public health providers in specific instances where requested by the relevant State or Territory government.

Governments recognise the different relationships and largely national approach of the majority of private health providers. The National Blood Authority will take the lead in coordination and communication with private health providers at a national and local level.

Activities	2018	2019	2020	2021	2022
NBA to continue to attend relevant conferences					
Private Sector Engagement activities identified and undertaken					
Provide support for regional areas					
Development and promulgation of a communication and marketing strategy; including promotional campaigns					
Promotion to assist in the implementation of NSQHS Standard 7					
Establish champion networks comprising key clinical and scientific officers within health providers					

## 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.

The NBA will monitor emerging and new opportunities to enhance blood product management improvement through the supply chain.

Activities	2018	2019	2020	2021	2022
Continue to monitor emerging and new opportunities as part the Horizon scanning activities					

## EVALUATION AND SUCCESS MEASURES

Success measures will be identified for each activity at the planning stage and used to determine the success of the activity. These will be included in the evaluation of the outcomes.

A comprehensive evaluation will mirror the objectives and supporting activities outlined in the Strategy. Evaluation should be designed to provide an overview of progress that all parts of the supply chain including transport, storage and inventory management minimise unnecessary wastage and ensure blood and blood products are available to meet clinical needs. 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.

The evaluation will use indicators that:

- Provide quantitative data on the all parts of the supply chain for blood and blood products have a responsibility to ensure that all aspects of the supply chain including transport, storage and inventory management minimise unnecessary wastage and ensure blood and blood products are available to meet clinical needs.
- Research the use of qualitative data on health provider performance
- Determine progress made towards achieving the objectives outlined in the strategy

## DEFINITIONS

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

**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’.*

**Health service organisation** is a separately constituted health service that is responsible for implementing clinical governance, administration and financial management of a service unit or service units providing health care at the direction of the governing body. A service unit involves a grouping of clinicians and others working in a systematic way to deliver health care to patients. It can be in any location or setting, including pharmacies, clinics, outpatient facilities, hospitals, patients’ homes, community settings, practices and clinicians’ rooms.

**Health providers** are organisations or individuals that receive blood and blood products under the national blood arrangements, including pharmacies, laboratories, hospitals, medical centres, general and nurse practitioners, patient homes and other educational or research facilities.

**Supply chain management** is the management of the flow of goods and services, involves the movement and storage of raw materials, of work-in-process inventory, and of finished goods from point of origin to point of use.

# Previous Strategy

This Strategy draws on the experiences and outcomes of the *National Blood and Blood Product Wastage Reduction Strategy 2013-2017* (2013-17 Strategy).

Since the launch of the 2013-17 Strategy, Australia has seen a significant reduction in the use of red blood cells. The implementation of the National Inventory Management Framework; the Standard; Patient Blood Management (PBM) Guidelines; the PBM Guideline Implementation Strategy; and the Wastage Reduction Strategy have all 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 and scientific 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. The NBA estimates there remains significant scope for consolidation of gains already made and further penetration of blood management.

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

*Legend:*

	<i>Completed</i>
	<i>In progress</i>
	<i>Not yet Commenced</i>

## National Blood and Blood Product Wastage Reduction Strategy 2013-2017

### Status of Wastage Reduction Strategy activities

Activity	Status	Notes
<b>1. Supply Chain Efficiencies</b>		
1.1 Reduction of national red blood cell inventory levels	G	<b>COMPLETE</b> – The Blood Service implemented inventory bands as part of the National Inventory Template Work with the Blood Service and Australian governments to implement a one-off reduction of national red blood cell inventory held by the Blood Service nationally by two days, thus reducing wastage in the system and increasing the proportion of fresher blood in the national inventory.
1.2 Increase red blood cell yield	G	<b>COMPLETE</b> – The Statement of Expectations from the all health ministers to the Blood Service includes a requirement in to maintain or improve red blood cell yield.
<b>2. Collection, Analysis and Distribution of Data</b>		
2.1 BloodNet Fate module national implementation	G	<b>COMPLETE</b> – The BloodNet Fate module has now been implemented and covers in excess of 95% of product issued nationally.
2.2 Further detailed discard analysis	A	<b>IN PROGRESS</b> – Further analysis is being undertaken and this work will accelerate with the completion of the enhanced BloodNet reporting. The NBA has further analysed discard rates over the past five years and will provide a paper to JBC in March 2018 on suggested wastage targets by product for specific health provider classes from 2018-19.
2.3 Enhanced BloodNet reporting	A	<b>IN PROGRESS</b> – New reports have been released focusing on order fulfilment, discards and inventory management for BloodNET and BloodSTAR. These are available through both <a href="#">BloodNet</a> for individual health providers to view their own data and in <a href="#">Jurisdictional Reporting for jurisdiction wide data</a> . Further reports provided by the NBA are also being specified for BloodNet reporting i.e. monthly Net Issues and DAPI/Reason and ABO wastage.
2.4 Publication of high level discard data	G	<b>COMPLETE</b> – Aggregated national discard data is published quarterly on the NBA website and The Conversation. Jurisdictional discard data is published on restricted project pages on The Conversation for Victoria and Tasmania.



Activity	Status	Notes
<b>3. Establish Targets for Discard Rates</b>		
3.1 Shadow targets for red blood cells, platelets and CFFP	G	<b>COMPLETE</b> – Shadow targets for 2013-14 were established and updated annually.
3.2 Targets for red blood cells, platelets and CFFP	A	<b>IN PROGRESS</b> – Targets for 2014-15 onwards have been the subject of bilateral discussions with Jurisdictions. There has been significant interest at the health provider level on benchmarks. The NBA has further analysed discard rates over the past five years and will provide a paper to JBC in March 2018 on suggested wastage targets by product for specific health provider classes from 2018-19.
3.3 Shadow targets for non-fresh products	R	<b>NOT YET COMMENCED</b> – Work has been delayed on this item until after BloodNet is extended to non-fresh products
3.4 Targets for non-fresh products	R	<b>NOT YET COMMENCED</b> – Work has been delayed on this item until after BloodNet is extended to non-fresh products
<b>4. Better Practice Inventory Management</b>		
4.1 National Inventory Management Framework (NIMF)	A	<b>IN PROGRESS</b> – NIMF for red cells developed, trialled, JBC approved and implementation rolled out over 18 months, NIMF for platelets commenced. In July 2017 JBC noted the revised National Inventory Management framework (NIMF) project approach that will provide and promote guidance and tools to Australian Health Providers (AHPs) on better practice inventory management. JBC agreed to the NBA providing monthly reports to jurisdictions for monitoring Red Blood Cell blood group ordering practices by AHPs. Safety Stock reports being specified for development in BloodNet.
4.2 Development and dissemination of case studies	G	<b>COMPLETE</b> – Ten case studies have been developed and published on the NBA website with the videos published on <a href="#">YouTube</a> . Eight of these relate directly to the Wastage Strategy: <a href="#">Queensland Pathology</a> , <a href="#">Hunter Area Pathology Service</a> , <a href="#">BloodMove Project</a> , <a href="#">BloodMove Platelets</a> , <a href="#">San Pathology</a> , <a href="#">Burnside War Memorial Hospital</a> , <a href="#">The Royal Children's Hospital Melbourne Extended Life Plasma</a> and <a href="#">Liverpool RFID Case Study</a>
4.3 <i>Managing Blood Product Inventory: Guidelines for Australian Health Providers</i>	A	<b>IN PROGRESS</b> – The second edition of the Guideline has been published and is available from the <a href="#">NBA website</a> and over 2,000 hard copies have been distributed by the NBA on request from health providers. The new edition was endorsed by the Royal College of

Activity	Status	Notes
		<p>Pathologists of Australia (RCPA) and the Australian and New Zealand Society for Blood Transfusion (ANZSBT) and supported by the National Association of Testing Authorities, Australia (NATA). The first module – <i>Managing Blood and Blood Product Transfers</i> is included in the new edition complete with fully downloadable and modifiable tools to support health providers in implementing transfer arrangements.</p> <p><i>Module 2: Managing Intravenous and Subcutaneous Immunoglobulin Inventory</i> was released in 2016 to assist Australian Health Providers manage their Ig inventory with the implementation of BloodSTAR.</p> <p>The Guidelines are currently under review and will have an additional chapter included “Improving Compliant Storage”. Three further modules (Red Blood Cells, Managing Retrieval Services Inventory and Platelets) to support the core guideline are under development and will be released in the 2018.</p>
4.4 Tools to set minimum and maximum bands for AHP inventory	A	<b>IN PROGRESS</b> – This work is being undertaken in conjunction with the <a href="#">National Inventory Management Framework</a> – see Item 3.1.
<b>5. Education and Training</b>		
5.1 Core training and assessment requirements for inventory management staff defined	A	<b>IN PROGRESS</b> – The NBA is involved in a number of initiatives to engage with, educate and support health providers on important issues such as inventory management and minimising wastage of blood and blood products. Communications and media examples include the Better Practice Case Study series, attendance at appropriate conferences, organisation and sponsorship of speakers and workshops at conferences, attending local blood week activities, National Blood Symposia, Standard 7 Blood and Blood Products of the National Safety and Quality Health Service (NSQHS) Standards and hosting and supporting the National Immunohaematology Continuing Education (NICE) presentations.
5.2 Incorporate core training in existing training programs	A	<b>IN PROGRESS</b> – The NBA provides recommendations through various media, that health providers include inventory management in their training, including <i>Managing Blood and Blood Product Inventory: Guidelines for Australian Health Providers</i>

Activity	Status	Notes
<b>6. Enhanced Awareness of Unit Prices</b>		
6.1 Enhance BloodNet reporting to always list unit prices	G	<b>COMPLETE</b> – BloodNet reports list the price of blood and blood product where appropriate to ensure BloodNet users are aware of the cost of units.  Unit prices are included in jurisdictional reports and discard reports.
6.2 Price labels on fresh blood products	G	<b>COMPLETE</b> – All fresh blood products manufactured by the Blood Service since May 2013 have included the manufacturing cost on the label. A sample label is available on the <a href="#">NBA website</a> .
6.3 National Product Catalogue with pricing published	G	<b>COMPLETE</b> – The <a href="#">National Product Price List</a> is available on the NBA website for the current year and in the NBA Annual Reports for prior years.
6.4 Price labels on domestic and imported immunoglobulin products by January 2017	G	<b>COMPLETE</b> – immunoglobulin suppliers are well advanced with this activity
<b>7. Enhanced Collaboration</b>		
7.1 Private sector engagement, including annual forums	A	<b>IN PROGRESS</b> – The inaugural Australian Private Health Sector Blood Forum was held in 2013 along with a number of one-on-one meetings with individual private sector CEOs.  Ongoing engagement in conjunction with jurisdictions will continue with individual CEO letters addressing benchmarked wastage rates and outlining tools and assistance to manage inventory and wastage, invitations to the Victorian and Tasmanian Wastage Summits (including opportunities to present), NBA attendance at the Australian Private Hospital Association's Annual Congresses and Better Practice Case Studies at private facilities. The private sector is being included with the public sector in all events.

Activity	Status	Notes
		Further work needs to be done in this area.
7.2 Development of champion networks	A	<p><b>IN PROGRESS</b> – The development of champion networks is ongoing, with the NBA actively supporting a range of transfusion nurses and scientists in relation to reducing wastage. The <a href="#">National Blood Symposiums</a> held in 2013 and 2015 supported the existing champions and provided further networking opportunities to enhance collaboration.</p> <p>The NBA supports local champions to attend and present at relevant conferences and workshops national.</p> <p>Four Victorian Wastage Summits have been held with representatives from both the public and private sector invited to attend to present and discuss collaborative plans to reduce wastage across the jurisdiction. This is a joint Summit between BloodMatters and Victorian Department of Health.</p> <p>A Wastage Summit was also held in Tasmania to support their collaborative approach to inventory management</p>
7.3 Biannual national awards program	A	<b>IN PROGRESS</b> – An awards program commenced at the 2015 National Blood Symposium in Brisbane and another award has been presented since.
7.4 Rural and remote collaboration	A	<b>IN PROGRESS</b> – The NBA is providing sponsorship and workshop speakers at the Rural Medicine Conference in 2014 and 2015. The NBA also provided sponsorship to the Rural Matters Acute Care conference in regional Victoria.
7.5 Australasian Conference	A	<b>IN PROGRESS</b> – The NBA has organised and financially supported four National Blood Symposiums across the country as a joint initiative with the Australian Commission on Safety and Quality in Health Care (ACSQHC) with local support from NSW Clinical Excellence Commission and South Australian and Victorian health departments in 2013 and Queensland Health in 2015.
<b>8. Addressing Systemic Issues</b>		
8.1 Identification of systemic issues	A	<p><b>IN PROGRESS</b> – Identification of issues is continuing with issues relating to product transfers and platelets currently being addressed.</p> <p>Investigation underway for a MBS item cross-match/group &amp; hold etc. (Fresh team progressing)</p> <p>A Barcoding policy is under development. Revised timelines will be agreed with the Blood Service in early 2017 for ISBT 128 Linear and 2D barcodes</p>

Activity	Status	Notes
8.2 Review and improve product transfer arrangements	G	<p><b>COMPLETE</b> – The transfer module of the <i>Managing Blood Product Inventory: Guidelines for Australian Health Providers</i> was released in early 2014 after extensive collaboration and public consultation. Many health providers have initiated or are investigating transfer arrangements, including between within organisations.</p> <p>The National Shipper Validation project is underway to assist health providers to transfer their product as appropriate. Assistance is offered, where appropriate, to help health providers set up transfer MOUs.</p>
8.3 Use of thawed clinical fresh frozen plasma	G	<p><b>COMPLETE</b> – The use of extended life plasma is being promoted with health providers, including with a case study on its use at the Royal children's Hospital published on the NBA website.</p>
8.4 Examination of alternatives to current packaging arrangements for clinical fresh frozen plasma	A	<p><b>IN PROGRESS</b> – The Blood Service has reviewed and continues to monitor possible alternatives.</p>
8.5 Review supply chain matters affecting the length of expiry of Platelets on issue of units to health providers	A	<p><b>IN PROGRESS</b> – The Blood Service had a submission with the Therapeutic Goods Administration (TGA), on extending the shelf life of platelets from 5 to 7 days. Further information is being gathered to support this initiative by the Blood Service. The NIMF project was extended to include a proof of concept for platelets and the will be considered by the steering committee. Also the NIMF project team is developing a module for platelets as part of the <i>Managing Blood Product Inventory: Guidelines for Australian Health Providers</i>.</p>
<b>9. Promotional Campaigns</b>		
9.1 Private sector wastage campaign	A	<p><b>IN PROGRESS</b> – High level meetings with private organisations have taken place. The private sector was targeted with wastage letters addressed to the CEO with an offer of assistance and direction to tools. NBA attendance at the Australian Private Hospital Association's Annual Congresses will continue. However, the focus is now on the blood sector as a whole.</p>

Activity	Status	Notes
9.2 General Wastage campaign	G	<p><b>COMPLETE</b> – The <i>Stop the Waste!</i> campaign materials have been developed including posters, magnets, swing tags for blood bags and wheelie bin pen holders. Large numbers of orders continue to be received from health providers. New wastage reduction tools will be developed as appropriate.</p> <p>An article on reducing blood and blood product wastage has been drafted for publication in a scientific journal.</p> <p>Regular wastage reduction information is presented at conferences, summits, workshops and in-services directly to health providers as appropriate.</p>
9.3 Rural & Remote wastage campaign	A	<p><b>IN PROGRESS</b> – Engagement with the Rural and Remote health sector commenced with high level meetings with the relevant professional organisations and NBA sponsorship of the Rural Medicine Conference 2014 and 2015.</p> <p>BloodNet pharmacy roll-out has commenced, specifically assisting the rural and remote areas with BloodSTAR.</p>

