



National Patient Blood Management (PBM) Collaborative

**AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE**

Information Bulletin
January 2015

National PBM Collaborative - Anaemia Management for Patients Having Elective Surgery

The Australian Commission on Safety and Quality in Health Care (the Commission) has been engaged by the Australian Government Department of Health to lead a **National Patient Blood Management (PBM) Collaborative** focussing on **Anaemia Management for Patients Having Elective Surgery**.

Three categories of surgery will be considered: abdominal, gynaecological and orthopaedic procedures.

The aim of the National PBM Collaborative is to achieve rapid and sustainable improvements in outcomes for patients through PBM.

The Collaborative learning method involves focussing on an important issue in healthcare where further improvements are possible. It is a structured process that will enable hospitals to learn from each other and from recognised experts in PBM.

The National PBM Collaborative will have four components: identification of specific and measurable aims; measurement of improvements over time; identification of changes that facilitate the desired improvements; and, a series of learning cycles where teams implement identified changes.

The National PBM Collaborative will consider and incorporate:

- the six evidence based PBM Guidelines now being delivered to health providers through the National Blood Authority's (NBA) PBM education, training and promotion program;
- the experience of the Western Australian PBM Program which has in participating hospitals, within four years of implementing a PBM Program, achieved a 13% drop in the transfusion issuances; and
- the growing evidence of a dose dependent increase of morbidity and adverse outcomes associated with transfusion which may also be increasing the length and complexity of hospital admissions.

Apply now to be part of the National PBM Collaborative

Expressions of Interest (EOI) are being sought from public and private hospitals to participate in the **National PBM Collaborative: Anaemia Management for Patients Having Elective Surgery**, which will run from March 2015 to April 2017.

Three categories of surgery will be considered: abdominal, gynaecological and orthopaedic procedures. Health services may wish to include more than one category of surgery, and it will be important for health services to consider the volume of surgery required to ensure clinical quality improvement can be achieved.

The Commission will provide support to successful respondents to achieve the objectives set locally for improved patient care through PBM strategies.

As General Practitioners and primary health clinicians play a key role in the overall health management of these patients, Expressions of Interest that involve partnerships with primary care providers and organisations will be strongly supported. Joint projects between public and private hospitals will also receive favourable consideration.

Download the Registration Form from:

www.safetyandquality.gov.au/national-priorities/pbm-collaborative/

Email: pbmcollaborative@safetyandquality.gov.au

Phone: (02) 9126 3648

EOIs must be received by Friday 30 January 2015.

National PBM Collaborative - Anaemia Management for Patients Having Elective Surgery (continued)

The National PBM Collaborative is progressing in consultation with the NBA and the states and territories. PBM has been identified as a clinical area with potential to improve patient outcomes.

Blood and blood products are a vital resource, sourced from the Australian and international donor community, and from commercial manufacturers. They are important elements of clinical practice and of great benefit to patients.

While blood and blood products can be lifesaving, there are also hazards associated with their administration to patients. These hazards include allergic and immunological complications, storage-related complications, infections, incorrect blood transfusions and other adverse outcomes. Research has also indicated that a significant proportion of blood transfusions may be unnecessary or could have been avoided. There is also high variation in prescribing practice in relation to blood and blood products.

A systematic review of evidence has found that preoperative anaemia is independently associated with an increased risk of morbidity and mortality. Preoperative anaemia has also been found to increase the likelihood of red blood cell transfusion. Anaemia management prior to elective surgery can improve a patient's pre-surgery clinical status, and reduce post-surgery morbidity, mortality and length of stay in hospital.

For a patient's wellbeing, it is important to establish a definitive diagnosis of anaemia; whether it is related to the patient's current condition; and, if it is correctable. While some forms of anaemia cannot be prevented (if caused by a failure in the cell production process), other forms, such as anaemia caused by blood loss and dietary deficiency, can be prevented and managed.

Unless there is a primary disorder of the marrow or some influence suppressing marrow function, most forms of anaemia are correctable without red blood cell transfusion within two or three weeks. If surgery is urgent, red blood cell transfusion may be provided. However, anaemia may recur in the weeks following surgery. If red blood cell transfusion is used to correct anaemia in the short term, the cause of the anaemia will need to be followed up and/or the anaemia monitored to ensure it is resolved.

There has been an increasing focus on PBM over the last decade. In conjunction with the clinical community, the NBA developed a series of evidence-based Guidelines to support healthcare professionals in making clinical decisions in regard to blood and blood products. Implementation of these Guidelines aims for better outcomes for patients. Jurisdictions have also been active in improving PBM and have established programs using both locally developed and NBA strategies.

A key aspect will be bringing together participant sites with experts in PBM, quality improvement and Collaborative methodologies. An orientation workshop will be held to:

- develop a shared understanding of PBM and its importance;
- share knowledge of current initiatives and research;
- provide training in collaborative methodologies and quality improvement tools;
- develop changes strategies to be trialled locally;
- confirm the measures to be used to assess the impact of changes; and methods for collecting data to assess the impact of those changes.

Learning Workshops will provide an opportunity for teams from participant sites to share their experiences, including the impact of changes introduced. Participating sites will also receive ongoing support through regular teleconferences and web access for information exchange.

The National PBM Collaborative will fast-track the benefits of PBM protocols, guidelines and programs.

References

- www.blood.gov.au/pubs/pbm/module2/3-clinical-guidance/3.2-effect-of-anaemia-on-outcomes.html
- www.transfusion.com.au/adverse_transfusion_reactions
- Rubin, G, Frommer M et al. Appropriateness of red blood cell transfusions in major urban hospitals and effectiveness of an intervention. Med J Aust 2001 175: 354 - 358

A patient's blood is a valuable and unique natural resource that should be conserved and appropriately managed. PBM provides a structured process where the focus is on good patient care and optimising this resource.



Planning Workshop, September 2014

A Workshop was held on 22 September 2014, with members of the PRG, Department of Health and subject matter experts in PBM, policy and Collaborative methodology attending. The aim of the Workshop was to advise on: the scope of the National PBM Collaborative; focus areas; the criteria and process for site selection for the Collaborative.

There was general support at the Workshop for resources to be provided in a flexible way, so as to meet the specific needs of individual project sites, whilst also meeting the overall requirements of the National PBM Collaborative. A key process objective of the National PBM Collaborative is to streamline data collection and develop performance metrics relevant to PBM. There is a need to incorporate both patient and product focused performance measures.

Key findings of the Workshop were:

Scope of PBM

PBM is a multidisciplinary approach to patient care that aims to minimise exposure to unnecessary blood or blood products with the objective of improving patient outcomes.

This can be achieved by: optimising blood volume and red cell mass; minimising blood loss; and, optimising the patient's tolerance of anaemia.

Collaborative Focus

The Workshop recommended that the priority area for the PBM Collaborative should be Anaemia Management for Patients Having Elective Surgery.

Number of participating sites

The target number of participating sites should be up to 15 sites, with flexibility as to how support is structured for each site and dependent on budget and cost.

Collaborative timetable and testing cycles

A successful Collaborative requires a significant planning and pre-implementation phase.

Selection of participating sites

Selection criteria for participating sites should include:

- institutional support, with CEO sign-off;
- being part of a surgical network or the elective surgery referral pathway;
- commitment to an existing, or to the establishment of a project governance committee with nominated responsible senior executive staff;
- commitment to staff participation in Collaborative activities; and
- ability to collect, analyse and share data.

The Commission established a PBM PROJECT REFERENCE GROUP (PRG) to provide technical advice and strategic oversight throughout the Collaborative.

An EXPERT PANEL will also provide support and expertise across a range of clinical quality improvement and health service delivery areas.

Partnerships and collaborations with other individuals and organisations, should be encouraged.

Resources and support for participating sites

The National PBM Collaborative will provide the support framework for the Collaborative program's testing, learning and feedback cycles.

Funding arrangements for Collaborative sites should be flexible and responsive to local needs.

Data extraction and analysis

Performance metrics for individual Collaborative sites and for jurisdictions should be agreed in the

pre-implementation phase. An evaluation framework, encompassing qualitative and quantitative elements, should be developed for the National PBM Collaborative.

Measures Group, November 2014

To further advance decisions about data extraction, collection, analysis and performance metrics, a Measures meeting was held in November 2014. There was agreement that the maximum benefit from the National PBM Collaborative could be achieved if the clinical caseload was more focussed on elective surgery patients most likely to be anaemic, have iron deficiency, or require a red blood cell transfusion. A list of surgical procedures developed by the Department of Health in Western Australia provided guidance as to the procedures that could be a focus for the National PBM Collaborative.

The Measures Group proposed that the National PBM Collaborative should focus on procedures associated with orthopaedic, abdominal and gynaecological surgery. It was highlighted that it would be important to demonstrate the impact of the National PBM Collaborative on overall health service resource use and performance.

It is expected that analysis of de-identified patient level data which includes diagnosis; co-morbidities (especially ischaemic heart disease, chronic renal failure and diabetes); length of stay; and, complications will add considerably to best understanding the impact of the National PBM Collaborative.

Whilst the meeting enabled a clear direction in regard to Measures, further work will be undertaken to document the indicators for this National PBM Collaborative and review other technical considerations.



Frequently Asked Questions regarding the National PBM Collaborative

How will the National PBM Collaborative help health services?

Participating in the National PBM Collaborative will contribute to :

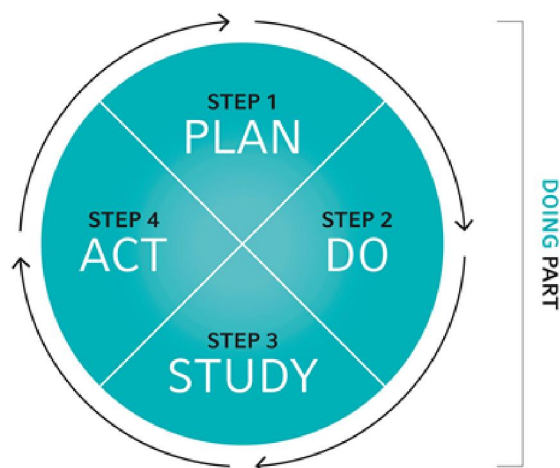
- strengthened compliance with *NSQHS Standard 7: Blood and Blood Products*
- implementation of National Blood Authority's *Patient Blood Management Guidelines*
- continuous quality improvement in the work of the health service
- enhanced data collection to support service improvement, accreditation and compliance
- informing the development of local strategies to strengthen the elective surgery referral and treatment pathway
- the development of local leaders, and enhanced clinical engagement to support quality improvement in the health service.

What is the structure of the National PBM Collaborative?

The National PBM Collaborative is expected to start in March 2015 and continue until April 2017. An orientation will formally commence the Collaborative and explain key concepts and requirements for participation. There will be up to six Learning Workshops throughout the Collaborative. After each Learning Workshop, Action Periods are held during which teams test ideas for improvement using the model for improvement (Plan, Do, Study, Act Cycles – PDSAs).

By testing ideas, monitoring activity and reporting on progress against targeted aims teams will be able to determine which ideas are successful and if they could lead to broader sustainable information. This information will feed into the next learning cycle.

The workshops will allow teams to share their experiences of local quality improvement processes; learn from colleagues; consult with experts in the field; gather new information; and develop ideas for improvement. During Action Periods, teams will work towards implementing ideas within their health service, while maintaining contact with each other to share progress and improvements, monitor activity and report against targeted aims on a monthly basis.



What support and resources will be provided?

The Commission will provide :

- orientation and Learning Workshops
- travel and accommodation, for up to three key staff, to attend the Orientation and Learning Workshops
- PBM education, training and tools, including: web interface for communication and transfer of data; analytical support and generation of performance reports; PBM forums for ongoing discussions and communication; and expert support, available both on-site and through web applications

In addition, a package of resources to support the individual needs of each team will be developed. This may include funding to contribute to the appointment of project staff, or employee backfill to attend the Collaborative activities.

What is required of the project team and health service?

- The health service is the provider, or part of a service network, which undertakes elective surgery.
- Demonstrated institutional support for participation in the Collaborative, with Chief Executive Officer sign-off.
- Demonstrated commitment to project governance through a new or existing committee, which includes participation by nominated senior executive staff. Nominated key staff must include a senior clinical lead, clinician and project officer.
- The health service should also commit the necessary resources to support the conduct of the Collaborative and enable nominated key staff to attend the orientation and Learning Workshops.
- Key staff will need to have dedicated time to work on PBM during Learning Cycles and submits appropriate reports and data against targeted aims during each Action Period.
- The health service should determine and organise any approvals that may be required in regards to ethics and other matters.
- Health services will need to consider the volume of surgery undertaken so clinical quality improvement can be achieved.
- Health services should indicate a minimum threshold for each of the categories of surgery they will be including for the Collaborative.

