



### **Project Coordinator's Workshop**

The most recent project co-ordinator's workshop was held at the Commission on Monday 21 November 2016. The discussions included the following points:

- An overview was provided of activity reporting to 31 October 2016.
- There was a discussion about resource-sharing where teams 'share generously and steal shamelessly' to advise on progress of initiatives and share documentation they have produced for adaptation by others.
- Attendees were informed that selected resources prepared by National Patient Blood Management Collaborative (NPBMC) teams would soon be available as a resource pack on the Commission's website. An example of such a resource is the intravenous iron infusions brochure and telephone information line for patients prepared by Central Coast Local Health District (shown on page 2). Resources should be available on the Commission website by early 2017.
- There was an in-depth discussion on patient pathways and management of anaemia and iron deficiency. Prior to the workshop, teams were asked to undertake an audit of up to 10 to 20 previous data entries that had been identified as 'not managed', to better understand why management was not recorded and identify potential areas of improvement. Some of the management factors identified included:
  - Healthcare providers: Some may not be aware of the impact of iron deficiency in the absence of anaemia, or may determine not to treat borderline results. Some may not be aware of the evidence regarding treatment of iron deficiency when there is not a diagnosis of anaemia, or may not acknowledge there may be iron deficiency if the haemoglobin is within range. There may be a lack of knowledge of the National Blood Authority guidelines and the practice points recommending iron studies. Some medical practitioners may feel that surgery will 'fix the problem' and not treat the anaemia or iron deficiency prior to surgery.
  - Patients: Some patients may receive conflicting provider information from a range of healthcare professionals prior to surgery, and may not be aware of questions they could ask to ensure they are '*Fit for Surgery*'. The possibility of skin staining, that can be associated with IV iron infusions, may be a consideration.
  - System: There may be a need to improve communication regarding patient blood management and the benefits of optimising a patient's own blood prior to surgery and promoting information-sharing between clinicians. It was noted that continued education can be difficult with staff turnover and rotations.
- The group also workshopped questions for the Evaluation and Business Case which is currently underway by KP Health. KP Health will meet with all health service teams and state and territory representatives.

Project coordinators and clinicians will next meet at a learning workshop in February 2017.

## Intravenous Iron Infusion Brochure – Central Coast Local Health District

### Side effects of IV iron

- Changes in what you taste (eg metal taste in your mouth)
- Headache, feeling or being sick
- Muscle and joint pain
- Feel short of breath
- Feeling itchy or a have a rash
- Change in blood pressure or pulse
- Redness, pain and swelling at injection site
- If your drip starts to hurt or if you feel any side effects, tell your nurse

Severe side effects are rare. You will be watched closely for any signs of these side effects by nursing staff.

**When you get home if you have chest pain, problems breathing, feel dizzy or have neck/mouth swelling CALL 000 for an Ambulance**

### Central Coast Local Health District

**IV Iron**  
Telephone Info line  
(02) 4320 3855


**Medical Day Unit**  
Gosford Hospital  
Ph (02) 4320 9960

**Ambulatory Care Unit**  
Wyong Hospital  
Ph (02) 4394 8111


[www.cclhd.health.nsw.gov.au/ourservices/Pages/Ambulatory-Care-Units](http://www.cclhd.health.nsw.gov.au/ourservices/Pages/Ambulatory-Care-Units)

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## Intravenous Iron Infusions

**Information for Patients**

This leaflet answers some questions about IV iron infusions and does not take the place of talking to your doctor about why you need IV iron.

**Health**  
Central Coast  
Local Health District

### What is an IV iron infusion?

"Intravenous" or "IV" means giving something into the blood stream through a vein. A needle is put into a vein (in the back of the hand or arm). Then a mix of iron and saline (salt water) is slowly "dripped" (infused) into the vein and mixes with the blood in your body.

### Why do we need iron?

Iron helps your body make red blood cells which carry Oxygen around your body. If you have low iron levels you may feel weak and lack energy.

### Why might I need IV iron?

The best way to treat low blood iron levels is to take iron as a tablet or liquid. This works well for most people and is usually tried first.

You may need IV iron if you:

- Cannot take iron tablets
- Are unable to absorb iron through the gut
- Are about to have major surgery and your iron levels are low
- Find the iron tablets do not work
- Have kidney or heart problems

### Before IV iron

Tell your doctor if you:

- Are having a baby or trying to get pregnant
- Have had asthma, eczema or other allergies
- Have had problems with any type of iron injection or infusion in the past
- Have ever had high iron levels
- Are on any medications (don't forget the supermarket or herbal medications)

### On the day of IV iron

- Eat your breakfast / lunch. It is OK to eat and drink before IV iron
- Take all of your normal medications
- You can drive home after IV Iron and do what you would normally do during the rest of the day (unless there is a problem)

### After IV iron

Side effects can start 1 to 2 days after IV Iron such as headache, mild fever, joint and muscle aches. These will go away over the next few days. If you are worried call your doctor or the Medical Day Unit Gosford or Ambulatory Care Unit Wyong.





## Poster for the 2016 Annual Scientific Meeting of HAA

A NPBMC poster was accepted for the 2016 Annual Scientific Meeting of HAA (Haematology Society of Australia and New Zealand, Australian & New Zealand Society of Blood Transfusion and the Australasian Society of Thrombosis and Haemostasis) in Melbourne in November 2016:

# National Patient Blood Management Collaborative

## Improving anaemia management for people having elective surgery

### Aim

While blood and blood products can be lifesaving, their administration may also carry risks for patients. Blood transfusions can be avoided in many patients through effective patient blood management (PBM), which involves optimising the patient's blood volume and red cell mass, minimising blood loss and optimising the patient's tolerance of anaemia so that blood and blood products are not needed.

The Australian Commission on Safety and Quality in Health Care (the Commission) is leading a national Patient Blood Management Collaborative, to support improvements in the pre-operative management of anaemia for patients undergoing specific elective gastrointestinal, gynaecological and orthopaedic surgery procedures.

There are 12 Health Services from across Australia participating. The Collaborative applies the Model for Improvement to PBM across the patient journey, from the time the need for surgery is identified, through to when surgery is performed.

### Methods

Health Service teams provide data on a monthly basis via a purpose designed web portal. The measures used in the Collaborative include:

- Was the patient assessed for anaemia and iron deficiency pre-operatively?
- If so, was anaemia or iron deficiency confirmed?
- Was it managed? Was there evidence of improvement?
- Was the patient transfused (pre-, intra- and post-operatively)?

The Commission has led workshops for teams to share their experiences and learnings from their local quality improvement processes, consult with experts in the field, gather new information and develop ideas for improvement.

### Results

Table 1: Percentage of patients confirmed as anaemic by age and gender, May 2015 to September 2016

Age Range	Gender	% of patients confirmed as anaemic
0-19	Female	0.96%
0-19	Male	2.04%
20-64	Female	46.99%
20-64	Male	31.22%
65 and over	Female	52.05%
65 and over	Male	66.74%

Table 2: Percentage of patients confirmed as iron deficient by age and gender, May 2015 to September 2016

Age Range	Gender	% of patients confirmed with iron deficiency
0-19	Female	0.97%
0-19	Male	1.73%
20-64	Female	57.32%
20-64	Male	34.63%
65 and over	Female	41.71%
65 and over	Male	63.64%

Table 3: Percentage of patients confirmed as anaemic and iron deficient by age and gender, May 2015 to September 2016

Age Range	Gender	% of patients confirmed with anaemia AND iron deficiency
0-19	Female	1.22%
0-19	Male	2.80%
20-64	Female	54.07%
20-64	Male	28.04%
65 and over	Female	44.72%
65 and over	Male	69.36%

### AUTHORS

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

### Results

The Collaborative has data for 8758 patient episodes for elective surgical procedures as at the end of September 2016 consisting of gastrointestinal (19%), gynaecological (25%) and orthopaedic (56%). Of the total procedures, 92% received a haemoglobin test, 39% had iron studies and 39% had both tests prior to surgery.

Figure 1: Total by test by health service to September 2016

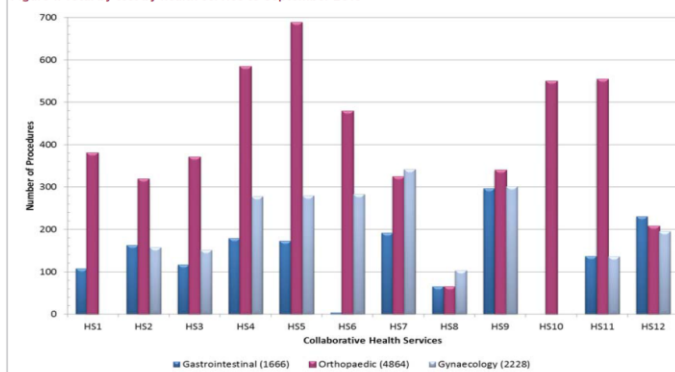


Figure 2: Percentage of patients receiving pre-operative assessment for anaemia and iron deficiency per month, May 2015 to September 2016

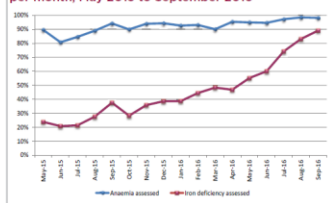


Figure 3: Percentage of patients confirmed for anaemia and iron deficiency per month, May 2015 to September 2016

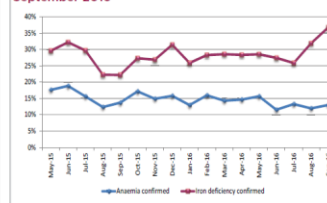


Figure 4: Percentage of patients managed for anaemia and iron deficiency per month, May 2015 to September 2016

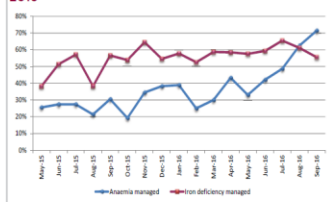


Figure 5: Number of patients who received transfusions by month, May 2015 to July 2016

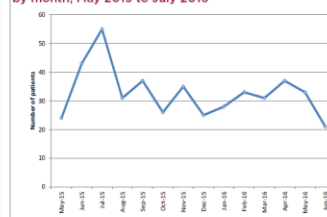
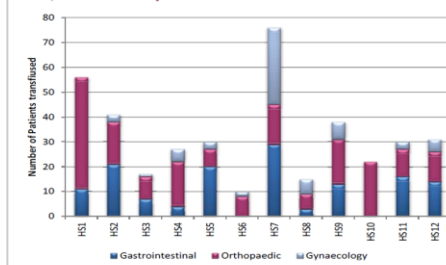


Figure 6: Number of patients transfused by health service by surgical stream, June 2015 to July 2016



### CONCLUSIONS

By improving anaemia management for patients in the pre-operative phase of care, the Collaborative may contribute to:

- reducing the risk of post-operative infections and adverse reactions from blood products;
- reducing the risk of transfusion related inflammatory events;
- potentially reducing hospital length of stay;
- reducing the risk of readmission from infectious complications of transfusion, and
- reducing elective surgery cancellations.

The Collaborative will run to April 2017.



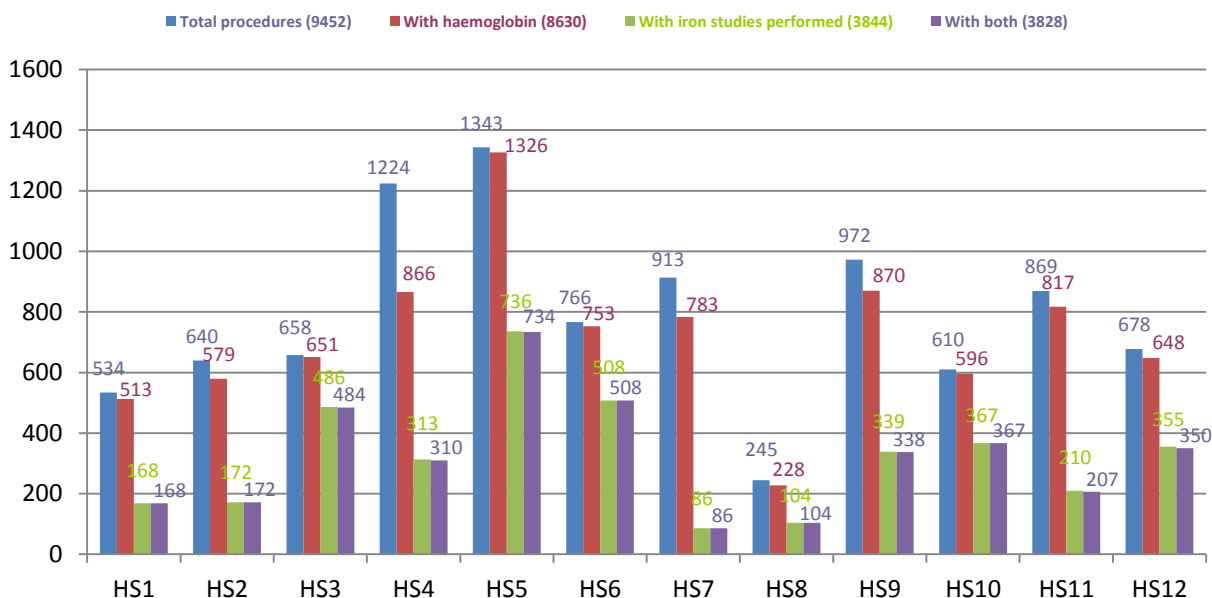
National Patient  
Blood Management  
Collaborative

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# Overview of Collaborative Activity to October 2016

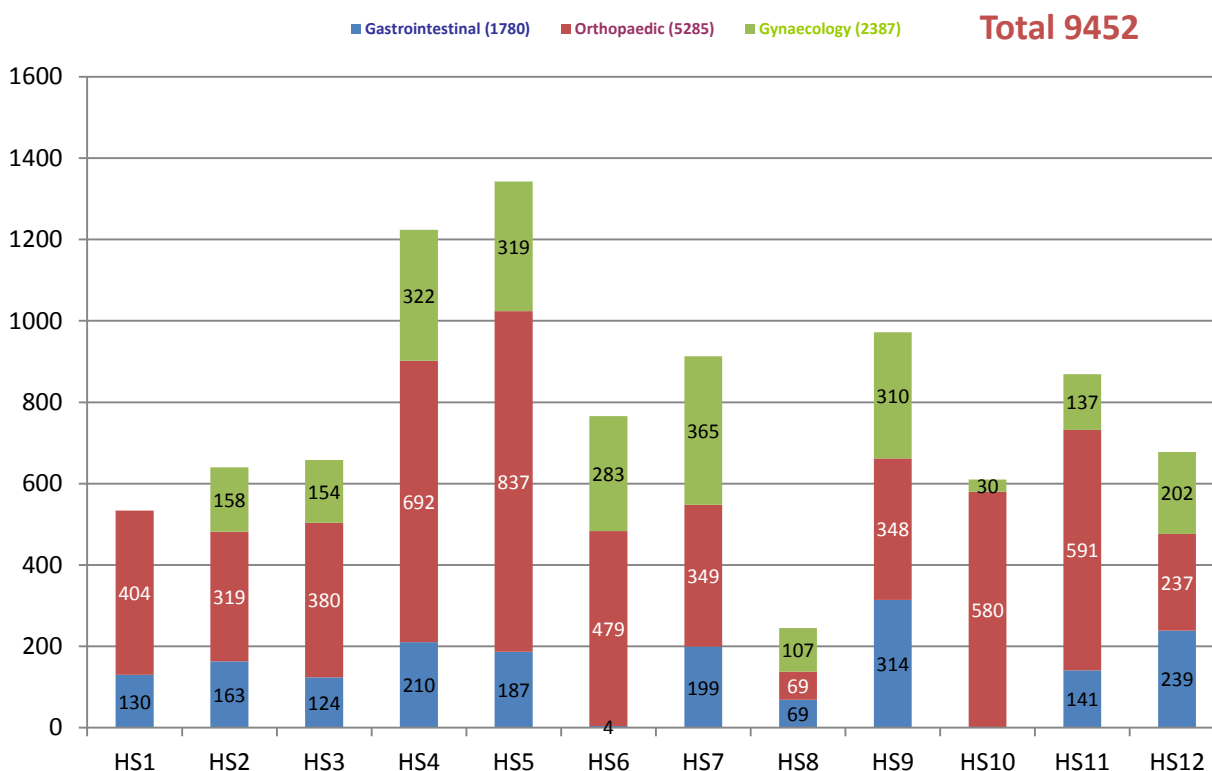
**Figure 1: Total patient procedures by test, by health service, as at end of October 2016**

A total of 9452 patient procedures had been recorded by NPBMC sites up to October 2016. Across NPBMC sites, a haemoglobin level was recorded for 8630 procedures (91%), and 3844 (41%) were accompanied by iron studies. Patients for whom iron studies had been recorded usually also had a haemoglobin level recorded.



**Figure 2: Total procedures by surgical stream, by health service, as at end of October 2016**

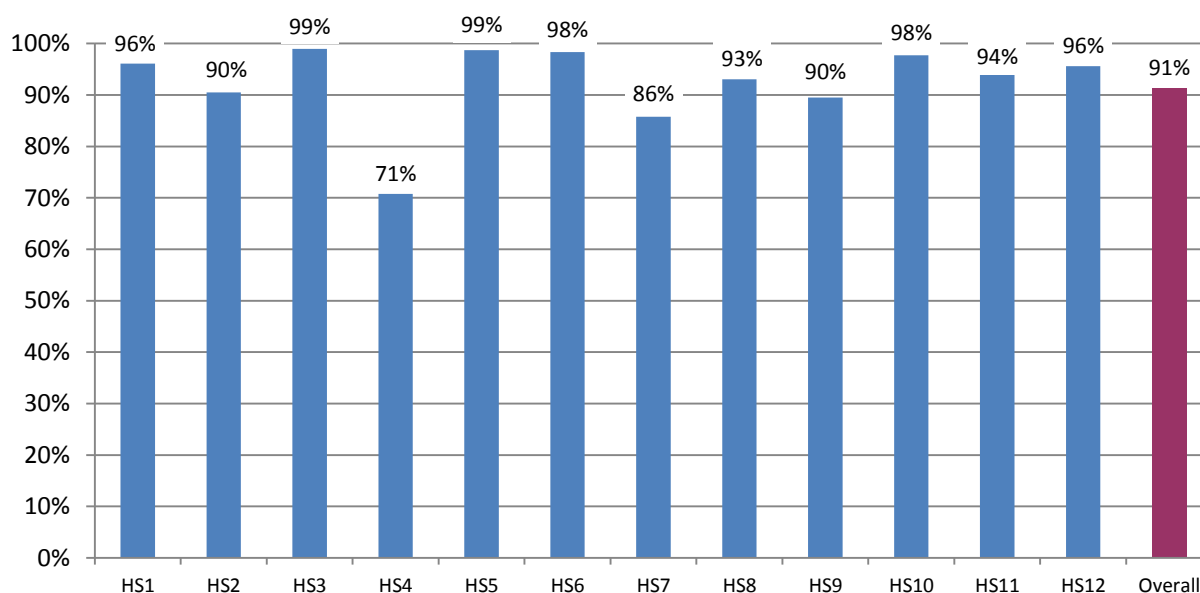
Ten out of 12 NPBMC sites were recording data for all three surgical streams (gastrointestinal, orthopaedic and gynaecology). The majority of procedures recorded up to the end of October 2016 were for orthopaedic surgery.



## Overview of Collaborative Activity to October 2016

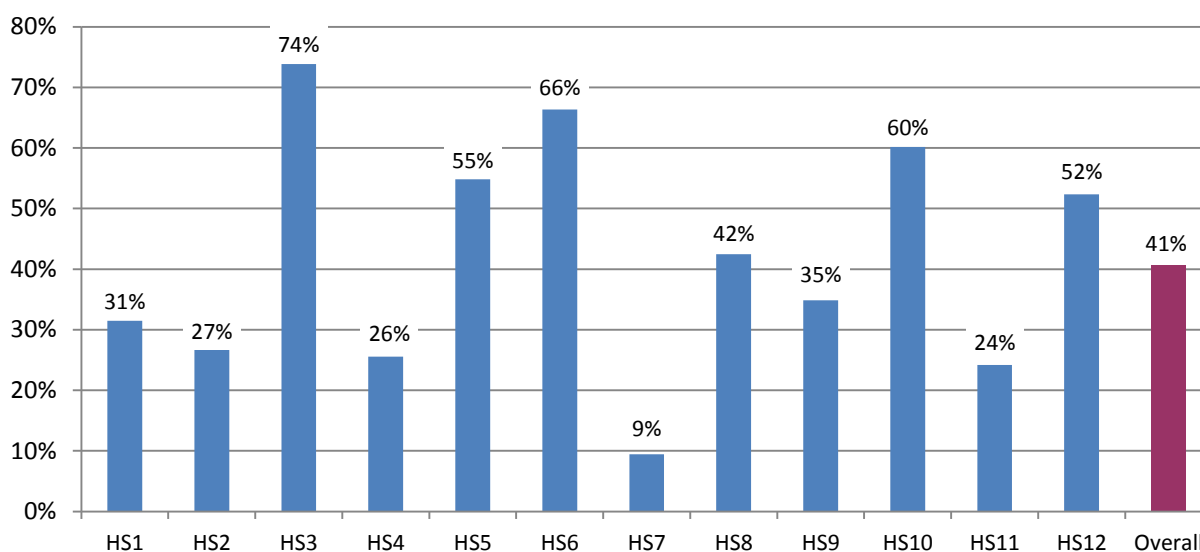
**Figure 3: Percentage of patients receiving pre-operative assessment for anaemia, by health service, as at end of October 2016**

The percentage of patients in whom a pre-operative haemoglobin level had been recorded varied across participating NPBMCM sites from 71% to 99%. However, there has been an increase of 6 percentage points in the percentage of patients having pre-operative assessment since the beginning of the Collaborative in May 2015.



**Figure 4: Percentage of patients receiving pre-operative assessment for iron deficiency, by health service, as at end of October 2016**

There was greater variability in the percentage of patients in whom pre-operative iron studies were recorded, from 9% to 74%. This high variation is being examined as there is a need to increase provision of pre-operative iron studies in order to determine whether an intervention may be required to promote better patient care.

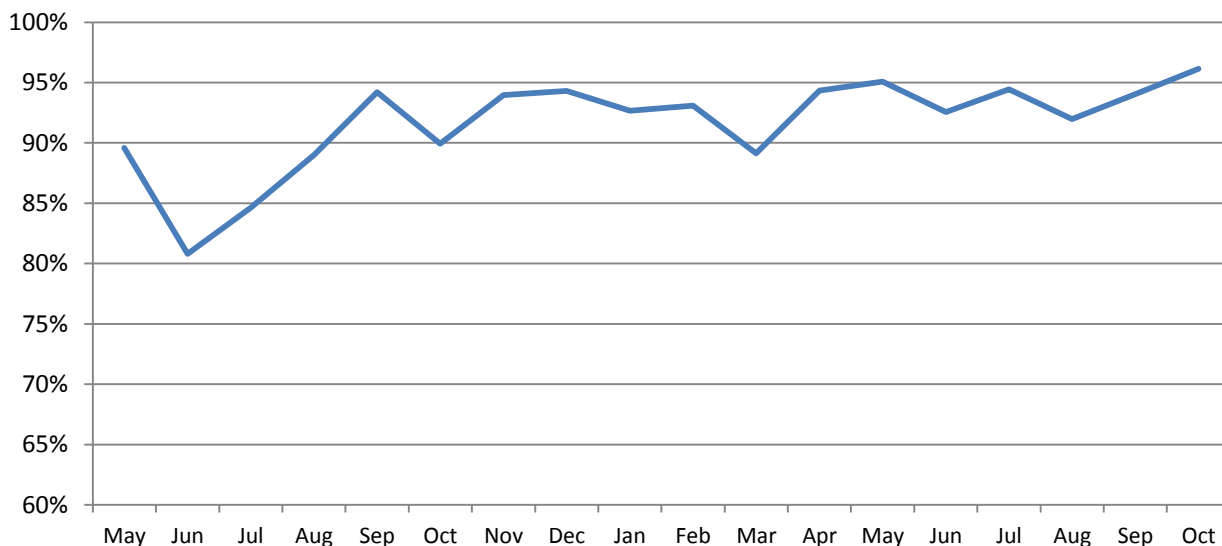


# Overview of Collaborative Activity to October 2016

## ANAEMIA

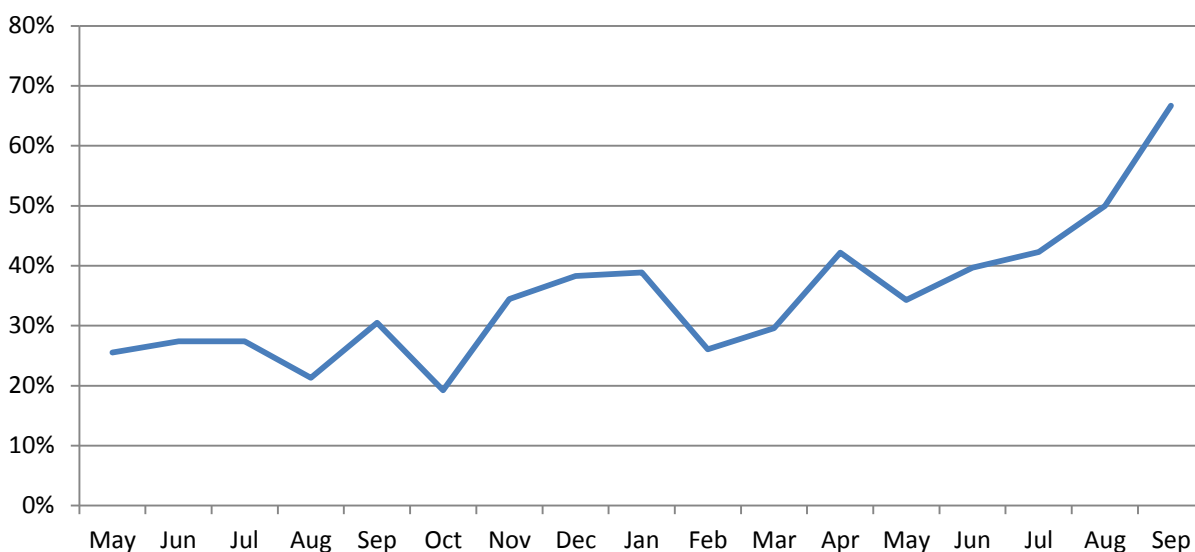
**Figure 5: Percentage of patients assessed for anaemia, by month, May 2015 to October 2016**

Patients undergoing major surgical procedures are at increased risk of haemorrhage. Pre-operative assessment of patients' haemoglobin levels assists clinicians to identify and manage patients in whom anaemia is a risk factor for adverse surgical outcomes. The percentage of patients assessed for anaemia each month has increased over the duration of the Collaborative, from 90% in May 2015 to 96% in October 2016.



**Figure 6: Percentage of patients managed for anaemia, by month to September 2016**

The data shows that rates of anaemia management have varied between 19% and 67% over the term of the Collaborative to September 2016. (NB: There is no management data available for October 2016). This high variation is being examined as there is a need to increase rates of anaemia management in order to determine whether an intervention may be required to promote better patient care.



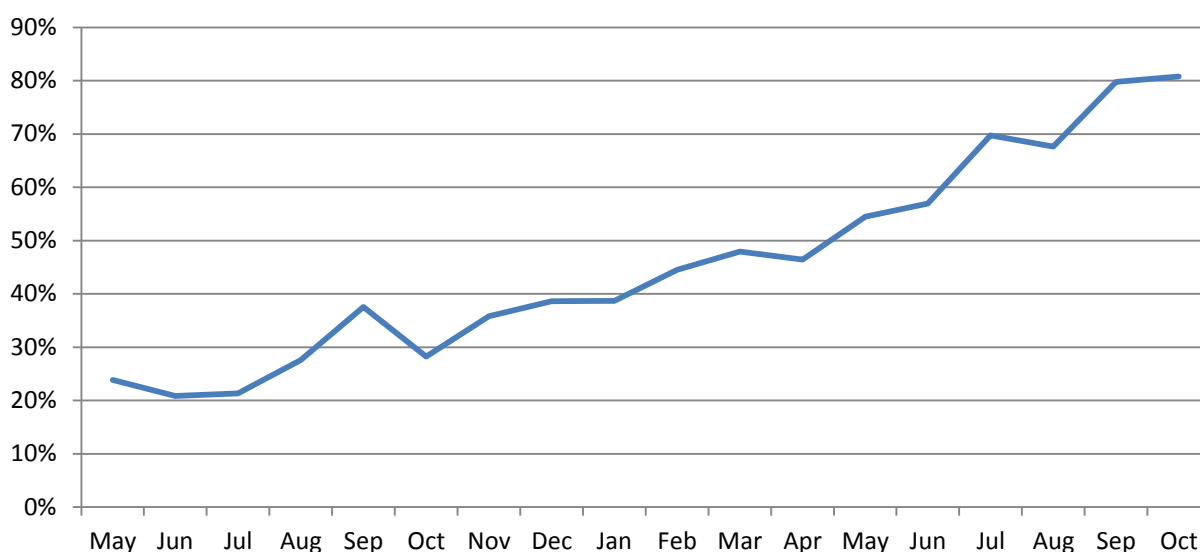
# Overview of Collaborative Activity to October 2016

## IRON DEFICIENCY

Patients' iron stores can be assessed safely and inexpensively with a simple blood test. Patients who undergo major surgery lose varying amounts of blood as a result of their surgery. This decreases their haemoglobin levels, which in some patients results in anaemia. Patients use their iron stores to produce haemoglobin. Knowledge of the patient's iron stores assists clinicians to identify patients who need iron replacement to support haemoglobin production post-operatively.

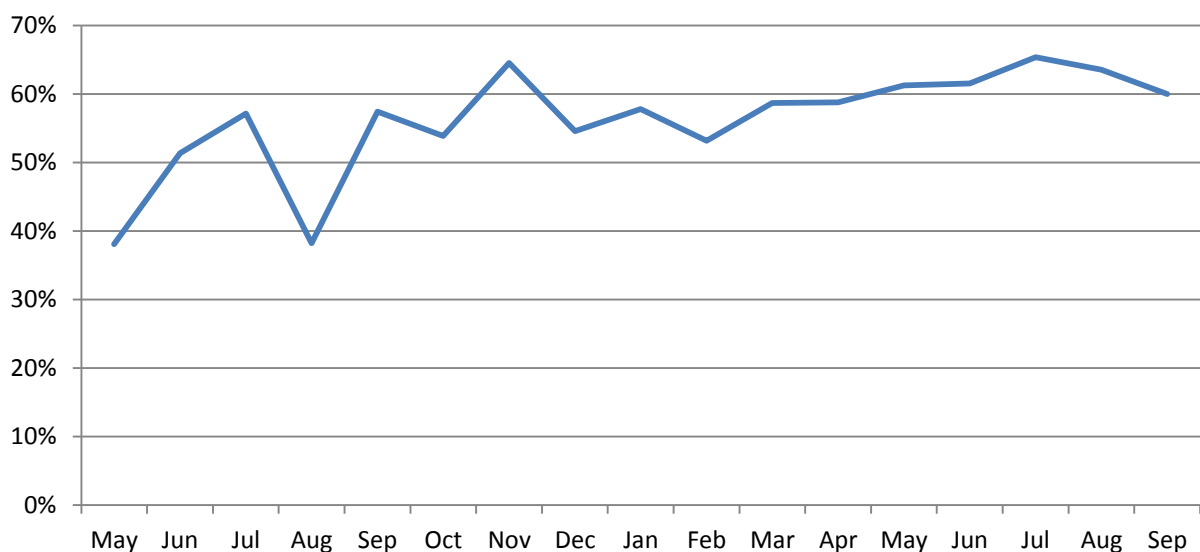
**Figure 7: Percentage of patients assessed for iron deficiency, by month, May 2015 to October 2016**

Rates of pre-operative assessment of iron deficiency have steadily increased from 21% to 81% over the duration of the Collaborative.



**Figure 8: Percentage of patients managed for iron deficiency, by month to September 2016**

The data shows that between 38% and 60% of patients were managed for iron deficiency from May 2015 to September 2016. (NB: No management data available for October 2016)

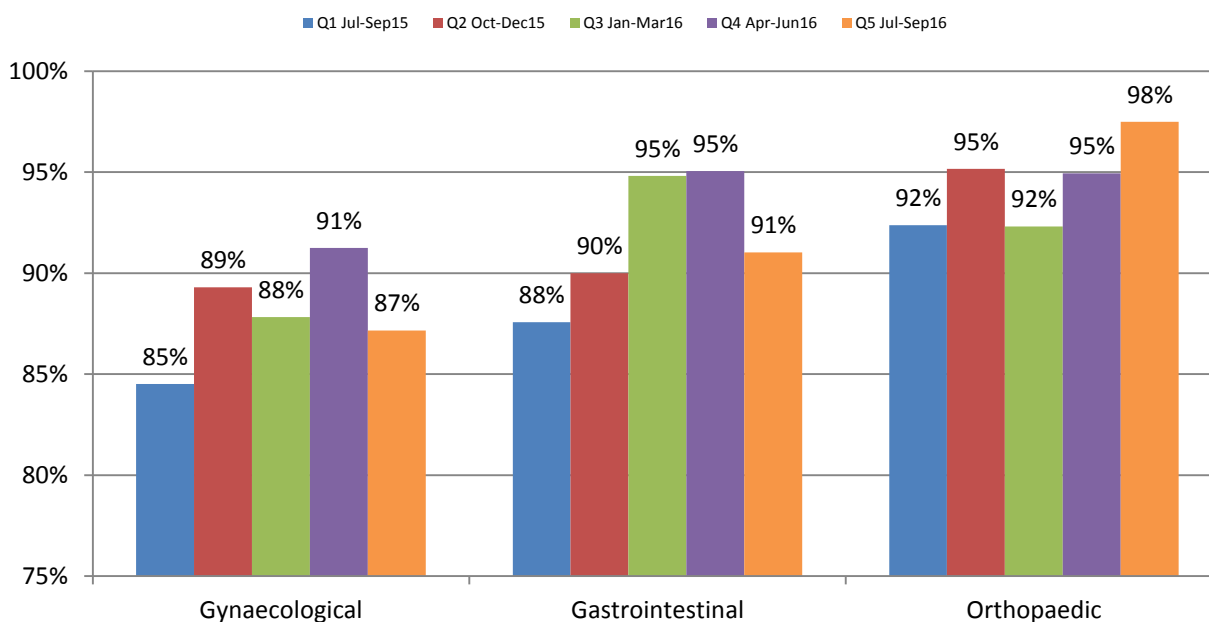


# Overview of Collaborative Activity to October 2016

## ANAEMIA

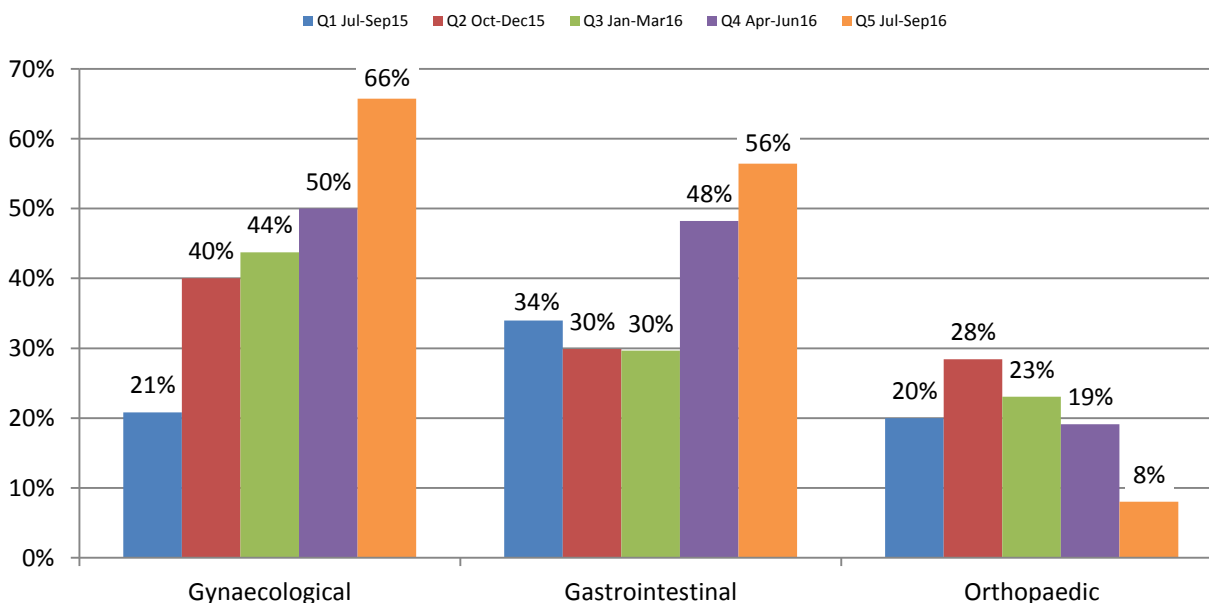
Recording of patient assessment for anaemia varies with the type of surgery; this aspect of recording will be further assessed. Rates are highest for patients undergoing orthopaedic surgery and lowest for those undergoing gynaecological surgery. Recording of assessment for anaemia has improved in all surgical streams over the duration of the Collaborative. The target is for 100% of patients to have an assessment for anaemia recorded in their patient record.

**Figure 9: Percentage of patients assessed for anaemia, by surgical stream, by quarter**



**Figure 10: Percentage of patients confirmed with anaemia who were managed for this condition, by surgical stream, by quarter**

Management of patients with anaemia has improved in the gynaecological and gastrointestinal surgical streams but not in the orthopaedic stream. A large percentage of patients diagnosed with anaemia in each surgical stream have no management recorded, particularly in orthopaedics.



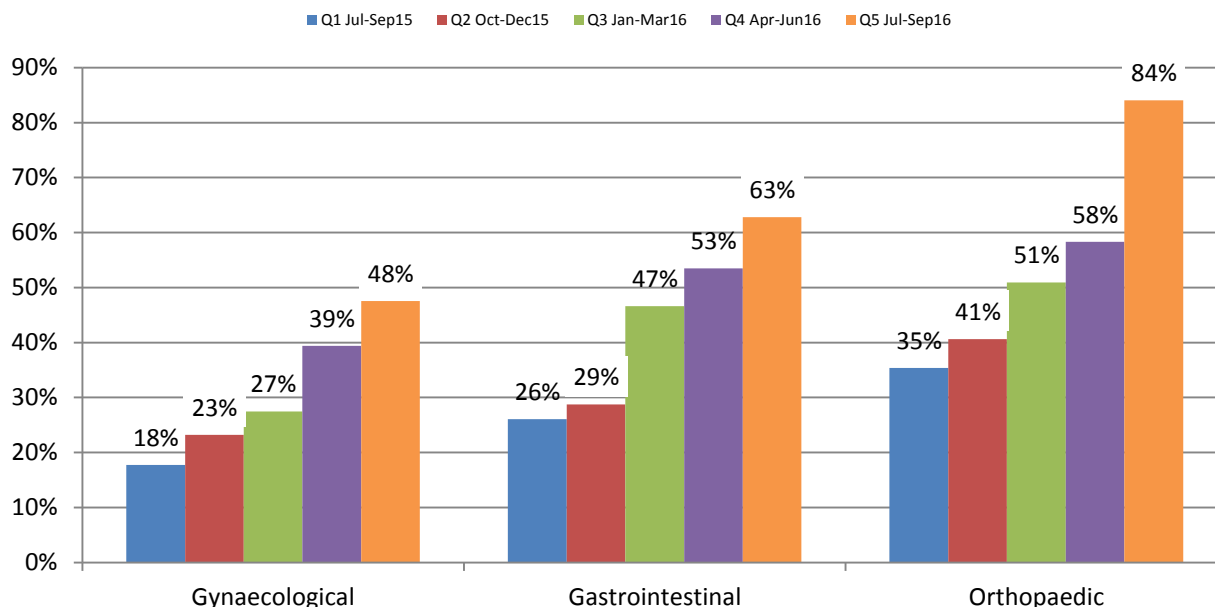


# Overview of Collaborative Activity to October 2016

## IRON DEFICIENCY

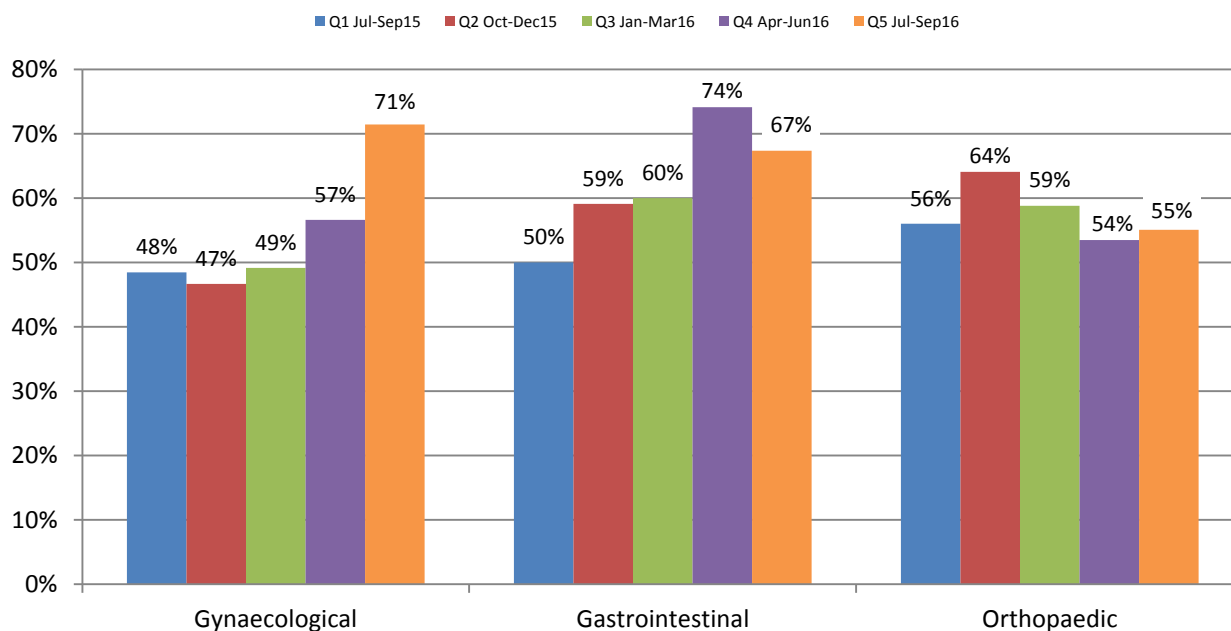
**Figure 11: Percentage of patients assessed for iron deficiency, by surgical stream, by quarter**

Recording of patient assessment for iron deficiency has improved in each surgical stream from July 2015 to September 2016.



**Figure 12: Percentage of patients confirmed with iron deficiency who were managed for this condition, by surgical stream, by quarter**

Recorded management of patients who were diagnosed with iron deficiency does not vary greatly across surgical streams from July 2015 to September 2016, except for gynaecology which has recorded an increase in the most recent quarter.



### For further information:

**Website:** [www.safetyandquality.gov.au/national-priorities/pbm-collaborative/](http://www.safetyandquality.gov.au/national-priorities/pbm-collaborative/)

**Email:** [pbmcollaborative@safetyandquality.gov.au](mailto:pbmcollaborative@safetyandquality.gov.au) **Twitter:** @ACSQHC **Phone:** 02 9126 3600