

Supplementary File One: Retrospective health record review questions

Question	Answer option
Demographics	
Patient UR number	Integer entry
Date of preadmission appointment	DD/MM/YYYY
Date of surgery	DD/MM/YYYY
Surgical speciality	Radio buttons: <ul style="list-style-type: none"> - General/Colorectal - Gynaecology - Gynaecology/oncology - Orthopaedics - Thoracic - Urology - Neurosurgery
Procedure name	Radio buttons: <ul style="list-style-type: none"> - Abdomino-perineal resection - Anterior resection - Bowel resection - Gastrectomy - Liver resection - Esophagectomy - Pancreatectomy - Splenectomy - Total Knee Replacement - Total Hip Replacement - Total shoulder replacement - Aortic aneurysm - Aorto-femoral bypass graft - Aorto-iliac bypass graft - Ilio-femoral bypass graft - Cystectomy - Nephrectomy - Prostatectomy - Lobectomy - Pneumonectomy - Abdominal Hysterectomy (gynaecology-oncology only) - Myomectomy/Omentectomy - Flap repair - Abdominoplasty - Pelvic exenteration - Neck Dissection - Laparotomy
What was the treating consultants name?	Text entry
Preoperative assessment and treatment	
Were all preadmission bloods ordered?	Radio buttons: <ul style="list-style-type: none"> - Yes - No
When were the pre-admission bloods performed?	DD/MM/YYYY

Were anticoagulants/antiplatelets ceased?	Radio buttons: <ul style="list-style-type: none"> - Yes - No - N/A
If so, provide detail	Text entry
What was the patient's haemoglobin level preoperatively?	Integer entry (if not available, to enter 0)
What was the patient's MCV?	Integer entry (if not available, to enter 0)
Iron studies including ferritin	Radio buttons: <ul style="list-style-type: none"> - Yes - No
What was the ferritin level?	Integer entry (if not available, to enter 0)
What was transferrin saturation?	Integer entry (if not available, to enter 0)
What was the patient's CRP?	Integer entry (if not available, to enter 0)
What was the EGFR?	Integer entry (if not available, to enter 0)
B12 & Folate	Radio buttons: <ul style="list-style-type: none"> - Yes - No
What was the serum b12 level?	Integer entry (if not available, to enter 0)
What was the folate level?	Integer entry (if not available, to enter 0)
Based on the blood results, what was the patient's diagnosis?	Radio buttons: <ul style="list-style-type: none"> - Insufficient information - Absolute iron deficiency - Suboptimal iron stores - Iron deficiency anaemia - Anaemia of inflammation - Non-iron deficiency anaemia - Iron deficiency anaemia and anaemia of inflammation - Normal – no further intervention required
If treatment or intervention was needed, what was provided?	Radio buttons <ul style="list-style-type: none"> - Oral iron - IV iron - Erythropoietin - Blood - GP referral - Perioperative medicine referral - None - Other
What was the dose of IV Iron/EPO/Blood?	Text entry

If other, please specify	Text entry
At the closest point before surgery, which blood results were available?	
When were these tests taken?	Radio buttons <ul style="list-style-type: none"> - Day of surgery - Up to and including one week prior - Up to and including two weeks prior - Up to and including three weeks prior - Up to and including four weeks prior - Up to and including five weeks prior - Up to and including six weeks prior - Greater than six weeks prior - Not done
What was the patient's haemoglobin level?	Integer entry (if not available, to enter 0)
What was the patient's MCV?	Integer entry (if not available, to enter 0)
Iron studies including ferritin	Radio buttons: <ul style="list-style-type: none"> - Yes - No
What was the ferritin level?	Integer entry (if not available, to enter 0)
What was transferrin saturation?	Integer entry (if not available, to enter 0)
What was the patient's CRP?	Integer entry (if not available, to enter 0)
What was the EGFR?	Integer entry (if not available, to enter 0)
B12 & Folate	Radio buttons: <ul style="list-style-type: none"> - Yes - No
What was the serum b12 level?	Integer entry (if not available, to enter 0)
What was the folate level?	Integer entry (if not available, to enter 0)
Based on the blood results, what was the patient's diagnosis?	Radio buttons: <ul style="list-style-type: none"> - Insufficient information - Absolute iron deficiency - Suboptimal iron stores - Iron deficiency anaemia - Anaemia of inflammation - Non-iron deficiency anaemia - Iron deficiency anaemia and anaemia of inflammation - Normal – no further intervention required
If treatment or intervention was needed, what was provided?	Radio buttons <ul style="list-style-type: none"> - Oral iron - IV iron

	<ul style="list-style-type: none"> - Erythropoietin - Blood - GP referral - Perioperative medicine referral - None - Other
What was the dose of IV Iron/EPO/Blood?	Text entry
If other, please specify	Text entry
Assessment and treatment - intraoperatively	
Did the patient receive tranexamic acid?	Radio buttons: <ul style="list-style-type: none"> - Yes - No - N/A
If available, please provide dates and dose of TXA	Text entry
Was blood loss recorded?	
What was the total estimated blood volume lost? (mL)	
Was cell salvage used?	
If cell salvage was used, how much blood was returned to the patient?	Integer entry
Were bloods taken intraoperatively?	Radio buttons: <ul style="list-style-type: none"> - Yes - No
What was the lowest Hb result intraoperatively?	Integer entry (if not available, to enter 0)
Was IV Iron given in theatre?	Radio buttons: <ul style="list-style-type: none"> - Yes - No
Was the patient transfused in theatre?	Radio buttons: <ul style="list-style-type: none"> - Yes - No
How many units?	Radio buttons: <ul style="list-style-type: none"> - 1 - 2 - 3 - 4 - More than four
Was there evidence of haemodynamic or respiratory decompensation?	Radio buttons: <ul style="list-style-type: none"> - Yes - No
Was the patient reassessed between units?	Radio buttons: <ul style="list-style-type: none"> - Yes - No

Assessment and treatment - postoperatively	
What was the patient's haemoglobin level postoperatively? (earliest possible)	Integer entry (if not available, to enter 0)
What date was it taken?	DD/MM/YYYY
Based on the results, was further investigation needed?	Radio buttons: - Yes - No
Were iron studies performed?	Radio buttons: - Yes - No - N/A
As a result of Hb and/or iron results what was the diagnosis?	Radio buttons: - Insufficient information - Absolute iron deficiency - Suboptimal iron stores - Iron deficiency anaemia - Anaemia of inflammation - Non-iron deficiency anaemia - Iron deficiency anaemia and anaemia of inflammation - Normal – no further intervention required
Is this patient receiving or have they received iron replacement?	Radio buttons: - Yes - No - Not specified - Not applicable
What was the treatment type?	Radio buttons: - IV - Oral
Please state the date of the treatment	DD/MM/YYYY
Was the patient assessed after treatment?	Radio buttons: - Yes- Full Blood Count - Yes – Iron studies - Yes – Full blood count and iron studies - No
Was the patient discharged on oral iron?	Radio buttons: - Yes - No - N/A
Did the patient receive a transfusion post-operatively?	Radio buttons: - Yes - No
What was listed as the indication for the transfusion?	Text entry
If yes, how many units did they receive?	Integer entry
What was the date of transfusion?	DD/MM/YYYY

Was there evidence of haemodynamic or respiratory decompensation?	Radio buttons: - Yes - No
Was there reassessment between transfused units?	Radio buttons: - Yes - No
Discharge and readmission questions	
What was the Hb at discharge?	Integer entry (if not available, to enter 0)
What was the total length of stay? (days)	Integer entry
Is there evidence of post-op infection?	Radio buttons: - Yes - No
Is there evidence of post-op VTE?	Radio buttons: - Yes - No
Was the patient readmitted?	Radio buttons: - Yes - No
What was the date of readmission?	DD/MM/YYYY
What was the hb at readmission?	Integer entry (if not available, to enter 0)
What was the reason for readmission?	Text entry
Any other comments?	Text entry

Supplementary File Two: Quantitative survey questions with free text field

Question	Answer option
Demographics	
What is your role?	Dropdown <ul style="list-style-type: none"> - Medical officer - Anaesthetist - Clinical Nurse Consultant - Preadmissions Nurse - Surgeon - Blood bank/Pathology lab - IV Iron infusion clinic nurse - Quality - Manager
How long have you been in your role?	Dropdown <ul style="list-style-type: none"> - Less than one year - One to three years - Three to five years - Five to ten years - Over ten years
Which aspects of the preoperative anaemia and iron deficiency screening, evaluation and management pathway are you involved with delivering?	Checkbox <ul style="list-style-type: none"> - Initial patient assessment - Test ordering - Test checking - Treatment ordering - Referral ordering - Provision of treatment - Nursing care - Patient education - Quality oversight - Other
Which of the following are a component of preoperative anaemia and iron deficiency screening, evaluation and management?	<ul style="list-style-type: none"> - Ordering a full blood count, iron study, CRP, b12 & folate, U&E at the earliest possible time before surgery. - Reviewing patient tests results to determine the type of anaemia (if any) and act accordingly - Ordering IV Iron for patients who have iron deficiency (with or without anaemia) and are having urgent major surgery - Suggesting the patient obtains oral iron supplementation where necessary - Following up to see if the patient treatment is working - Referral to GP

Acceptability of Intervention Measure (AIM)	
The PAIDSEM-P meets my approval.	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
The PAIDSEM-P is appealing to me.	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
I like the PAIDSEM-P	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
I welcome the PAIDSEM-P.	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
Intervention Appropriateness Measure (IAM)	
The PAIDSEM-P seems fitting.	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
The PAIDSEM-P seems suitable.	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
The PAIDSEM-P seems applicable.	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree

The PAIDSEM-P seems like a good match.	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
Feasibility of Intervention Measure (FIM)	
The PAIDSEM-P seems implementable.	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
The PAIDSEM-P seems possible.	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
The PAIDSEM-P seems doable.	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
The PAIDSEM-P seems easy to use.	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
Patients who are screened, evaluated and managed using the PAIDSEM-P:	
Understand why the pathway is being used	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
Are happy to have the required tests	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree

Are not significantly inconvenienced	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
Are better off since implementation	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
Existing barrier mitigation	
Do you feel that Mater has the required infrastructure in place to support the PAIDSEM-P?	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
Do you feel that the intervention as delivered (coordinated by a nurse) is helpful to executing the PAIDSEM-P?	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
Do you feel that current funding arrangements support the use of the PAIDSEM-P?	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
Do you think there is good communication between the multidisciplinary team in regards to enacting the PAIDSEM-P?	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
Do you think the use of PAIDSEM-P is seen as a priority in the context of perioperative patient care?	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree

Do you have sufficient resources for ongoing participation in the delivery of PAIDSEM-P?	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
Do you have sufficient access to information about the PAIDSEM-P?	Radio buttons: <ul style="list-style-type: none"> - Completely disagree - Disagree - Neither agree nor disagree - Agree - Completely agree
Do you have any comments or suggestions regarding the PAIDSEM-P?	Text entry
Are you happy to be contacted about your responses?	Radio buttons: <ul style="list-style-type: none"> - Yes - No
Please leave your name here (if happy to be contacted):	Text entry