

Self-evaluation of the implementation of Patient Blood Management



To reduce your and our effort, we ask you to fill out the self-assessment form digitally. The necessary calculations can thereby be automated.

Hospital:.....
Address:.....
.....
Person of contact:.....
Position:.....
Email:.....

This self-assessment form determines the implementation degree of the PBM measures defined in the PBM network and calculates the corresponding PBM level (e.g. silver, gold). In order to be able to make statements relative to the possibilities of the respective hospital, it is first determined whether the measure to be evaluated can be implemented locally at all.

Measures are considered feasible as soon as they are theoretically feasible. This also includes measures that have not (yet) been implemented for various (e.g. financial) reasons (e.g. use of point-of-care diagnostics), but which would be beneficial for the patient.

Measures are considered unfeasible if there is no theoretical possibility of implementation (e.g. participation of important PBM stakeholders from paediatrics if there is no paediatrics in the hospital or use of MAT in oncological interventions if no oncological interventions are performed in the hospital). Since it is impossible to treat patients of special disciplines in hospitals without corresponding areas, the non-implementation of the special measure does not result in any disadvantage for the patient. Accordingly, the measure is not included in the evaluation.

If the respective measure is unfeasible, please tick the corresponding column. If the measure can be implemented (= feasible), please rate the degree of implementation by ticking the appropriate box: 0 = none / rare (<10%), 1 = moderate (10-50%) or 2 = good / frequent (>50%) implementation. Subsequently, all points are added up and evaluated as a percentage of the maximum number of points resulting from the number of measures that can be implemented. The sum of the percentages results in the achieved PBM level (for details see page 7).

The form can be signed digitally. If you encounter any problems, you can of course also print out the self-assessment form, sign it and scan it.

Please send the completed form to: patientbloodmanagement.kgu@gmail.com

Bundle 1 – General PBM project management	unfeasible	feasible		
		0	1	2
Involvement of key PBM stakeholders [role]				
Local PBM coordinator with protected time [central role for communication, networking, education, documentation, and benchmarking]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hospital board of directors (eg, chief medical officer, chief executive officer, chief nursing officer) [support; official decision]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surgeons (eg, orthopaedic/trauma, cardiac, vascular, visceral, trauma, urology, neurosurgery) [interdisciplinary consensus, practical collaboration]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anaesthesiologist/intensive care specialists [interdisciplinary consensus, practical collaboration]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transfusion medicine specialists/transfusion committee [prevention of blood wastage, optimal blood use, changes in donor blood management]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internists/gastroenterologists/hematologists/cardiologists/nephrologists [Anaemia management, optimal blood use]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
General practitioners/family doctors [determine the necessity for elective surgery, assign patients to a hospital, preoperative anaemia management]]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Patient's representative [need to be informed about the different alternatives to treat anaemia/create awareness]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paediatrics mainly refers to blood conservation strategies]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Central laboratory/laboratory scientists [number and amount of blood sampling, smaller blood collecting tubes]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pharmacists/purchasing department [introduction of new drugs for the management of anaemia and coagulopathy]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information technology department [sampling of routine data and key performance metrics]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finance department [finance experience for program budget plan, initial project costs; hospital-wide cost savings]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality management [project management experience; PBM as a fixed part of a quality improvement initiative]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public affairs [dissemination channels/marketing of the PBM project (eg, via journals/Intranet/e-mails/posters/roll-ups/press)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Undergraduate and postgraduate education				
Undergraduate education (nursing school/medical school)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Postgraduate education of physicians and clinicians (lectures, workshops; initial and yearly)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Postgraduate education of nurses (intensive care unit, normal ward; initial and yearly)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Certification (eg, by online E-learning courses) - to enhance PBM education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local standard operating procedures/protocols				
Standard operating procedures for PBM				
Anaemia management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coagulation management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blood conservation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Optimal blood use/transfusion of blood products (list of index procedures for “type and screen” or “type and crossmatch (and supply)”)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Massive haemorrhage protocols (including such as damage controlled surgery, arterial embolization, haemotherapy algorithm)				
Massive haemorrhage (in general)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Postpartum haemorrhage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trauma-associated haemorrhage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cardiac surgery-associated haemorrhage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bundle 1 – Subtotal				

Bundle 2 – First strategy: Manage the patient's anaemia	unfeasible	feasible		
		0	1	2
Preoperative management of anaemia (subgroup of surgical patients)				
Diagnosis of anaemia				
Identification of anaemic patients (screening), especially surgeries with relevant transfusion risk >10%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnosis of iron deficiency anaemia (eg, blood count, ferritin, transferrin saturation, calculation of the individual iron deficit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnosis of vitamin B ₁₂ or folic acid deficiency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extended diagnostic of anaemia (eg, consultant for gastroenterology, endoscopy; haematology, bone marrow biopsy)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnosis of anaemia ideally 3-4 weeks before surgery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnosis of anaemia although time to surgery is shorter than 3-4 weeks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anaemia clinic; anaemia/PBM nurse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Treatment of anaemia				
Administration of intravenous iron	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Administration of vitamin B ₁₂ and/or folic acid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Administration of erythropoietin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Optimizing cardiovascular and pulmonary function to improve tolerance of anaemia				
Increase of oxygen delivery (increase of inspiratory oxygen concentration); decrease of oxygen consumption	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Haemodynamic monitoring in high-risk procedures/patients (normovolaemia, optimization of cardiac output)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management of anaemia in hospitalized patients and/or after surgery				
Diagnosis of anaemia				
Diagnosis of iron deficiency anaemia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Treatment of anaemia				
Administration of intravenous iron	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Administration of vitamin B ₁₂ , folic acid and / or erythropoiesis-stimulating agents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bundle 2 – Subtotal				

Bundle 3 – Second strategy: Interdisciplinary blood conservation modalities	unfeasible	feasible		
		0	1	2
Reduction of diagnostic-associated blood loss				
Restrictive frequency of blood collection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appropriate timing of postoperative blood tests and not daily judicious use / “weekend” plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduced size of blood collection tubes				
EDTA (eg, 1.8 ml), citrate (eg, 1.8 ml), lithium-heparin/serum (eg, 2.5 ml)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BGA (eg, 1 ml)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Type and screen tubes (z.B. 5 ml)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduced sampling for blood cultures in daily routine (limit to established indications)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Closed in-line flush devices (arterial pressure transducer systems, central venous blood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduction of surgery-related blood loss (subgroup of surgical patients)				
Extreme attention to minimize blood loss (eg, diathermy for tissue dissection), haemostatic adjuncts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Laparoscopic surgery/minimal invasive techniques/modern surgical instruments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Controlled hypotension (if no contraindication is present)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Autologous blood collection and retransfusion (cell salvage) – perioperatively				
Non-oncological procedures: if expected blood loss >500 mL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oncological procedures: if massive blood loss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oncological procedures: if expected blood loss >500 mL (radiation of washed blood; filtration using leukocyte depletion filters)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limited numbers of swabs for blood absorption/swab washing and cell salvage (“single swab”)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cardiac surgery (as special area)				
Small extracorporeal circuits (priming volume <1.2 L; 3/8” lines; minimized extracorporeal circuits)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extracorporeal circuits (retrograde autologous priming; blood cardioplegia, modified ultrafiltration/haemofiltration)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bloodless saphenous vein graft removal/immediate wound closure/endoscopic vein removal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preoperative management of coagulopathy				
Questionnaire/tests of haemostasis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Algorithm for management of patients with oral/parenteral anticoagulation and/or antiplatelet therapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Haemostasis management in hospitalized patients				
Use of a coagulation algorithm for administration of blood products, clotting factor concentrates, tranexamic acid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physiological conditions of haemostasis				
Body temperature >36°C (normothermia), pH >7,2 / Ca _i ²⁺ >1,1 mmol/l	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Point-of-care diagnostic in coagulopathy				
Coagulation system (eg, viscoelastic methods)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Platelet function (eg, aggregometric methods)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Empiric administration of tranexamic acid in certain procedures (particular in cardiac, orthopaedic, transplant surgery, massive haemorrhage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Empiric therapy of platelet dysfunction (eg, desmopressin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bundle 3 – Subtotal				

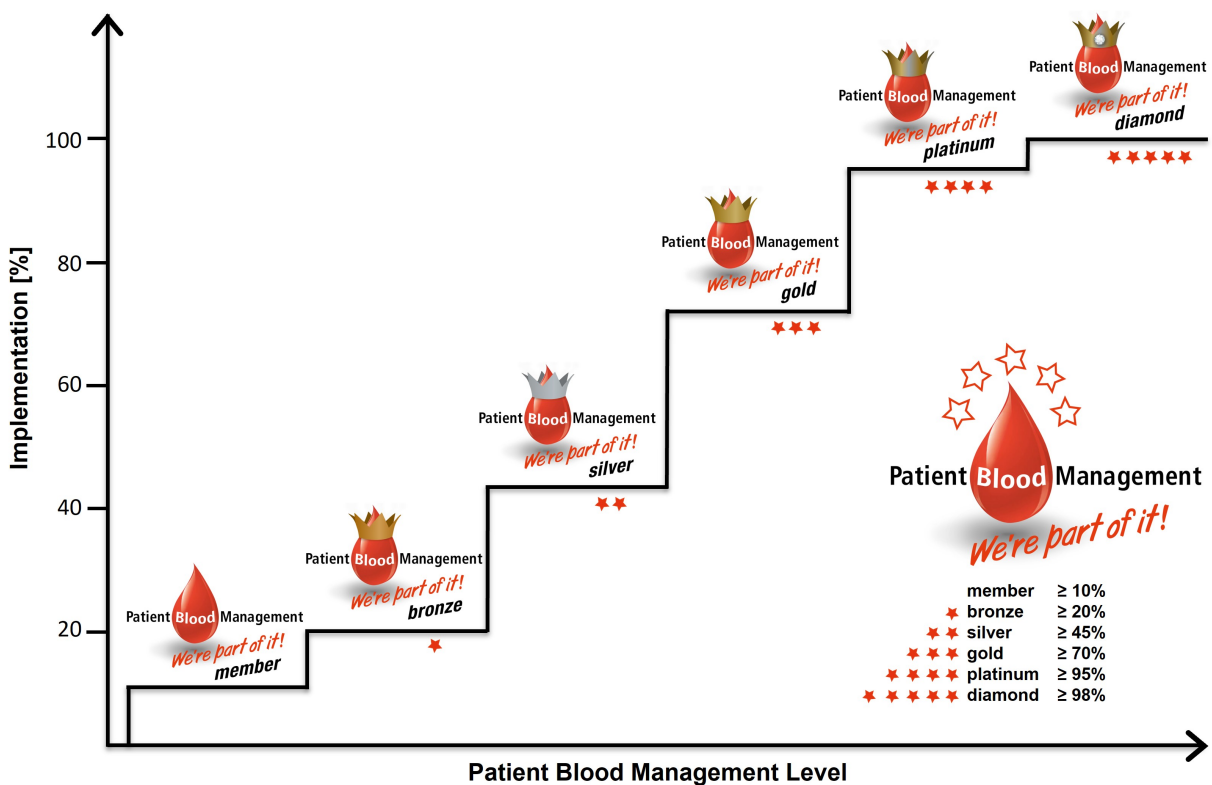
Bundle 4 – Third strategy: Optimal blood use with patient-centred decision making	unfeasible	feasible		
		0	1	2
Patient-centred decision making				
Individual PBM plan with transfusion triggers based on the patient's risk profile/tolerable erythrocyte deficit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Written patient information form/informed consent for allogeneic blood products (in emergency after transfusion)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intelligent electronic ordering system for blood products (including patient's lab results, alert function)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinician who ordered blood products can be identified (important for feedback and audit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indication list for each of the following hemotherapy products (eg, pocket card, posters etc)				
RBC units	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Platelet concentrates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FFP units	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coagulation factors (prothrombin complex concentrate, fibrinogen, recombinant VIIa, recombinant XIII)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Single-unit policy (RBC units, platelet concentrate)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Documentation of the indication for each of the following hemotherapy products (eg, by paper-/electronic-based ordering)				
RBC units	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Platelet concentrates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FFP units	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coagulation factors (prothrombin complex concentrate, fibrinogen, recombinant VIIa, recombinant XIII)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use of dosage for blood components instead of units	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bundle 4 – Subtotal				

Bundle 5 – PBM-related metrics/patient's outcome/benchmark	unfeasible	feasible		
		0	1	2
PBM-related metrics				
Anaemia - itemized for each department with percentage of patients				
Preoperative anaemia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hospital-acquired anaemia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Treated anaemic patients (eg, parenteral iron, vitamin B ₁₂ , folic acid, erythropoiesis-stimulating agents)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use of blood conservation techniques - itemized for each department with number of units and percentage of patients				
Use of haemostatic agents (tranexamic acid, desmopressin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use of cell salvage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Haemotherapy product use - itemized for each department with number of units/dosage and percentage of patients				
Blood products (RBC units, platelet concentrates, FFP units)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coagulation factors (prothrombin complex concentrate, fibrinogen, recombinant VIIa, XIII)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transfusion episodes where a single unit of RBCs/platelet issued	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indications for blood product use - mean pretransfusion levels (haemoglobin, platelet count, INR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Blood product use that falls outside of hospital or professional transfusion guidelines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blood wastage - number of units				
Crossmatch (supply) / transfusion ratio (aim: as low as possible, ratio 1.7:1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discarded blood products (RBC units, platelet concentrates, FFP units)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Report to clinicians/administrative departments about PBM-related metrics (once a year)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Patient's outcome				
Haemovigilance (transfusion reactions, transfusion-associated cardiac overload, TRALI)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mortality (in-hospital)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Morbidity (eg, ICD-10 codes)				
Infections (sepsis, pneumonia), acute renal failure, acute myocardial infarction, acute ischemic stroke	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Length of stay in hospital/intensive care unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Benchmarking				
Internal/external benchmarking (eg, for selected surgical procedures)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Membership of a PBM network	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Program budget for PBM				
Initial/ongoing project costs (personnel resources, dissemination); PBM-related cost savings (reduced blood products, laboratory analyses)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hospital audit for PBM				
Participation in hospital audit for PBM practice and transfusion decisions in a sample of scheduled cases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hospital accreditation for PBM				
Participation in a hospital certification (accreditation) program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bundle 5 – Subtotal				

Summary

	Number of measures (total)	Maximum score (total)	Number of feasible measures (local)	Maximum score (local)	Score achieved (local)	Relative degree of implementation
Bundle 1	27	54				%
Bundle 2	15	30				%
Bundle 3	25	50				%
Bundle 4	14	28				%
Bundle 5	22	44				%
Sum	103	206				%

Patient Blood Management



Place, Date

Name, Stamp

Signature

Questions & Comments