THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. (For all remaining questions in other categories please see later in this works		Coriginal Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has received a blood transfusion, B = Blood Donor, H = Health professional, NK = no details provided.	Previous Related & up-to-date Res
D11 What would encourage more people (especially black and ethnic mine	ority groups 1	How can we encourage people to donate	н	1. Bagot KL, Murray AL, Masser BM. Ho
or people with rare blood type) to donate blood?		How can the rest of the population (especially minorities) be encouraged to become regular donors ?	н	evidence. Transfusion Medicine Review 2. Memon A, Moiz B. Why are we losing
		How do we encourage more donors?	н	2016;101((s1)):P877- ABSTRACT NO.PB
		It should be mandatory to donate/ or be paid to do it	В	3. Appiah BA, Bates BA. Cultural contex
		people should be encouraged to donate more by better campaigning	РВ	a systematic literature review. Vox San
		What would encourage people to donate blood?	н	
		What can we do to encourage more people to become blood donors?	P R B H	
		How can we make giving blood more appealing to the public?	P R B H	1
		How can we make donating blood more appealing to the public?	PRBH	
		How is recruitment for more blood donors being developed.	P R B	
		How can we encourage more ethnic minorities to give blood?	RBH	
		How can the public be made aware of the need to be donors?	RH	-
		How do you plan getting more people to donate?	PB	
		How important is blood type and does marketing for new donors target rare types? Should be patients friends & family be asked to join campaign to get more donors as they've seen firsthand	P	-
		how it helpsthis happened with me	r r	
		I have a major concern in our declining stock of blood. What is preventing the general public from donating? Is it lack of knowledge? Are they concerned about the safety of receiving another's blood?	н	
		Encouraging people to become donors, but without putting too much pressure on those already signed up	R B H	
		How do we increase number of people donating?	BH	
		How can more people be encouraged to become donors?	NK	
		How can more people from minority ethnic backgrounds be encouraged to think about donating? How can I help promote the blood donation process?	В	
		When you give blood it is quite an old fashioned type of service, it needs updating to get younger donors	В	
		interested and involved		
		The most effective ways and time to give blood and blood products	RH	
		Would sending information about where/how donations have been received increase the popularity of donating blood?	В	
DtTr1 How can health professionals be discouraged from using blood inapple	roriately? 2	Explore the level of knowledge and understanding of prescribing and administrating blood transfusions by	н	1. Hibbs SP, Nielsen ND, Brunskill S, Do
	2	healthcare professionals. What systems can we put in place to limit unnecessary use of blood and blood products on the ICU?	BH	transfusion practice: a systematic revie
		How can we improve knowledge of and reduce incidence of TRALI	RBH	-
		What can be done to make it easier to give blood in the bleeding patient (i.e. not 1:1:1) [ratio question]	н	
		NICE GUIDELINE RESEARCH KEY RECOMMENDATION: Electronic decision support: [Guideline Dev Gp fully assessed all evidence to Jan 2015 = "inconclusive and of very low quality"]. What is the clinical and cost	Question not derived from the survey but from another source.	
		effectiveness of an electronic decision support system compared with current practice in reducing inappropriate blood transfusions, overall rates of blood transfusion and mortality?		
		Red cell transfusion: dose, frequency, end points, outcome, home vs. hospital, efficacy in patients with chronic malignant haematologic diseases	н	
		Transfusion is a quick fix, but is it always the best fix?	н	
		A bigger push on hospitals etc on " Why use 2 when 1 will do". Lets get out profesiso	Н	
		Ensuring that all hospital staff realise that blood transfusion is akin to transplantation and not be blase about administering it	RBH	
		How can Hospitals reduce the requirements for Blood Transfusions	R B H	
		How can the risks and complications associated with blood transfusions be more clearly understood by the	NK	
		wider medical community? How can we improve the hospitals clinicians that blood is a limited resource, I feel they should be encouraged	I BH	{
		to be donors.		4
		How do we encourage staff to use blood only when necessary	Н	4
		How do we unify blood transfusion practices across disciplines (.e.g. cardiac surgery vs. general ICU)?	RBH	
		Should blood and blood product transfusion in trauma be better applied in NHS hospitals? Is current guidance actually being followed?	н	
		To save time and resources (for both patients and health care professionals) is it possible to reduce the amount of blood products that are prescribed?	BH	
		What measures could prevent blood transfusions?	н	1
		Why do clinical staff seemingly ignore SOPs and improvise a procedure and end up getting it wrong - move to	В	1
		A7? Who should decide that a patient should receive a blood transfusion?	RBH	4
				J

- How can we improve retention of the first-time donor? A systematic review of the current iews. 2016;30(2):81-91.
- sing our precious blood donors? A systematic review from Pakistan. Haematologica. .PB2222
- text and role of communication in promoting adequate blood donation in sub-Saharan Africa: anguinis. 2015;109((Suppl. 1)):p128. Abstract P-142

Doree C, Yazer MH, Kaufman RM, et al. The impact of electronic decision support on view. Transfusion Medicine Reviews. 2015;29(1):14-23.

(For a	THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. Ill remaining questions in other categories please see later in this worksheet).	AGREED PRIORITY AT THE WORKSHOP	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has received a blood transfusion, B = Blood Donor, H = Health professional, NK = no details provided.	
			How decision to transfuse is made	R B H	
			How can health care professionals in general be better informed about alternatives to blood transfusion?	NK	
			How can we ensure that evidence based best practice regarding optimising pre-op haemoglobin is implemented	н	
			What factors are the most important to ward clinical staff (consultants & junior doctors) in deciding when to	Н	
			initiate blood transfusion How do we promote transfusion triggers and make doctors keep to it!	R B H	
			Should doctors have mandatory updates on blood transfusion, no matter what their seniority?	ВН	
			What factors influence the usage demand for donated blood products & can waste be reduced?	В	
			What should determine the need to transfuse?	н	
			When is blood transfusion absolutely indicated and when can it be avoided	RBH	
			When should I transfuse patients?	Н	
			Would it be beneficial to transfuse blood based on an ideal body weight rather than everyone receiving a	н	
A2	How on the western of dones blood be minimized?		similar amount? How can we reduce the lag time between request and availability of blood for transfusion?	н	No up-to-date SR evidence
AZ	How can the wastage of donor blood be minimised?	3	What is the basis for the 30 minute rule?	вн	No up-to-date SK evidence
			How ethical is it to collect blood that will be destroyed e.g. from AB+ve females	ВН	
			How can we reduce blood wastage by improving transport / administration whilst ensuring ready access to	Н	
			blood when required How much blood donated is "wasted" by disposal?	В	
			How might this percentage (i.e. wastage/redundancy) be reduced?	В	
			Why are giving sets not flushed with 0.9% sodium chloride on completion of transfusion	ВН	
			Why is blood thrown out in the giving set?	Р	
			Can I be sure my donation will not be wasted?	ВН	
			Are too many donations rejected unnecessarily?	ВН	
			What happens to unused donations?	ВН	
			What happens to blood that is not used after donation?	РВН	
			Percentage of donations that are transfused	ВН	
			What percentage, if any, of all blood donated for transfusion gets wasted? Does all the blood donated at donor sessions get used?	P R B H	
			When a child needs blood ,why is a whole bag used .why is there so much wasted.	ВН	
			Is all collected blood used usefully or is there wastage?	RB	
			Is all the donated blood used	Н	
			What percentage of blood donations are found to be unusable because of contamination?	В	
			how do I know how my blood is being used?	R B	
			What percentage of donated blood gets used?	В	
			How many units have been wasted due to 30 minute rule violations? If this information is not captured, why not?	ВН	
			How much blood is wasted by the health services and we're is that most common	ВН	
			What percentage of blood is actually used per year?	R B	
			How many units are 'wasted' in hospitals (e.g. poor storage)?	ВН	
			How much blood/blood products is wasted by hospitals which have blood on standby for surgical procedures?	РН	
DtTr12a	What is the optimal type and combination of blood products [red blood cells,	4	Are major haemorrhage protocols optimised for different age groups e.g. elderly?	Н	1. Yu F, Zhong T, Wu G. [Efficacy of high
	platelets, frozen plasma] for adult patients* with a major haemorrhage that		How can we clarify and improve the guidance on massive haemorrhage?	ВH	requiring massive blood transfusion: a 2017;37(-1):119-23.
	requires a transfusion of 4 or more units of blood]? * Aged over 16 years old.		In major haemorrhage settings for example trauma, is there any information how older or younger patients respond to generic major haemorrhage protocols?	н	2. Wikkelso A, Wetterslev J, Moller AM
			Improved protocols for massive haemorrhages in the critical care unit	BH	monitor haemostatic treatment in blee
			Wider knowledge of best way to manage brisk haemorrhage i.e. ratio of blood:FFP:platelets	P R B H	Anaesthesia. 2017. Apr;72(4):519-531. 3. Cannon JW, Khan MA, Raja AS, Cohe
			What is the ideal blood:ffp:platelets ratio during major haemorrhage in the operating theatre	ВН	traumatic hemorrhage: a practice man
			what is the best ratio of blood products during massive haemorrhage	н	Trauma and Acute Care Surgery. 2017;8 4. Fahrendorff M, Oliveri RS, Johansson
			What are the ideal ratios of a major haemorrhage policy e.g. RBC:FFP: platelets: cryo. Which strategies &	н	blood products - a systematic review ar
			techniques result in improved patient outcomes? In major trauma bleeding, there is evidence of early platelet dysfunction and the PROPPR study gave upfront	н	2017;25(-1):39 5. Deppe AC, Weber C, Zimmermann J,
			platelets, however not all trauma units have readily available stocks of platelets. Are there alternatives to		thromboelastography/thromboelastom
			platelet transfusion e.g. fibrinogen replacement that might compensate for this?		The Journal of Surgical Research. 2016;

high versus low plasma: red blood cell ratio resuscitation in patients with severe trauma : a meta-analysis]. Nan Fang Yi Ke Da Xue Xue Bao = Journal of Southern Medical University.

AM, Afshari A. Thromboelastography (TEG) or rotational thromboelastometry (ROTEM) to bleeding patients: a systematic review with meta-analysis and trial sequential analysis. 531. doi: 10.1111/anae.13765

Cohen MJ, Como JJ, Cotton BA, et al. Damage control resuscitation in patients with severe management guideline from the Eastern Association for the Surgery of Trauma. The Journal of 017;82(-3):605-17.

sson PI. The use of viscoelastic haemostatic assays in goal-directing treatment with allogeneic w and meta-analysis. Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine.

nn J, Kuhn EW, Slottosch I, Liakopoulos OJ, et al. Point-of-care

stometry-based coagulation management in cardiac surgery: a meta-analysis of 8332 patients. 016;203(-2):424-33.

AM. Afshari A. Thromboelastography (TEG) or thromboelastometry (ROTEM) to monitor

(For a	THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. I remaining questions in other categories please see later in this worksheet).	AGREED PRIORITY AT THE WORKSHOP	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has received a blood transfusion, B = Blood Donor, H = Health professional, NK = no details provided.	Previous Related & up-to-date Res
			how should we arrange blood product transfusion in major haemorrhage, and can near-patient testing help?	н	haemostatic treatment versus usual ca
			What is the optimal 'formulation' of blood (i.e., combination of packed red blood cells, platelets, fresh frozen plasma, whole blood) for patients prescribed a massive transfusion (e.g., more than four units of blood)?	RH	8):CD007871-CD. 7. Jones AR, Frazier SK. Association of I transfusion: a systematic review. Advar
			Role of whole blood in managing trauma haemorrhage	ВН	8. Jiang LB, Zhang M, Jiang SY, Ma YF. E
			Can more be done to promote better blood loss management?	NK	analysis and trial sequential analysis. So
			should we have whole blood available for major haemorrhage	Н	 Boutin A, Chasse M, Shemilt M, Lauz brain injury: a systematic review and m
			Why haven't we adopted the military usage of using blood products: not RBC but more platelets & WC?	ВН	10. McQuilten ZK, Crighton G, Engelbre
			How much thought is put into the option of using alternatives to blood in an emergency situation?	NK	bleeding requiring massive transfusion 11. Balvers K, Wirtz MR, van Dieren S, C
			Is blood transfusion still the best treatment for sudden blood loss due to cardiac cath lab complications?	н	associated multiple organ failure in sev
			How can over transfusion be prevented for patients with traumatic haemorrhage?	R B H	
			Is blood transfusion still the best treatment for sudden haemorrhage due to cardiac cath lab complications?	н	
			What are ideal products for trauma haemorrhage Rhesus in the prehospital environment? Saline, FFP alone, RBC & FFP or RBC & lyoplas or fibrinogen concentrate/ cryo?	н	
DtTr3	How can patients, relatives and carers be empowered to have greater say about	5	Could alternatives be further explained to patients prior to transfusion route?	ВН	1. NICE Guideline Recommendations:
	their choices in relation to blood transfusion and it's alternatives?		How can the world of medicine become more open minded with patients who do no desire a blood	н	Patient information 43. Provide verbal and written informat
			transfusion as treatment Should people about to undergo transfusion be counselled about their future ability to donate blood?	РВН	carers (as appropriate), explaining: • the reason for the transfusion
			How do we improve public perception that having a blood transfusion is not the "answer to everything"	н	 the risks and benefits the transfusion process
			How could we empower patients to improve anaemia?	RH	 any transfusion needs specific to ther
			Once a decision is made, why are Jehovah's Witnesses put under pressure to change their minds?	NK	 any alternatives that are available, an that they are no longer eligible to dor
			Why are there so many different blood products. How do I know which is right for me?	R B H	 that they are encouraged to ask ques
			Why was I put under pressure by hospital staff to change my decision to avoid blood and its derivatives?	NK	44. Document discussions in the patien
			Where blood products are refused are there still clinicians who consider this an affront to their superior knowledge?	NK	 45. Provide the patient and their GP wi the details of any transfusions they hi the reasons for the transfusion
			Is it automatically assumed that the traditional use of blood products is the only option, or is it standard	NK	any adverse events
			practise to advise patients of alternatives? Transfusion Avoidance	R B H	 that they are no longer eligible to dor 46. For guidance on communication an
			Do I really need a transfusion?	R B H	services
			How can I be sure that my wishes regarding the avoidance of blood transfusion will be respected?	NK	
			How can patients be empowered to ensure they get only appropriate transfusion?	н	
			How much information is given to patients so that they can make an individual choice whether to have blood or alternatives?	NK	
			To avoid a blood transfusion how can I build up my red blood cell count	В	
			How could we empower patients to avoid unnecessary transfusion?	RH	
			We need more of an awareness of the alternatives to blood transfusion. It should not always be the first thing thought of when a patient presents with a low Hb. Lets think about optimising with oral iron/IV iron/ Health Promotion on diet and be strict on a cut off point if the patient is asymptomatic. Are all patients being told that they cannot be a blood donor once they have become a receiver? Perhaps this may give cause for the patient to think further about receiving in cases where they are asymptomatic and other forms are optimisation may be as effective for them?	н	
			What information is available to tell people if the alternatives to a blood transfusion?	R B H	
DtTr6	How can patients with anaemia be identified and treated in a timely manner so		Are patients being screened and treated for anaemia before surgery to prevent the need for blood	Н	1. Potter LJ, Doleman B, Moppett IK. A
	that the need for transfusion is avoided?	6	transfusion? How to promote early identification of patients who are anaemic who are going to need a transfusion and	R B H	fractured hips. Anaesthesia. 2015;70(4) 2. Ng O, Keeler BD, Mishra A, Simpson
			treat it to avoid them needing a transfusion Does a transfusion to correct anaemia lead to the true cause of the anaemia beingh missed?	н	Systematic Reviews. 2015(-12):CD0115
			How do Blood Transfusion experts penetrate into the Commissioners and GPs in order to fully employ Patient	ВН	 Hogan M, Klein AA, Richards T. The in surgery. European Journal of Cardio-Th
			Blood Management which I believe should start in the community? How important is anaemia during pregnancy, what are the clinical consequences, how should oral iron be	BRH	4. Chan AW, de Gara CJ. An evidence-b
			used (including prevention)?		of the Royal College of Surgeons of Eng 5. Borstlap WA, Stellingwerf ME, Mooll
			How should anaemia be managed before elective surgery to reduce the risk of transfusion	PBRH	anaemia in patients with colorectal car
			How can GPs be more engaged in the pre-operative process to ensure that blood counts are optimised before admission to hospital?	NK	Other Types:
			Are hospital patients more or less likely to develop delirium with a lower haemoglobin	ВН	1. Bonovas S, Fiorino G, Allocca M, Lytr

care in adults or children with bleeding. The Cochrane Database of Systematic Reviews. 2016(-

of blood component ratio with clinical outcomes in patients after trauma and massive vanced Emergency Nursing Journal. 2016;38(-2):157-68.

E. Early goal-directed resuscitation for patients with severe sepsis and septic shock: a meta-. Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine. 2016;24(-1):23-. auzier F, Moore L, Zarychanski R, et al. Red blood cell transfusion in patients with traumatic d meta-analysis. Transfusion Medicine Reviews. 2016;30(-1):15-24.

precht S, Gotmaker R, Brunskill SJ, Murphy MF, et al. Transfusion interventions in critical on: a systematic review. Transfusion Medicine Reviews. 2015;29(-2):127-37.

S, Goslings JC, Juffermans NP. Risk factors for trauma-induced coagulopathy and transfusionseverely injured trauma patients. Frontiers in Medicine. 2015.

nation to patients who may have or who have had a transfusion, and their family members or

- and how they might reduce their need for a transfusion
- donate blood
- uestions.
- ient's notes.
- with copies of the discharge summary or other written communication that explains:
- y had

donate blood.

and patient-centred care for adults, see the NICE guideline on patient experience in adult NHS

A systematic review of pre-operative anaemia and blood transfusion in patients with 0(4):483-500.

on A, Neal K, Brookes MJ, et al. Iron therapy for pre-operative anaemia. Cochrane Database of L1588-CD.

e impact of anaemia and intravenous iron replacement therapy on outcomes in cardiac . Thoracic Surgery. 2015;47(2):218-26.

e-based approach to red blood cell transfusions in asymptomatically anaemic patients. Annals England. 2015;97(-8):556-62.

bolla Z, Musters GD, Buskens CJ, Tanis PJ, et al. Iron therapy for the treatment of preoperative carcinoma: a systematic review. Colorectal Disease. 2015;17(-12):1044-54.

ytras T, Tsantes A, Peyrin-Biroulet L, et al. Intravenous versus oral iron for the treatment of

(For al	THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. I remaining questions in other categories please see later in this worksheet).	AGREED PRIORITY AT THE WORKSHOP	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has received a blood transfusion, B = Blood Donor, H = Health professional, NK = no details provided.	Previous Related & up-to-date Res
			Why do general doctors in hospital and GP surgeries understand so few facts about donor blood and the treatment of anaemia?	RBH	anemia in inflammatory bowel disease 2):e2308-e. 2. Tay HS, Soiza RL. Systematic review a elderly people? Drugs & Aging. 2015;3:
DTtR18a&b	Ab What are the best drug alternatives to blood transfusion to reduce and prevent bleeding? Antifibrinolytic amino acids for upper gastrointestinal bleeding in people with acute or chronic liver disease. Implications for research: This updated Cochrane review has identified the need for well-designed, adequately powered randomised clinical trials to assess the benefits and harms of antifibrinolytic amino acids in people with upper gastrointestinal bleeding due to acute or chronic liver disease. According to Brown 2006, questions such as the following could be answered using randomised clinical trials. What regimen is most effective: single or combined? When can intravenous antifibrinolytic regimens be switched to oral administration? The randomised clinical trials should be planned according to SPIRIT (Standard Protocol Items: Recommendations for Interventional Trials) statement (Chan 2013a; Chan 2013b). The trials should be reported according to the CONSORT (CONsolidated Standards Of Reporting Trials) statement (Moher 2010), which helps in improving the quality of reporting othereis, and arms in clinical research (Ioannidis 2004; Moher 2010). Trials should include participant-centred outcomes such as mortality, re-bleeding, and serious and non-serious adverse events as recommended by the Patient-Centered Outcomes Research Institute (P-CORI) statement (Selby 2013; Frank 2014; Selby 2014).		acid following primary total hip arthrop 2. Xie J, Hu Q, Huang Q, Ma J, Lei Y, Pei arthroplasty: an updated meta-analysis 3. Wu Y, Yang T, Zeng Y, Si H, Li C, Shen simultaneous bilateral total knee arthro an International Journal in Haemostasi 4. Watterson C, Beacher N. Preventing Dentistry. 2017;18(-1):28-9. 5. Topsoee MF, Settnes A, Ottesen B, B acid treatment in major benign uterine International Federation of Gynaecolog 6. Takagi H, Ando T, Umemoto T. Seizu non-randomized studies. The Journal o 7. Mi B, Liu G, Zhou W, Lv H, Liu Y, Zhal arthroplasty: a meta-analysis of randor		
			Tranexamic acid for preventing postpartum haemorrhage. Implications for research: Further research is needed to examine the effects of TA on maternal mortality, severe morbidity and thromboembolic events. Studies assessing TA for preventing PPH in high-risk women with placenta praevia, placental abruption, uterine rupture and other conditions causing PPH are important. Comparison of different doses of TA as well as prophylactic use of TA without prophylactic uterotonics is necessary, using large, well-designed trials.	Question not derived from the survey but from another source.	 Mi B, Liu G, Lv H, Liu Y, Zha K, Wu Q, intravenous or intraarticular tranexami Journal of Orthopaedic Surgery and Re 9. Meena S, Benazzo F, Dwivedi S, Ghia
			Antifibrinolytic drugs for acute traumatic injury. Implications for research: The knowledge that TXA safely reduces the risk of death from traumatic bleeding raises the possibility that it might also be effective in other situations where bleeding can be life threatening or disabling and further research is warranted to explore this potential. Randomised trials involving patients with isolated traumatic brain injury (TBI) that assess both mortality and disability outcomes are required before TXA can be recommended for use in these patients. The ongoing NCT01402882 trial with a planned sample size of 10,000 patients with TBI and the planned trial of prehospital TXA in TBI (NCT01990768), will contribute to resolving the uncertainty about the effects of TXA in this group.	Question not derived from the survey but from another source.	Orthopaedic Surgery (Hong Kong).201: 10. Liu X, Liu J, Sun G. A comparison of tranexamic acid alone for blood loss re (London, England). 2017. May;41:34-4 11. Li JF, Li H, Zhao H, Wang J, Liu S, So primary total knee and hip arthroplast Research. 2017;12(-1):22. 12. Li C, Gong Y, Dong L, Xie B, Dai Z. Is arguenting A exchange in an and a second se
			Antifibrinolytics (lysine analogues) for the prevention of bleeding in people with haematological disorders. Implications for research: The only evidence available is for adults with acute leukaemia receiving chemotherapy. We await the results of the two ongoing trials that are expected to recruit 916 participants in total by 2020. These studies are recruiting adults with a mixture of haematological malignancies. There is currently no evidence for the use of antifibrinolytics in children with haematological disorders who are thrombocytopenic and usually require treatment with platelet transfusions and there are no ongoing studies that include children.	Question not derived from the survey but from another source.	prevention? A systematic review and n 13. Chen TP, Chen YM, Jiao JB, Wang Y intravenous tranexamic acid in primary Orthopaedic Surgery and Research. 20 14. Cannon JW, Khan MA, Raja AS, Coh traumatic hemorrhage: a practice man Trauma and Acute Care Surgery. 2017; 15. Zhang XQ, Ni J, Ge WH. Combined i
			IS IT TIME for a risk-adjusted, retrospective trial comparing "bloodless" and transfusion strategies in the UK?	NK	arthroplasty: a meta-analysis of rando 16. Zhang P, Liang Y, Chen P, Fang Y, He
			Trials at Johns Hopkins, Baltimore, Englewood,NJ in USA and in Brussels,Belgium indicate that there are similar or better outcomes with equivalent lower costs in the bloodless care group. If this is correct research should be undertaken in the UK	NK	meta-analysis. Medicine. 2016;95(-50) 17. Yuan ZF, Yin H, Ma WP, Xing DL. The loss and transfusion rate in total knee a
			Are drugs that are known to reduce blood loss and transfusion such as aprotinin and transamic acid being used appropriately in all suitable patients.	Н	18. Yuan QM, Zhao ZH, Xu BS. Efficacy and meta-analysis. European Spine Jou
			Novel haemostatic agents either given topically or intravenously to arrest haemorrhage Optimisation of surgical patients using alternative techniques to avoid blood transfusion - in particular safe	B H B H	19. Winter SF, Santaguida C, Wong J, F review. Global Spine Journal. 2016;6(-3
			low levels of Hb Can drugs, such as desmopressin or tranexamic acid, be used instead of fresh frozen plasmaor platelets to prevent bleeding for people undergoing invasive procedures?	н	20. Weng K, Zhang X, Bi Q, Zhao C. The analysis. Medicine. 2016;95(-39):e4960
			Effectiveness of tranexamic acid in reducing blood loss during cytoreductive surgery for advanced ovarian cancer. Implications for research: There is a need for an adequately sized, placebo-controlled trial with a well defined protocol for blood transfusion and a protocol for evaluating tranexamic acid-related adverse events to shed more light on the effectiveness of tranexamic acid given perioperatively to reduce blood loss during cytoreductive surgery for advanced ovarian cancer.	Question not derived from the survey but from another source.	21. Wang S, Gao X, An Y. Topical versus controlled trials. International Orthopa 22. Sun X, Dong Q, Zhang YG. Intravenc meta-analysis. International Journal of 23. Simonazzi G, Bisulli M, Saccone G, I cesarean delivery: a systematic review
			What are the risks and benefits of tranexamic acid when trying to avoid blood transfusion for hip fracture surgery?	RBH	Scandinavica. 2016;95(-1):28-37. 24. Shin YS, Yoon JR, Lee HN, Park SH, I

se: a systematic review and meta-analysis of randomized controlled trials. Medicine. 2016;95(-

w and meta-analysis: what is the evidence for oral iron supplementation in treating anaemia in ;32(2):149-58.

- He J, Wang J. Combined application versus topical and intravenous application of tranexamic roplasty: a meta-analysis. Bmc Musculoskeletal Disorders. 2017;18(-1):90-.
- Pei F. Comparison of intravenous versus topical tranexamic acid in primary total hip and knee ysis. Thrombosis Research. 2017;153:28-36.
- en B. Tranexamic acid reduces blood loss and transfusion requirements in primary hroplasty: a meta-analysis of randomized controlled trials. Blood Coagulation & Fibrinolysis : asis and Thrombosis. 2017.
- ng perioperative bleeding in patients with inherited bleeding disorders. Evidence-Based
- B, Bergholt T. A systematic review and meta-analysis of the effect of prophylactic tranexamic ine surgery. International Journal of Gynaecology and Obstetrics: the Official Organ of the plogy and Obstetrics. 2017;136(-2):120-7.
- izures associated with tranexamic acid for cardiac surgery: a meta-analysis of randomized and Il of Cardiovascular Surgery. 2017 Aug;58(4):633-641
- na K, et al. Intra-articular versus intravenous tranexamic acid application in total knee domized controlled trials. Archives of Orthopaedic and Trauma Surgery. 2017 Jul;137(7):997-
- I Q, et al. Is combined use of intravenous and intraarticular tranexamic acid superior to tamic acid alone in total knee arthroplasty? A meta-analysis of randomized controlled trials. Research. 2017 Apr 18;12(1):61. doi: 10.1186/s13018-017-0559-2.
- shiara M. Topical versus intravenous tranexamic acid in total knee arthroplasty. Journal of 017 Jan;25(1):2309499016684300. doi: 10.1177/2309499016684300.
- of combined intravenous and topical administration of tranexamic acid with intravenous reduction after total hip arthroplasty: a meta-analysis. International Journal of Surgery -43. doi: 10.1016/j.ijsu.2017.03.031. Epub 2017 Mar 21.
- Song Y, et al. Combined use of intravenous and topical versus intravenous tranexamic acid in sty: a meta-analysis of randomised controlled trials. Journal of Orthopaedic Surgery and
- Is prophylactic tranexamic acid administration effective and safe for postpartum hemorrhage d meta-analysis. Medicine. 2017;96(-1):e5653-e.
- g YF, Qian LG, Guo Z, et al. Comparison of the effectiveness and safety of topical versus ary total knee arthroplasty: a meta-analysis of randomized controlled trials. Journal of 2017;12(1):11.
- Cohen MJ, Como JJ, Cotton BA, et al. Damage control resuscitation in patients with severe nanagement guideline from the Eastern Association for the Surgery of Trauma. The Journal of 17;82(3):605-17.
- ed use of intravenous and topical versus intravenous tranexamic acid in primary total joint ndomized controlled trials. International Journal of Surgery (London, England). 2016. /, He J, Wang J. Intravenous versus topical tranexamic acid in primary total hip replacement: a
- 50):e5573-e. The combined effect of administration of intravenous and topical tranexamic acid on blood
- ee arthroplasty: Combined tranexamic acid for TKA. Bone & Joint Research. 2016;5(-8):353-61. Icy and safety of tranexamic acid in reducing blood loss in scoliosis surgery: a systematic review Journal. 2016.
- , Fehlings MG. Systemic and topical use of tranexamic acid in spinal surgery: a systematic i(-3):284-95.
- he effectiveness and safety of tranexamic acid in bilateral total knee arthroplasty: A meta-960-e.
- sus intravenous tranexamic acid in total knee arthroplasty: a meta-analysis of randomized opeedics. 2016.
- enous versus topical tranexamic acid in primary total hip replacement: a systemic review and of Surgery (London, England). 2016.
- G, Moro E, Marshall A, Berghella V. Tranexamic acid for preventing postpartum blood loss after ew and meta-analysis of randomized controlled trials. Acta Obstetricia et Gynecologica

I, Lee DH. Intravenous versus topical tranexamic acid administration in primary total knee

THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. (For all remaining questions in other categories please see later in this worksheet).	AGREED PRIORITY AT THE WORKSHOP	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has received a blood transfusion, B = Blood Donor, H = Health professional, NK = no details provided.	Previous Related & up-to-date Rese
		Fibrin sealants for the prevention of postoperative pancreatic fistula following pancreatic surgery. Implications for research: Further trials with low risk of bias and sufficient sample size are necessary to assess various fibrin sealants (e.g. glue, patch) for preventing postoperative pancreatic fistula. Future trials should report the rate and the grade of the postoperative pancreatic fistula according to the definition of the International Study Group on Pancreatic Fistula (Bassi 2005). Future randomized trials should use adequate methods of randomization and allocation concealment. Future trials need to employ blinding of participants and outcome assessors.	Question not derived from the survey but from another source.	arthroplasty: a meta-analysis. Knee Surg 25. Shang J, Wang H, Zheng B, Rui M, Wa primary total knee and hip arthroplasty: England). 2016. 26. Ray S, Ray A. Non-surgical interventii disorders. The Cochrane Database of Sys 27. Prutsky G, Domecq JP, Salazar CA, Ac Database of Systematic Reviews. 2016(- 28. Olsen JJ, Skov J, Ingerslev J, Thorn JJ, meta-analysis of randomized controlled Association of Oral and Maxillofacial Sur 29. Murphy GR, Glass GE, Jain A. The eff of Craniofacial Surgery. 2016;27(-2):374 30. McNicol ED, Tzortzopoulou A, Schum in children. The Cochrane Database of Sy 31. Lin Z, Xiaoyi Z. Tranexamic acid-assoo 32. Lin C, Qi Y, Jie L, Li HB, Zhao XC, Qin L
		The role and optimal use of alternatives like desmopressin/tranexamic acid to cover invasive procedures in	ВН	intravenous tranexamic acid alone and c
		sick patients What is the evidence for systematic targeted preoperative haemoglobin optimisation reducing the rate of	н	Medicine. 2016;95(-51):e5344-e. 33. Li J, Zhang Z, Chen J. Comparison of e
		preoperative blood transfusion Effectiveness of various methods of improving Hb preoperatively.	н	meta-analysis. Medicine. 2016;95(-36):e 34. Li G, Sun TW, Luo G, Zhang C. Efficac
		What are the best methods of preventing/ reducing haemorrhage during myomectomy?	ВН	surgery: a meta-analysis. European Spin
DtTr15 How can the blood transfusion process be delivered more safely in hospitals?	8	Antifibrinolytic agents for reducing blood loss in scoliosis surgery in children. Implications for research: Evidence demonstrating reduced blood loss and less requirement for transfusion is based on very limited numbers of participants and is susceptible to publication bias. Therefore, larger studies are required to increase the robustness of our findings. Future studies should assess head-to-head comparisons of different antifibrinolytic drugs to identify any differences in effectiveness or safety. Studies should also enrol more patients with secondary scoliosis and should report results separately for this population. Optimal dosing regimens have not been established; studies employing different regimens for the same agent will help to clarify this question. Although challenging, we also recommend that the long-term safety of antifibrinolytic drugs in children should be evaluated in view of safety concerns with some antifibrinolytic drugs when used in adults. How can we educate healthcare professionals to adopt best practice in RBC transfusion	Question not derived from the survey but from another source. B H	Deformity Society, and the European Sec 35. Kietpeerakool C, Supoken A, Laopaib cytoreductive surgery for advanced ovar 36. Ker K, Shakur H, Roberts I. Does tran- controlled trials. Bjog : an International J 37. Kamhieh Y, Fox H. Tranexamic acid ir Journal of Netherlands Society for Oto-R 38. Jiang X, Ma XL, Ma JX. Efficiency and systematic review and meta-analysis. Or 39. Jiang M, Chen P, Gao Q. Systematic r Collular Physiology and Biochamictor - In No available up-to-date evience.
		Is the training given to junior doctors on transfusion enough?	ВН	
		JUNIOR DOCTORS. How consistent is their training in Transfusion Avoidance June 2015 and use of Alternatives?	Jehovah's Witness	
		Nursing and medical team to have a better and in depth understanding of the side effects of blood transfusions and be aware of common haematology medical problems which can interfere with blood donation/transfusion.	ВН	
		Shouldn't NMS put more money in to researching and training surgeons in blood conservation techniques?	NK	
		Why can't medical staff give advice on non-blood products?	NK	
		Why is there such a disconnect between knowledge and practice regarding transfusion requirements in clinical medicine? i.e. Are medical students taught the indications and evidence for transfusion?	н	
		How do we improve the sharing of knowledge in transfusion science to juniors staff Why is blood transfusion training not a nationally required core mandatory training subject	ВН	
		How do we safeguard unnecessary transfusion?	н	•
		Why can't experienced nursing staff prescribe blood?	R B H	1
		Do you reassess after giving each unit?	н]
		Is ever a 1 or 2 pint transfusion valid since this amount can be donated by an individual?	NK	
D3 What medical conditions make it unsafe for a person to be a blood donor?	9	Are the donor exclusion criteria truly evidence based? When is safe to donate blood after contacting hepatitis A?	R B P B	1. Pasricha S, Speedy J, Low M. What do consequences of donor iron deficiency?
		Why do I need to wait after travelling abroad if I have not been unwell or vaccinated?	ВН	2. Hoogerwerf MD, Veldhuizen IJ, De Kou physiological stress reactions to blood de
		Can a person with HIV be able to donate blood?	PH	3.Estcourt LJ, Malouf R, Hopewell S, Trive
		Why can't people with diabetes give blood - are there real evidence based reasons for the ban?	В	of bleeding. Cochrane Database of Syste 10.1002/14651858.CD009072.pub3.
		Is it always necessary to turn blood donors away for various reasons	P B	4. Chasse M, McIntyre L, English SW, Tin
		Why can't I give blood anymore as I'm on anti-hypertensive drugs?	R B H	outcomes: a systematic review and meta 5. Chasse M, Tinmouth AT, English SW, N
		Can I donate blood if I have asthma?	н	outcomes: a systematic review and meta
		What are the criteria for being able to donate blood?	RH	 De Buck E, Dieltjens T, Compernolle V, transmissible infections in male blood do
		Donor Selection Can I give blood after having had meningococcal septicaemia?	R B H B	2015;10(4):e0122523-e.
		can i give biood after naving nau meningboottal septitaellila:	B	7. Webster J, Bell-Syer SE, Foxlee R. Skin

urgery, Sports Traumatology, Arthroscopy : Official Journal of the Esska. 2016. Wang Y. Combined intravenous and topical tranexamic acid versus intravenous use alone in sty: a meta-analysis of randomized controlled trials. International Journal of Surgery (London,

entions for treating heavy menstrual bleeding (menorrhagia) in women with bleeding Systematic Reviews. 2016(-11):CD010338-CD.

, Accinelli R. Antifibrinolytic therapy to reduce haemoptysis from any cause. The Cochrane .6(-11):CD008711-CD.

n JJ, Pinholt EM. Prevention of bleeding in orthognathic surgery - a systematic review and lled trials. Journal of Oral and Maxillofacial Surgery : Official Journal of the American Surgeons. 2016;74(-1):139-50.

e efficacy and safety of tranexamic acid in cranio-maxillofacial and plastic surgery. The Journal 374-9.

umann R, Carr DB, Kalra A. Antifibrinolytic agents for reducing blood loss in scoliosis surgery f Systematic Reviews. 2016(-9):CD006883-CD.

ssociated seizures: a meta-analysis. Seizure. 2016;36:70-3.

Qin L, et al. Is combined topical with intravenous tranexamic acid superior than topical, nd control groups for blood loss controlling after total knee arthroplasty: a meta-analysis.

of efficacy and safety of topical versus intravenous tranexamic acid in total hip arthroplasty: a 5):e4689-e.

cacy of antifibrinolytic agents on surgical bleeding and transfusion requirements in spine pine Journal : Official Publication of the European Spine Society, the European Spinal Section of the Cervical Spine Research Society. 2016.

paiboon M, Lumbiganon P. Effectiveness of tranexamic acid in reducing blood loss during ovarian cancer. The Cochrane Database of Systematic Reviews. 2016(-1):CD011732-CD. ranexamic acid prevent postpartum haemorrhage? A systematic review of randomised nal Journal of Obstetrics and Gynaecology. 2016.

id in epistaxis: a systematic review. Clinical Otolaryngology : Official Journal of Ent-Uk ; Official to-Rhino-Laryngology & Cervico-Facial Surgery. 2016.

and safety of intravenous tranexamic acid in simultaneous bilateral total knee arthroplasty: a 5. Orthopaedic Surgery. 2016;8(-3):285-93.

tic review and network meta-analysis of upper gastrointestinal hemorrhage interventions.

do systematic reviews of iron supplementation in women tell us about the functional cy? Vox Sanguinis. 2015;109((Suppl. 1)):58-.

Kort WL, Frings-Dresen MH, Sluiter JK. Factors associated with psychological and d donation: a systematic review of the literature. Blood Transfusion. 2015;13(-3):354-62. Trivella M, Doree C, Stanworth SJ, Murphy MF. Pathogen-reduced platelets for the preventior ystematic Reviews 2017, Issue 7. Art. No.: CD009072. DOI:

Tinmouth A, Knoll G, Wolfe D, et al. Effect of blood donor characteristics on transfusion neta-analysis. Transfusion Medicine Reviews. 2016.

V, McIntyre L, Knoll G, Wolfe D, et al. Effect of blood donor characteristics on transfusion neta-analysis. Transfusion. 2015;55((Suppl. 3)):123A-A.

e V, Vandekerckhove P. Is having sex with other men a risk factor for transfusion-

donors in Western countries? A systematic review. PLoS ONE [Electronic Resource].

kin preparation with alcohol versus alcohol followed by any antiseptic for preventing

(For a	THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. I remaining questions in other categories please see later in this worksheet).	AGREED PRIORITY AT THE WORKSHOP	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has received a blood transfusion, B = Blood Donor, H = Health professional, NK = no details provided.	Previous Related & up-to-date Res
			It is not clear on the blood donation that first time donors of 17 or 18 years old need to have eaten within the 4 hours prior to donation. It just states eaten and drunk that day. Does it really matter if they have not eaten within 4 hours - not everyone eats that regularly	ВН	bacteraemia or contamination of blood
			How to insure donors and their health	R B H	
			I have ALL, therefore I have been told I can't give blood any more. I suspect I had blood cancer for a while before I was told by my GP. Does the service test donations for blood cancer before giving blood to a recipient?	РВ	•
			I have a blood cancer, how would it be picked up if I tried to donate blood?	R B	1
			Can a person who suffers with Chronic Lymphatic leukaemia donate blood if that patients HB is high enough?	NK	
			I assume that now I am diagnosed with a blood cancer I would not be able to give blood!!	В	-
			Is the blood drop iron level test a good indicator of ability to donate?	В	
			Can any use be made of blood components (other than abnormal cells) if donated by MPN patients	Р	
			For someone who has not participated in the donation of blood, is there any qualitative aspect to the pre- screening questions?	NK	
			How are donors screened? Why is it getting harder to meet the criteria to give blood, as it seems to change every time I go?	NK	
					-
			What if someone lies on their medical form? Why are patients having had illegal (? Should this be illeal) conduit surgery that did not receive a transfusion	R B H B	
			during surgery unable to ever give blood in the future?		-
			What precautions should be taken and the blood tests to be carried out? Why exclude ALL females from plasma donation regardless of history of previous (possible) pregnancies?	R H R B H	-
			Assumption that HLA/HPA antibodies present in all females.		
			I'm asthmatic, so if there is a connection to blood donation and asthma I'd be interested.	В	
			What medications stop you from donating blood = make a single question What can be done to safely relax existing rules around donation, for people who want to donate but are	РН	
			exempt i.e. with individual consultant permission , or further screening?		-
			After a critical illness, can I safely donate again? Does the general fitness of the donor have any impact on the quality of blood donated? If so, would it/should	P B NK	
			it be part of the collection strategy to target sections of society who maintain a healthier life-style e.g. Health- centres and gymnasiums etc?		
D8			Is it good enough to rely on people's honesty about their health? Need to raise awareness of what blood donations are used for	R B P	1. Bagot KL, Murray AL, Masser BM. Ho
08	What are the most effective ways to educate the general public about the process and purpose of blood donation?	5 10	How can we improve the understanding of the general public for transfusion	РВН	evidence. Transfusion Medicine Review
			To persuade new donors, why not illustrate, say by video maybe speeded up, the immediate improvements	R B	 Memon A, Moiz B. Why are we losin 2016;101((s1)):P877- ABSTRACT NO.PB
			transfusions bring How can social media improve the knowledge of transfusion and numbers for donation	н	3. Appiah BA, Bates BA. Cultural contex
			If it doesn't already feature; could blood transfusion and collection be added to the national curriculum and	NK	a systematic literature review. Vox San
			feature in the PSHE course? Why do you not go into schools explaining the importance of blood donation	R B	-
			Why is the public not educated more about giving blood.	РВН	
			Do the general public know about the process of blood transfusion from donation to a patient receiving	BH	-
			blood Donor Recruitment - Is there potential for there to be a national campaign (including all four devolved	ВН	
			countries) to recruit more donors?		-
			How long it takes? How do I give bloo0d transfusion	B	
			Why does it appear that you seem reluctant to reward those donors of large numbers of donations	ВН	
			nowadays? Cutbacks?		
			Why is the profile of donation days in an area not better flagged ? Do you think being a blood donor could be mandated for all 20-40 year olds	В Н Р В Н	
			Should blood donation be made compulsory for healthy adults?	н	{
			Do you approach businesses asking them to send a donation registration pack with their recruitment process?	R B	
			Why don't you raise the profile of blood donation? National campaign; blood donor day; blood donation featuring in a soap	В	
			Why isn't there any school/college visits about why giving blood is so important?	В	1
			More info on donating plasma, platelets etc	R B]
B&C 8	What is the psychological impact of blood transfusion on the patient?	11	Transfusion recipients feelings about the transfusion and its effect on them	PRBH	1. Brunskill SJ, Millette SL, Shokoohi A,

ood for transfusion. Cochrane Database of Systematic Reviews. 2015(2):CD007948-CD.

How can we improve retention of the first-time donor? A systematic review of the current riews. 2016;30(2):81-91.

sing our precious blood donors? A systematic review from Pakistan. Haematologica.

.PB2222

ntext and role of communication in promoting adequate blood donation in sub-Saharan Africa: Sanguinis. 2015;109((Suppl. 1)):p128. Abstract P-142

ii A, Pulford EC, Doree C, Murphy MF, et al. Red blood cell transfusion for people undergoing hip

(For al	THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. Il remaining questions in other categories please see later in this worksheet).	AGREED PRIORITY AT THE WORKSHOP	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has received a blood transfusion, B = Blood Donor, H = Health professional, NK = no details provided.	Previous Related & up-to-date Reso Tracture surgery. Cochrane Database of
			Regular long-term red blood cell transfusions for managing chronic chest complications in sickle cell disease. Implications for research: There is a need for RCTs looking at the effect of long-term transfusion therapy on pulmonary hypertension and chronic sickle lung disease. The most likely starting point for any series of trials will be the effect of transfusion on existing pulmonary hypertension. The effect of transfusion on disease incidence and mortality would require trials with longer-term follow-on, making them more costly and conceptually more difficult. The definition of chronic sickle lung disease include is not agreed by consensus and this is a stumbling block for further studies in this area. New trials could consider using a combination of objective and subjective outcome measures. Effectiveness could be measured objectively, for example, through echocardiogram or pulmonary function testing, or subjectively by measuring symptoms such as chest pain on a standardised scale. Such trials might provide useful information on the rate of deterioration in chronic chest complications. Given the chronic nature of the condition, trials could consider measuring pre- intervention 'severity' using an extended baseline 'steady state' period. It should be remembered that transfusions may reduce symptoms such as breathlessness by increasing the haemoglobin level rather than having any beneficial effect per se on the chronic chest complication. Future RCTs in this area should have clear protocols for the aims of transfusion (such as a target haemoglobin level, or target sickle haemoglobin percentage) and how the long-term transfusion programme is to be carried out, for example, by simple or exchange transfusion on the complications arising from long-term transfusion therapy in trial participants	Question not derived from the survey but from another source.	
			Blood transfusions for treating acute chest syndrome in people with sickle cell disease.Implications for research: We found only one very small randomised controlled trial; this is not enough to make any reliable conclusion to support the use of blood transfusion. This review highlights the need of further high quality research to provide reliable evidence for the effectiveness of these interventions for the relief of the symptoms of ACS in people with sickle cell disease.	Question not derived from the survey but from another source.	
			What is the psychological impact on a patient, of a blood transfusion?	R B H	
			Are the improvements in blood pressure after tansfusion related to simple mchanges in blood volumen or the nitric oxide scavenging effects of hamoglobin in stored blood increasing resting vascular tone and improving blood pressure by this mechanism? i.e. increasing after load as well as pre-load?	н	
			Does transfusion reduce length of stay after hip & knee replacement surgery?	BH	
			Did you feel better after your transfusion for anaemia? If so how quickly?	PRH	
			What are the early symptomatic benefits of blood transfusion after hip fracture?	RBH	
			Does receipt of a whole blood transfusion confer any cell mediated immunity on the recipient? Does the body attempt a rejection process after transfusion?	H Jehovah's Witness	
			What is the patient's perception on going through blood transfusion?	RH	
D6	How can donation sessions be organised to make them easier and more convenient for blood donors?	12	Many people express frustration at not being able to get an appointment to donate blood, there seems to be very limited donor sessions	н	 Bagot KL, Murray AL, Masser BM. Ho evidence. Transfusion Medicine Review
			Why can you not provide enough slots for donors.	BH	2. Fisher SA, Allen D, Doree C, Naylor J,
			Could you have more flexibility for donation sessions	н	a systematic review and meta-analysis. 3. Hoogerwerf MD, Veldhuizen IJ, De Ko
			Why do donors fall off the active list and how can we look after them better?	ВН	physiological stress reactions to blood
			Sometimes donor sessions are restricted to specific time slots. Can there be more scope to turn up without an appointment?	R B H	
			I am finding it increasingly difficult to donate as often as I would like, why is that.	R B	
			There seems to be less sessions at my donation centre, why?	R B	
			Why does donating blood affect people differently? (Some faint, some feel no effect etc)	В	
			Why do some people give blood easily and quickly compared to others?	В	
			Why can't local health services be supplemented to take blood donations? How can the decisions around limiting donor pool for platelets and plasma be best communicated to the	В	
			public?		
			Why does it sometimes seem difficult to arrange my next donation as soon as I would be eligible, especially as we have two donation venues in this city? At the one venue there are no future schedules available and the staff are unable to provide information about other local venues.	ВН	
			Would happily donate as often as possible but sessions at the location only twice a year	R	
			Why are some Donation Places so busy that it is hard to get an appointment?	В	
			Why do you not weigh patients who do not know their weight prior to blood donor sessions - instead of turning them away to come back another day	ВН	
			Why aren't there more places to donate platelets?	Р	
			Why isn't there more open drop in sessions for blood donors	ВН	
			From a donor point of view: when my letter comes through the door with my next appointment the session is already fully booked when I ring up to confirm, this puts me off organising an alternative date.	ВН	
			Why do you not put on donation sessions at hospitals?	н	

lesearch

e of Systematic Reviews. 2015.

How can we improve retention of the first-time donor? A systematic review of the current iews. 2016;30(2):81-91.

r J, Angelantonio ED, Roberts DJ. Interventions to reduce vasovagal reactions in blood donors: sis. Transfusion Medicine (Oxford, England). 2016;26(1):15-33.

e Kort WL, Frings-Dresen MH, Sluiter JK. Factors associated with psychological and

od donation: a systematic review of the literature. Blood Transfusion. 2015;13(3):354-62.

	THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. remaining questions in other categories please see later in this worksheet).	AGREED PRIORITY AT THE WORKSHOP	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has received a blood transfusion, B = Blood Donor, H = Health professional, NK = no details provided.	
			Last donor session booking slot is early evening and gives little time to get back from work to attend - whilst understanding the need for packing up time after - can there be later donor slots/evening donor sessions?	BRPH	
			Why don't NHSBT have blood donor sessions in hospitals? This would increase the number of donors hugely	BRPH	
			Why is there such variation in opportunities or places to donate between different areas of England?	В	
			Why not have more fixed places where donations can take place e.g. at hospitals?	В	
			Why aren't there more donation centres?	ВН	
			Why is the donation service hours so short and everyone stops at lunch and breaks	В	
			Why don't you get donation points at gap surgeries	В	
			Is the waiting time at donor sessions acceptable?	В	
			I would like to be a platelet donor but the location is not very accessible. Could there be more invested in this to have more very accessible.	В	
			to have more venues? Could a mobile facility be made available? Obviously cost is at the heart of that question.	В	
			Why are there so few platelet donation venues if it is so important?	В	4
			Why do you not work Saturdays and Sundays? people who work - would be easier to donate	В	1
			Why do donors fall off the active list and how can we look after them better?	ВН	1
			What is the donors experience when doing this specifically to donate to an individual.	н	1
			How can blood donors best be thanked and rewarded ?	н	
			How can the experience for blood donors be improved	ВН	
			Why do donors get upset if they cannot donate for any reason.	ВН	
			How can we improve the feedback on the fate of blood post transfusion	РВН	
			Have you considered thank you test to donors?	ВН	
			What can we do to improve your experience?	R B	
			Why don't you use skin analgesia prior to donation as I feel this may prevent donation	R B H B	
			Why does a service which relies on public goodwill fail perform so poorly in basic customer service at point of delivery?	В	
			Is it possible to inform the donor when there blood has been used?	R B	
			Why does it seem that by donating blood you are doing me a favour?	В	
			Could donors be given information while waiting on other forms of donation?	В	
			Why are blood donors so undervalued?	R B	
			Why do people not donate?	P B	
			Can the process of blood donation be made more efficient? How can we make blood donation easier for donors	вн	
			Is there a way of cutting down waiting times especially when attendees are getting cold/dehydrated?	PRBH	
			Process of donating blood, how to streamline service	вн	
			How can the appointment system be refined to ensure prompt donations?	ВН	
			Is the waiting time at donor sessions acceptable?	В	-
			Why do you make so many hurdles to people who want to give blood	В	
			How uncomfortable is it to donate and does this put people off coming again?	P B R H	1
			Would home self-testing of haemoglobin before attending blood donation sessions be acceptable, feasible,	В	1
			accurate, and save time and money? How well rolled out is the text message service notifying donors of usage?	н	
			What would the impact of paying donor expenses be?	РН	
			Is there a way to make the donation process simper/more efficient?	R B	4
DtTr21	Which patients groups would benefit most from artificial blood* products?	13	Trial of synthetic RBC substitutes vs PRC	н	No SR evidence available
	*Artifical blood ois a product made to act as a substitute for red blood cells wiothj		where is the development of artificial blood and blood products?	R B H	
	the sole purpose of transporting oxygen and carbon dioxide throughout the body.		Are there substances that can be used to avoid blood transfusion	R B H	1
			Is there research going on into artificial blood replacement? Not just ectoplasm but whole blood or RBC?	ВН	
			Has there been any successful research in the production of a laboratory manufactured blood replacement ?	ВН	
			Can other products replace blood?	н	
			What is the progress on the current research into manufactured red cells?	P R	
			What is the future for factory produced red cells?	ВН	1
			How accessible are blood transfusion alternatives?	NK	1

(For a	THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. I remaining questions in other categories please see later in this worksheet).	AGREED PRIORITY AT THE WORKSHOP	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has received a blood transfusion, B = Blood Donor, H = Health professional, NK = no details provided.	Previous Related & up-to-date Res
			How can alternatives to blood transfusions be made more freely available?	NK	
			How do we develop artificial blood products?	BH	
			Are there any synthetic alternatives so that one does not have to donate?	PBH	
			Do you see any promise of a safe artificial oxygen carrying agent to replace RBC transfusion soon?	Jehovah's Witness	
			Is there a likely hood of modified Haemoglobin products come into UK practice in the near future?	NK	
			Is there an alternative to human blood products	R B H	
			Why are we not investing more in blood substitutes?	Н	
			Are there government funded projects to promote bloodless alternatives?	NK	
			Will viable blood substitutes be available in the near future?	NK	
			Are non-blood oxygen carrying fluids a viable option?	Н	
			Can we use synthetic agents to carry oxygen in the blood until the body is able to manufacture its own red cells and therefore avoid the need for interhuman transfusion	н	
			Have you considered alternatives to blood ?	NK	
			With the advancement of science has there been true research into alternative's) to blood , considering the bidden implications according the blood?	NK	
			hidden implications associated with blood? What are developments in artificial blood currently?	R B H	
DTtR18	Are drugs* a cost effective alternative to blood transfusion for the management	14 What Mine Alter	What alternatives provide the best outcome	РВН	1. NICE Guideline Recommendations 1-
	of anaemia? *Drug alternatives are medicines that can be used in place of a blood transfusion, for examples drugs such as iron and recombinant erythropoietin for		Minimising the use of donated blood and blood products, without compromising patient safety	RBH	erythropoietin 1. Do not offer erythropoietin to reduc
	the treatment of anemia.		Alternatives to transfusion in children	R B H	 the patient has anaemia and meets
			What are the alternatives to receiving a blood transfusion?	R B	 the appropriate blood type is not available
			Why are alternatives to transfusions not more widely offered.	NK	2. Offer oral iron before and after surg
			What strategies exist to avoid transfusion in chronic anaemia?	ВН	 Consider intravenous iron before or have iron-deficiency anaemia and car
			How can we minimize blood transfusions?	н	NICE guideline on medicines adherence
			Alternatives to blood transfusion	Н	 are diagnosed with functional iron de
			what happens when an individual cannot receive transfusion due to reaction When considering transfusion alternatives, how can more money be put into researching these alternatives	P H NK	 are diagnosed with iron-deficiency an too short for oral iron to be effective.
			and sharing the knowledge of these alternatives?	INK	4. For guidance on managing anaemia
			Alternative strategies	н	chronic kidney disease.
			What are the alternatives to blood transfusion	R	For guidance on managing blood tra guideline on acute upper gastrointestir
				н	
			If an alternative is appropriate, how efficient is this compared to transfusion?	HBRH	NICE Guideline Recommendations 6-9: acid
			Alternative options for blood products to treat patients needing transfusion What further can be done to mitigate the need for a transfusion	NK	6. Offer tranexamic acid to adults unde
			The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents (epoetin and darbepoetin) for	Question not derived from the survey but	7. Consider tranexamic acid for childre
			treating cancer treatment-induced anaemia: It may also be helpful to explore reasons why improved anaemia may lead to better outcomes; that is, whether ESAs allow better compliance with chemotherapy.	from another source.	 10% blood volume). Do not routinely use cell salvage witi Consider intra-operative cell salvage example in cardiac and complex vascul
			The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents (epoetin and darbepoetin) for treating cancer treatment-induced anaemia: More evidence is needed to assess the impact of Hb	Question not derived from the survey but from another source.	
			normalisation on utility. If clinical studies of normalisation are conducted it would also be valuable for HRQoL outcomes to be measured, preferably using the EQ-5D or another universal HRQoL questionnaire, so that incremental QALYs resulting from normalising from a higher Hb level can be modelled directly rather than by using the surrogate of Hb level.		 Li C, Gong Y, Dong L, Xie B, Dai Z. Is p prevention? A systematic review and n Ray S, Ray A. Non-surgical interventi The Cochrane Database of Systematic
			Early versus delayed erythropoietin for the anaemia of end-stage kidney disease. Implications for research: This Cochrane Review has highlighted a need for well-designed, high-quality RCTs to assess the benefits and harms of early versus delayed erythropoietin for the anaemia of end-stage kidney disease. The potential study should include main clinical outcomes (patients-oriented outcomes) such as all-cause mortality, cardiovascular mortality, quality of life, adverse events and cardiovascular events according to their occurrence during study follow-up. The study should be reported according to the Consolidated standards of reporting trials (CONSORT) statement for improving the quality of reporting of efficacy and to get better reports of harms in clinical research (loannidis 2004; Moher 2010; Turner 2012). Future studies should be planned according to the recommendations of Standard Protocol Items: Recommendations for Interventional Trials (SPIRIT) (Chan 2013a; Chan 2013b) and the Foundation of Patient-Centered Outcomes Research (Gabrie 2012; PCORI 2012). Future studies should be conducted by independent researchers and reported according to the Consolidated Standards of Reporting Trials (CONSORT) guidelines (Icannidis 2004; Moher 2010) and using the Foundation of Patient-Centered Outcomes Research recommendations (Gabriel 2012; PCORI 2012).	from another source.	 Prutsky G, Domecq JP, Salazar CA, Ad Database of Systematic Reviews. 2016 Jiang M, Chen P, Gao Q. Systematic r Cellular Physiology and Biochemistry : 1 2016;39(-6):2477-91. Roberts I, Shakur H, Ker K, Coats T, c Systematic Reviews. 2015;5:CD004896 Marti-Carvajal AJ, Sola I. Antifibrinol disease. Cochrane Database of System Alam A, Choi S. Prophylactic use of t of randomized controlled trials. Transfer

s 1-5: Alternatives to blood transfusion for patients having surgery: Oral iron, IV iron and

luce the need for blood transfusion in patients having surgery, unless: s the criteria for blood transfusion, but declines it because of religious beliefs or other reasons

available because of the patient's red cell antibodies.

rgery to patients with iron-deficiency anaemia.

or after surgery for patients who:

cannot tolerate or absorb oral iron, or are unable to adhere to oral iron treatment (see the nce)

deficiency

anaemia, and the interval between the diagnosis of anaemia and surgery is predicted to be

ia in patients with chronic kidney disease, see the NICE guideline on anaemia management in

transfusions for people with acute upper gastrointestinal bleeding, see section 1.2 in the NICE stinal bleeding.

-9: Alternatives to blood transfusion for patients having surgery: Cell salvage and tranexamic

ndergoing surgery who are expected to have at least moderate blood loss (greater than 500 ml) Iren undergoing surgery who are expected to have at least moderate blood loss (greater than

without tranexamic acid.

use with tranexamic acid for patients who are expected to lose a very high volume of blood (for cular surgery, major obstetric procedures, and pelvic reconstruction and scoliosis surgery).

s prophylactic tranexamic acid administration effective and safe for postpartum hemorrhage d meta-analysis. Medicine. 2017;96(-1):e5653-e.

ntions for treating heavy menstrual bleeding (menorrhagia) in women with bleeding disorders. ic Reviews. 2016(-11):CD010338-CD.

Accinelli R. Antifibrinolytic therapy to reduce haemoptysis from any cause. The Cochrane 16(-11):CD008711-CD.

, collaborators C-T. Antifibrinolytic drugs for acute traumatic injury. Cochrane Database of 96-CD.

nolytic amino acids for upper gastrointestinal bleeding in people with acute or chronic liver ematic Reviews. 2015(-6):CD006007-CD.

of tranexamic acid for postpartum bleeding outcomes: a systematic review and meta-analysis insfusion Medicine Reviews. 2015;29(-4):231-41.

(For al	THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. Il remaining questions in other categories please see later in this worksheet).	AGREED PRIORITY AT THE WORKSHOP	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has received a blood transfusion, B = Blood Donor, H = Health professional, NK = no details provided.	
			Recombinant human erythropoietin versus placebo or no treatment for the anaemia of chronic kidney disease in people not requiring dialysis. Implications for research: A future RCT to look specifically at whether rHuEPO can delay or hasten RRT in patients with chronic kidney failure is required. Nephrology is a low volume specialty and multicentre studies are therefore necessary to recruit sufficient numbers to achieve acceptable statistical power. Further RCTs should be designed to be large enough and of long enough duration to address this question adequately. These studies could also examine the proposition that a patient with a higher haemoglobin is in better health and better able to cope with the commencement of dialysis when it is eventually necessary. Hospitalisation duration for initiation of dialysis, hospitalisation rates and mortality for the first three months of RRT should provide further relatively hard end-points. Considering the demonstrable effectiveness of rHuEPO in improving haemoglobin it may be impossible to blind health care providers effectively in such a study.		
			The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents (epoetin and darbepoetin) for treating cancer treatment-induced anaemia: If ESAs are thought to have a major potential for improving cancer care, large RCTs meeting current methodological and reporting standards with adequate follow-up are needed to evaluate ESAs as administered in line with current marketing authorisations (including licence criteria for Hb levels) The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents (epoetin and darbepoetin) for	Question not derived from the survey but from another source.	
			treating cancer treatment-induced anaemia: There is a need for improved estimates of the impact of ESAs on tumour response and mortality; if these estimates are neutral or slightly beneficial it is plausible that ESAs could be cost-effective.	from another source.	
			The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents (epoetin and darbepoetin) for treating cancer treatment-induced anaemia: There should be assessment of the frequency of the key potential AEs related to ESA administration. The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents (epoetin and darbepoetin) for treating cancer treatment-induced anaemia: More data are needed to assess the impact of ESAs on HRQoL. Such studies should include the effect of ESAs on the EQ-5D.	Question not derived from the survey but from another source. Question not derived from the survey but from another source.	
			The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents (epoetin and darbepoetin) for treating cancer treatment-induced anaemia: In addition to new trials it may be valuable to revisit the Cochrane IPD meta-analysis7 and select studies that better fit 'licensed recommendations' with respect to Hb criteria and dose administered. What are best regimes for managing immediate peri-operative anaemia in various common conditions e.g.	Question not derived from the survey but from another source. H	
			emergency laparotomy, hip fracture, distal femur fracture (could include Hb transfusion trigger or other agents e.g. tranexamic acid) What cheaper alternatives are their to blood transfusion	NK	
			What are alternative options to a transfusion	В	
			What alternatives are there to blood transfusions Are we doing enough with patient blood management?	н	
B&C4	How can any negative long term effects of blood transfusion be prevented?	15	What future harm does a transfusion cause	РВН	1. Li SL, Ye Y, Yuan XH. Association bet
		15	Harm caused by blood transfusion	R B H	prostatectomy: a systematic review an
			What proportion of frequent platelet recipients develop HLA or specific antibodies?	н	 Xie JW, Xu B, Kang PD, Zhou ZK, Shei total hip arthroplasty: a meta-analysis
			What are the effects of blood transfusion on the immune system, infection rates, cancer recurrence etc?	ВН	3. Thongprayoon C, Cheungpasitporn V
			What are the long-term consequences of blood product transfusion?	ВН	injury after transcatheter aortic valve r 4. Mainou M, Alahdab F, Tobian AA, As
			Long term risks	В	cytomegalovirus infection: a systemati
			What are the long term risks of receiving a blood transfusion?	ВН	 Kim JL, Park JH, Han SB, Cho IY, Jang following total hip and knee arthroplas
			Are any patients at particular risk of long-term complications when receiving blood transfusion?	ВН	6. Keir AK, Wilkinson D, Andersen C, St
			What is the long term effect on health of blood transfusion	ВН	morbidity and mortality in preterm info 7. Jones AR, Frazier SK. Association of
			What is the relationship between blood transfusion and poorer outcome in the era of leukocyte-depleted blood?	н	transfusion: a systematic review. Adva
			Are there any dangers associated with Blood Transfusion?	Р	 Harnan S, Ren S, Gomersall T, Everso survival in patients with myelodysplast
			With multiple transfusions how do the risks of complications increase with each additional unit transfused	н	2016;136(-1):23-42.
			Is there any long term follow up for patients who have received the wrong unit of blood?	P B R H	 Cata JP, Lasala J, Pratt G, Feng L, Sha patients undergoing bladder cancer su
			what are the long term problems after blood transfusion	н	2016;2016:9876394
			Can we produce more evidence regarding risks and benefits of blood transfusion in different clinical scenarios.	н	10. Sarai M, Tejani AM. Loop diuretics 2015(2):CD010138-CD.
				1	11 Muller MC yes Stein D. Dispoledo
			Risk of transfusion	Н	
			what are the risks of blood transfusions	н	and the impact on the onset of transfu
					 Muller MC, van Stein D, Binnekade and the impact on the onset of transfu 12. Kwok CS, Sherwood MW, Watson S intervention and risk of subsequent ad porte of the tag. If a
			what are the risks of blood transfusions How does a blood transfusion impact on the recipient's future health. Are there any negative outcomes that	н	and the impact on the onset of transfu 12. Kwok CS, Sherwood MW, Watson S intervention and risk of subsequent ad 2015;8(3):436-46.
			what are the risks of blood transfusions How does a blood transfusion impact on the recipient's future health. Are there any negative outcomes that we know of? What about as yet unknown risks? What can be done to decrease the number of reactions in multitransfused patients?	H PB RBH PR	and the impact on the onset of transfu 12. Kwok CS, Sherwood MW, Watson S intervention and risk of subsequent ad 2015;8(3):436-46. 13. Kopolovic I, Ostro J, Tsubota H, Lin graft-versus-host disease. Blood. 2015,
			what are the risks of blood transfusions How does a blood transfusion impact on the recipient's future health. Are there any negative outcomes that we know of? What about as yet unknown risks?	H PB RBH	and the impact on the onset of transfu 12. Kwok CS, Sherwood MW, Watson S intervention and risk of subsequent ad

etween allogeneic or autologous blood transfusion and survival in patients after radical and meta-analysis. Plos One. 2017;12(-1):e0171081-e.

hen B, Yang J, et al. [The efficacy and safety of postoperative retransfusion drain following sis]. Zhonghua Wai Ke Za Zhi [Chinese Journal of Surgery]. 2016;54(-2):108-13.

n W, Gillaspie EA, Greason KL, Kashani KB. Association of blood transfusion with acute kidney ve replacement: A meta-analysis. World Journal of Nephrology. 2016;5(-5):482-8.

, Asi N, Mohammed K, Murad MH, et al. Reducing the risk of transfusion-transmitted natic review and meta-analysis. Transfusion. 2016.

ang KM. Allogeneic blood transfusion is a significant risk factor for surgical-site infection blasty: a meta-analysis. The Journal of Arthroplasty. 2016.

, Stark MJ. Washed versus unwashed red blood cells for transfusion for the prevention of infants. The Cochrane Database of Systematic Reviews. 2016(-1):CD011484-CD. of blood component ratio with clinical outcomes in patients after trauma and massive

vanced Emergency Nursing Journal. 2016;38(-2):157-68.

rson-Hock ES, Sutton A, Dhanasiri S, et al. Association between transfusion status and overall astic syndromes: a systematic literature review and meta-analysis. Acta Haematologica.

hah JB. Association between perioperative blood transfusions and clinical outcomes in surgery: a systematic review and meta-analysis study. Journal of Blood Transfusion.

cs for patients receiving blood transfusions. Cochrane Database of Systematic Reviews.

de JM, van Rhenen DJ, VlaarAp. Low-risk transfusion-related acute lung injury donor strategies sfusion-related acute lung injury: a meta-analysis. Transfusion. 2015;55(1):164-75. on SM, Nasir SB, Sperrin M, NolanJ, et al. Blood transfusion after percutaneous coronary adverse outcomes: a systematic review and meta-analysis. JACC: Cardiovascular Interventions.

in Y, Cserti-Gazdewich CM, Messner HA, et al. A systematic review of transfusion-associated 15;126(-3):406-14.

nan L, Callum J, Shehata N, et al. A systematic review and meta-analysis of risks of red cell ; or mortality. Vox Sanguinis. 2015;109((Suppl. 1)):31-2.

an L. Callum J. Sheheta N. et al. Adverse effects of RBC transfusions in neonates: a systematic

(For all	THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. remaining questions in other categories please see later in this worksheet).	AGREED PRIORITY AT THE WORKSHOP	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has received a blood transfusion, B = Blood Donor, H = Health professional, NK = no details provided.	Previous Related & up-to-date Res
			What is the effect of blood product transfusion on immunity?	Н	review and meta-analysis. Abstracts of
			Are breast cancer surgeons aware of the potential immunosuppressive effects of blood transfusion (or tissue trauma)	RBH	16. Balvers K, Wirtz MR, van Dieren S, G associated multiple organ failure in sev
B&C 9	What characteristics identify patients who would benefit from a blood		What is the benefit of blood transfusion in patients with evidence of poor oxygen delivery/ organ	н	1. Hunt H; Stanworth S; Curry N; Wo
	transfusion?	16	dysfunction? How well does donated blood carry oxygen in particular for patients with respiratory disease?	RBH	rotational thromboelastometry (ROTEN Database of Systematic Reviews. 2015;
					Database of Systematic Neviews. 2013,
			what is the reason for blood transfusion? What should be the criteria for transfusion?	R H B H	
			Will it benefit my patient in the best possible way	RBH	
			blood products given to a lot of patients who should possibly not be given one-need robust data to decide	RBH	-
			Does transfusion improve patient's outcome?	ВН	1
			What clinical markers should we use to show that patients have benefited from blood transfusion	RH	
DtTr24			(particularly in preterm neonates)? The role of iron in the management of chemotherapy-induced anaemia in cancer patients receiving	Question not derived from the survey but	Nies Cuideline Deserver debierer
	DtTr24 Does the use of oral or intravenous iron for patients with iron deficiency anaemia reduce the need for some transfusions?	17	erythropoiesis-stimulating agents. Implications for research: Since the included RCTs had shorter follow-up duration (up to 20 weeks), the long-term effects of iron supplementation are unknown. Nonetheless, further studies are required to define the optimal dosage of iron. Future trials with a longer follow-up and various re- dosing regimens are also required to determine the risk of adverse events and the impact of iron supplementation on mortality as well as the optimal re-dosing schedule after the patients received the initial cumulative iron supplementation.	from another source.	Alternatives to blood transfusion for pa 2. Offer oral iron before and after surge 3. Consider intravenous iron before or a • have iron-deficiency anaemia and can NICE guideline on medicines adherence • are diagnosed with functional iron de • are diagnosed with iron-deficiency an
			Does use of pre-op/pre-procedure iv iron in iron deficient patients improve clinic outcomes and reduce peri- operative blood product use?	н	too short for oral iron to be effective.
			Is their good evidence for the use of iron to reduce risk of needing a transfusion in the setting of a normal ferritin level	н	 For guidance on managing anaemia i chronic kidney disease.
			Oral or parenteral iron supplementation to reduce deferral iron deficiency and/or anaemia in blood donors.	-	5. For guidance on managing blood trar
			Would controlling the HB status with alternatives such as iron prevent the need for some blood transfusions?	from another source. B	guideline on acute upper gastrointestin
			Does intravenous iron reduce the need for blood transfusion post op?	н	1. Aksan A, Isik H, Radeke HH, Dignass A
			Does avoiding peri-operative transfusion improve outcomes?	н	tolerability of different intravenous iror bowel disease. Alimentary Pharmacolog
			Does improving Hb preoperatively improve outcomes?	н	2. Shepshelovich D, Rozen-Zvi B, Avni T,
			Would you try iron therapy first?	н	of anemia in CKD: an updated systemat the National Kidney Foundation. 2016.
			what is best regime for managing pre-op anaemia for elective surgical patients (where there is time to give iron)	Question not derived from the survey but from another source.	3. Shah A, Roy NB, McKechnie S, Doree
			Treatment for women with postpartum iron deficiency anaemia. Implications for research: After 40 years of	Question not derived from the survey but	patients: a systematic review and meta 4. Rognoni C, Venturini S, Meregaglia N
			research and 22 included studies on the subject, we are still not able to make a clear statement on how we should treat the clinical consequences of postpartum iron deficiency anaemia. The reasons for this are trial	from another source.	formulations in iron-deficient patients:
			quality, the chosen interventions, the chosen outcomes and the many different study designs. Researchers tend to evaluate efficacy trough Hb values. The correlation between Hb levels and anaemia symptoms in postpartum women has not yet been clarified. We strongly encourage authors to choose clinically relevant outcomes, using validated measuring tools. Researchers should distinguish between anaemia symptoms and		Drug Investigation. 2016;36(-3):177-94. 5. Roger SD, Tio M, Park HC, Choong HL haemodialysis: a systematic review and 6. Qian C, Wei B, Ding J, Wu H, WangY.
			adverse effects of treatment to evaluate the overall clinical effect. Also, researchers should choose clinically relevant time points during follow-up. Studies should report on survival and severe morbidity in all study participants. Trials should be designed following the CONSORT Consolidated Standards of Reporting Trials) guidelines in order to minimise sources of bias. We encourage future researchers to conduct more		deficiency: a systematic review and me 7. Mhaskar R, Wao H, Miladinovic B, Ku anemia in cancer patients receiving ery 2):CD009624-CD.
			randomised controlled trials on the treatment for postpartum iron deficiency anaemia focusing on interventions such as oral iron and IV iron treatment, comparing these with each other or placebo. Multicentre trials with large populations are encouraged. Due to the risk of irreversible adverse effects to mother and child, RBC transfusion studies should be reserved for bleeding or severe anaemia, and care should be taken to monitor all adverse effects, including allo-immunisation. Also, it is of great importance to investigate the long-term effects of any treatment on both mother and child.		 B. Jankowska EA, Tkaczyszyn M, Suchoc deficient patients with systolic heart fai 2016. Clevenger B, Gurusamy K, Klein AA, N anaemic adults without chronic kidney 10. Bonovas S, Fiorino G, Allocca M, Lyt anemia in inflammatory bowel disease:
			Should we use more iron/epo therapy in ICU, rather than transfusions?	ВН	2):e2308-e. 11. Tay HS, Soiza RL. Systematic review
			If a healthy woman refuses to have a blood transfusion (recommended after childbirth because of hb7 for	ВН	in elderly people? Drugs & Aging. 2015; 12. Shi Q, Leng W, Wazir R, Li J, Yao Q, I
			e.g.), how long, on average, would it take for her hb to recover to a normal level by taking an iron	1	iron deficiency anaemia: a systematic re

of the HAA 2015 Annual Scientific Meeting. 2015:196-7. S, Goslings JC, Juffermans NP. Risk factors for trauma-induced coagulopathy and transfusionseverely injured trauma patients. Frontiers in Medicine. 2015.

Voolley T; Cooper C; UkoumunneO; Zhelev Z; Hyde C. Thromboelastography (TEG) and TEM) for trauma-induced coagulopathy in adult trauma patients with bleeding. Cochrane 15;(2):CD010438

r patients having surgery: Oral iron, IV iron and erythropoietin

- irgery to patients with iron-deficiency anaemia.
- or after surgery for patients who:
- cannot tolerate or absorb oral iron, or are unable to adhere to oral iron treatment (see the nce)
- deficiency
- anaemia, and the interval between the diagnosis of anaemia and surgery is predicted to be
- ia in patients with chronic kidney disease, see the NICE guideline on anaemia management in
- transfusions for people with acute upper gastrointestinal bleeding, see section 1.2 in the NICE stinal bleeding.
- ss A, Stein J. Systematic review with network meta-analysis: comparative efficacy and iron formulations for the treatment of iron deficiency anaemia in patients with inflammatory ology & Therapeutics. 2017.
- ni T, Gafter U, Gafter-Gvili A. Intravenous versus oral iron supplementation for the treatment matic review and meta-analysis. American Journal of Kidney Diseases : the Official Journal of
- ree C, Fisher SA, Stanworth SJ. Iron supplementation to treat anaemia in adult critical care eta-analysis. Critical Care (London, England). 2016. Sep 29;20(1):306..
- a M, Marmifero M, Tarricone R. Efficacy and safety of ferric carboxymaltose and other ts: a systematic review and network meta-analysis of randomised controlled trials. Clinical 94.
- ; HL, Goh B, Cushway TR, et al. Intravenous iron and erythropoiesis-stimulating agents in and meta-analysis. Nephrology (Carlton, Vic). 2016.
- gY. The efficacy and safety of iron supplementation in patients with heart failure and iron meta-analysis. The Canadian Journal of Cardiology. 2016;32(-2):151-9.
- Kumar A, Djulbegovic B. The role of iron in the management of chemotherapy-induced erythropoiesis-stimulating agents. The Cochrane Database of Systematic Reviews. 2016(-
- hocki T, Drozd M, von Haehling S, Doehner W, et al. Effects of intravenous iron therapy in iron: : failure: a meta-analysis of randomized controlled trials. European Journal of Heart Failure.
- A, Murphy GJ, Anker SD, Richards T. Systematic review and meta-analysis of iron therapy in ey disease: updated and abridged Cochrane review. European Journal of Heart Failure. 2016. Lytras T, Tsantes A, Peyrin-Biroulet L, et al. Intravenous versus oral iron for the treatment of use: a systematic review and meta-analysis of randomized controlled trials. Medicine. 2016;95(-
- ew and meta-analysis: what is the evidence for oral iron supplementation in treating anaemia 115;32(2):149-58.
- Q, Mi C, et al. Intravenous iron sucrose versus oral iron in the treatment of pregnancy with ic review. Gynecologic & Obstetric Investigation. 2015;80(-3):170-8.

(For al	THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. I remaining questions in other categories please see later in this worksheet).	AGREED PRIORITY AT THE WORKSHOP	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has received a blood transfusion, B = Blood Donor, H = Health professional, NK = no details provided.	Previous Related & up-to-date Res 13. Peyrin-Biroulet L, Williet N, Cacoub
			Iron therapy for pre-operative anaemia. Implications for research: Higher quality studies are required to determine the efficacy of iron therapy for the treatment of pre-operative anaemia. Ideally these should be adequately powered large multi-centre trials across the surgical specialities. They should include only anaemic patients and assess for iron deficiency. Outcome measurements should include some measure of quality of life, post-operative complications, morbidity and mortality in addition to the haematological parameters and frequency of allogeneic blood transfusion reported in current studies. It will be important in the design of any future studies to also include strict transfusion guidelines and definitions of iron deficiency.	from another source.	 Feynmenrouet E, Wanter N, Gacodo systematic review. American Journal of 14. Pasricha S, Speedy J, Low M. What I consequences of donor iron deficiency 15. Nielsen OH, Ainsworth M, Coskun N systematic review. Medicine. 2015;94(- 16. Ng O, Keeler BD, Mishra A, Simpson of Systematic Reviews. 2015(-12):CD01 17. Markova V, Norgaard A, Jorgensen Cochrane Database of Systematic Revie 18. Jin HX, Wang RS, Chen SJ, Wang AP, Italian Journal of Pediatrics. 2015;41(1) 19. Hogan M, Klein AA, Richards T. The surgery. European Journal of Cardio-Th 20. Borstlap WA, Stellingwerf ME, Moo anaemia in patients with colorectal car 21. Bauer M, Ressl S, Walter E. Iron def 2015;18(-7):A405-A. Avni T, Amir B, Alon G, Hefziba G, Lu analysis. Mayo Clinic Proceedings. 2015
A1	What is the best administrative process for hospital blood transfusion to keep	18	How can modern technology e.g. apps for patients/healthcare professionals improve the transfusion process	н	1. NICE Guideline Recommendation: El
l	patients safe and minimises delay?	10	Why do you have to replicate all the info about blood transfusions on two separate forms that repeat the	R B H	 Consider using a system that electriprocess. Sellen KM, Jovanovic A, Perrier L, Ch 1):35-43.
l			same information Can we rationalise the requesting process to reduce delays in urgent situations	н	
l			Is it possible to design a "reminder" for staff regarding component times for transfusion that is easy to access	н	
l			and carry?	DDU	3. Manning N, Heddle NM, Arnold D, C
l			How can we be sure there are no errors in blood product delivery? How can the experience of blood transfusion for mothers during/after labour be improved?	P B H NK	ill patients and impact on transfusion: a 4. Manning M, Heddle N, Arnold D, Cro
l			Is there a more efficient way of networking to support optimal use of blood bank supplies than our existing	PRBH	ill patients and impact on transfusion:
l			methods	riton	5. Hibbs SP, Nielsen ND, Brunskill S, Do
l			How to maintain safety for recipients of blood and blood products	ВН	transfusion practice: a systematic revie 6. Coustasse A, Cunningham B, Deslich
l			Why do we (West Yorkshire) need a second patient checker when areas in Scotland don't	P R B H	Frequency Identification (RFID) system
l			Is the procedure for prescription through to administration of a transfusion standardised across all NHS trusts?	Р	2015;12((Fall)):1d-d.
l			How can we reduce lengthy stays in hospital due to transfusion?	ВН	
l			How do we ensure patient safety individually and collectively in blood transfusion ?	н	
l			How safe is it for a patient to have a transfusion in their own home rather than travel to the hospital?	ВН	
l			why does each trust have a different transfusion record	ВН]
l			Why is there not a universal procedure when administering prescribed blood products, documentation often differs in other health boards.	н	
l			How can patients receiving a transfusion experience a higher rate of safety?	R B	
l			Avoid transfusion errors	P R H	
l			Do the control measures designed to ensure 'safe blood' have an evidence base or are some based on	R B H	1
l			assumption of risk? Are there any strategies to reduce the development of Abs in Tx dependent patients?	R B H	
l			Improving safety of community transfusions (with aim to reduce acute hospital bed use)	ВН	
l			How can we improve communication between hospitals for patients needing special requirements?	РВН	1
l			Why don't patient ID wristbands have barcodes/ matrix to be scanned instead of second checker	P R B H	
l					
l			What checks are made to ensure a patient receives the right type and amount of blood?	NK	
l			Why can we not have a way of using patient barcodes to link to the computer system, to reduce risk of mis- labelling?	R B H	
l			Why can't transfusions be given evenings and weekends (in all hospitals) for patients on long term transfusion	P R	
DtTr10g	At what haemoglobin level [blood count] should a patient who has experienced a	19	regimes? Comparison of a restrictive versus liberal red cell transfusion policy for patients with myelodysplasia aplastic	Question not derived from the survey but	
l	haematological (blood or bone marrow) disorder receivce a blood transfusion?		anaemia and other congenital bone marrow failure disorders. Implications for research: As the incidence of MDS rises with an ageing population, many of whom are unable to tolerate curative therapy, further clinical	from another source.	
			mas mass man an ageing population, many or whom are unable to tolerate curative therapy, fulfiller cliffical		

- ub P. Guidelines on the diagnosis and treatment of iron deficiency across indications: a I of Clinical Nutrition. 2015;102(-6):1585-94.
- at do systematic reviews of iron supplementation in women tell us about the functional ncy? Vox Sanguinis. 2015;109((Suppl. 1)):58-.
- n M, Weiss G. Management of iron-deficiency anemia in inflammatory bowel disease: a 94(-23):e963-e.
- son A, Neal K, Brookes MJ, et al. Iron therapy for pre-operative anaemia. Cochrane Database 0011588-CD.
- en KJ, Langhoff-Roos J. Treatment for women with postpartum iron deficiency anaemia. eviews. 2015(-8):CD010861-CD.
- AP, Liu XY. Early and late iron supplementation for low birth weight infants: a meta-analysis. (1):16-.
- he impact of anaemia and intravenous iron replacement therapy on outcomes in cardiac -Thoracic Surgery. 2015;47(2):218-26.
- loolla Z, Musters GD, Buskens CJ, Tanis PJ, et al. Iron therapy for the treatment of preoperative carcinoma: a systematic review. Colorectal Disease. 2015;17(-12):1044-54.
- deficiency in patients with chronic heart failure: a systematic literature review. Value in Health.
- i, Leonard L, Anat GG. The safety of intravenous iron preparations: systematic review and meta 015;90(1):12-23.

Electronic patient identification

ctronically identifies patients to improve the safety and efficiency of the blood transfusion

Chignell M. Systematic review of electronic remote blood issue. Vox Sanguinis. 2015;109(-

- , Crowther MA, Siegal D. Interventions to reduce blood loss from laboratory testing in critically n: a systematic review. Journal of Thrombosis and Haemostasis. 2015;13((Suppl. 2)):974-5. Crowther MA, Siegal DM. Interventions to reduce blood loss from laboratory testing in critically n: a systematic review. Blood. 2015.
- Doree C, Yazer MH, Kaufman RM, et al. The impact of electronic decision support on view. Transfusion Medicine Reviews. 2015;29(1):14-23.
- ch S, Willson E, Meadows P. Benefits and barriers of implementation and utilization of Radioems in transfusion medicine. Perspectives in Health Information Management.

THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop.				Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has received a blood transfusion, B = Blood Donor, H = Health professional, NK = no details provided.	Previous Related & up-to-date Rese	
			Patients with cancer/haematological malignancies/leukaemia/MDS, and production failure, what are the optimal red cell transfusion strategies	ВН		
			Does transfusion to a haemoglobin >100 or >110 or >120 improve the quality of life of MDS patients?	ВН		
			Red cell transfusion thresholds in the management of patients with AML	н		
			What is the optimal red cell transfusion threshold for patients with acute leukaemia receiving intensive	R B H		
DtTr8			treatment? Are patients given enough information about the potential side effects ?	РВН	1. NICE Guideline Recommendations:	
DUITS	Do patients and their relatives and/or carers receive enough information to help them understand about blood transfusion?	20	Are patients given enough minimation about the potential side energy and the potential side ener	р	Patient information	
				r	43. Provide verbal and written informat	
			Did you understand the information provided to you before you were given a Blood Transfusion?	н	carers (as appropriate), explaining:the reason for the transfusion	
			do patients receive enough information about blood transfusion	ВН	the risks and benefits	
			How can I be sure the transfusion is safe.	Р	• the transfusion process	
			How can we reassure the public that the transfusion is virus free	н	 any transfusion needs specific to then any alternatives that are available, an 	
			How certain are you that patients understand the risks of blood transfusions?	R B H	 that they are no longer eligible to dor 	
			How certain are you that patients understand the risks of blood transfusions?	R B H	 that they are encouraged to ask ques 44. Document discussions in the patien 	
			How do I explain side effects	R B H	45. Provide the patient and their GP with	
			How do I know that my transfusion blood is free from any health conditions that could be detrimental to me	R B	• the details of any transfusions they have	
			How do we best inform/consent patients for blood transfusion	н	 the reasons for the transfusion any adverse events 	
			How effective is the consent process for patients? Do recipients of blood products really understand the risks and benefits?	R B H	 that they are no longer eligible to dor 	
			How much chance is there of getting illness through transfused blood	Р	 46. For guidance on communication an services 	
			How well are the risks associated with blood transfusion conveyed to potential recipients?	RH	Scruces	
			How well recipient of transfusion know the adverse reactions?	РВН		
			if I have a blood transfusion am I likely to stay in hospital longer	BH		
			If I needed an operation how much blood would I need?	В]	
			if I have a blood transfusion is my cancer more likely to reoccur	ВН		
			If I have a blood transfusion, can I be sure that I won't catch any viruses from it?	В	-	
			In non urgent transfusions is it possible to discuss with the recipient if requested the moral/ethical/religious implications of accepting someone else's blood into their body?	Р		
			Is it possible that my body will reject or react badly to blood from a transfusion?	В		
			Is receipt of a blood transfusion protective against allergic disorders?	н		
			What are the dangers from a blood transfusion	В		
			What are the implications of receiving bloodlike a leaflet to read	Р		
			What are the known risks?	RBH	-	
			How do I know I have had a blood transfusion?	B	-	
			I don't think anyone is actually informed about what they received, how much and why. Why do we not give relatives a simple comprehensive information leaflet when their relative is having a	R B H	-	
			transfusion			
D12b	What is the impact of iron deficiency on blood donors and how may its impact be	21	Research elsewhere suggests women would need iron supplements to prevent anaemia if donating more than twice a year, should this be included in recommendations?	BH	1. Pasricha S, Speedy J, Low M. What de	
	prevented?		titan twice a year, should this be included in recommendations:		consequences of donor iron deficiency	
DtTr13	What is the optimal blood transfusion dose [number of units] [in any situation] for	22	Is it better to give a little blood, i.e. 1 unit at a time to top a patient up in the BMT process rather than say a 3 unit transfusion to last a longer time.	BH	 NICE Guideline Recommendations: Consider single-unit red blood cell t 	
	maximum patient benefit?		Why do blood transfusions always include two units and not just one?	Р	or adults with low body weight) who do	
			How much blood can one transfuse in an acute setting?	н	18. After each single-unit red blood cell	
					with low body weight), clinically reasses 1. Torres ME, Rodriguez JN, Ramos JL, O Palliative Medicine. 2014;17(1):88-104	
DtTr28	How cost effective is cell salvage* for the avoidance of transfusion of donor blood	23	How can we use cell salvage to reduce the need for donor blood?	н	NICE Guideline Recommendations:	
	during major surgery?	10	Cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion: What are the	Question not derived from the survey but	Alternatives to blood transfusion for pa	
			wider economic costs and benefits of alternative autologous techniques?	from another source.	 B. Do not routinely use cell salvage with Consider intra-operative cell salvage 	
			Are we using Autologous blood systems efficiently?	703	example in cardiac and complex vascula	

lesearch

mation to patients who may have or who have had a transfusion, and their family members or

hem

and how they might reduce their need for a transfusion

donate blood

uestions.

ient's notes.

with copies of the discharge summary or other written communication that explains:

y had

donate blood. and patient-centred care for adults, see the NICE guideline on patient experience in adult NHS

t do systematic reviews of iron supplementation in women tell us about the functional http://www.sanguinis. 2015;109((Suppl. 1)):58. Abstract No. 4C-S25-03.

ell transfusions for adults (or equivalent volumes calculated based on body weight for children o do not have active bleeding.

cell transfusion (or equivalent volumes calculated based on body weight for children or adults ssess and check haemoglobin levels, and give further transfusions if needed.

L, Gomez FA. Transfusion in palliative cancer patients: a review of the literature. Journal of 04

r patients having surgery: Cell salvage and tranexamic acid

without tranexamic acid.

age with tranexamic acid for patients who are expected to lose a very high volume of blood (for cular surgery, major obstetric procedures, and pelvic reconstruction and scoliosis surgery).

THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. (For all remaining questions in other categories please see later in this worksheet).	AGREED PRIORITY AT THE WORKSHOP	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has received a blood transfusion, B = Blood Donor, H = Health professional, NK = no details provided.	
		Allogeneic blood is a precious and life saving resource. but need to be used wisely and only in situations where it is unavoidable. There are many situations where 'cell salvage' can be used to minimise the use of allogeneic blood but is not currently in wide practice. How can we ensure that this 'recycling' of spilt blood is	н	Other refs: 1. Liu JM, Fu BQ, Chen WZ, Chen JW, Hu
		encouraged. Is there a risk of disseminating micrometastases when reinfusing cell saved blood	н	Neurosurgery. 2017. May;101:568-576 2. Xie JW, Xu B, Kang PD, Zhou ZK, Shen
		Can the use of cell salvage be expanded?	н	total hip arthroplasty: a meta-analysis].
		Why the current cell savers are not efficient enough to avoid blood transfusion	ВН	3. Xie H, Pan JK, Hong KH, Guo D, Fang J
		How do we promote cell salvage so it is routine	RBH	analysis of randomized controlled trials.
		How can cell salvage be better resourced within hospitals? (Money and trained staff)	NK	 Stone N, Sardana V, Missiuna P. Indica review. Spine. 2017 Mar 15;42(6):E363-
				5. Pawaskar A, Salunke AA, Kekatpure A
		How can cell salvage machines be adapted for low income countries? (e.g. simplified, battery back-up, works in high temperatures))	В	blood transfusion in total knee arthropla
		How can we make cell salvage better for major haemorrhage situations	BH	6. Pan JK, Hong KH, Xie H, Luo MH, Guo
		Post-operative cell salvage: For patients having cardiac surgery with a significant risk of post-operative blood	Question not derived from the survey but	undergoing total knee arthroplasty: a m 1):452
		loss, is post-operative cell salvage and reinfusion clinically and cost effective in reducing red blood cell use and improving clinical outcomes, compared with existing practice	from another source.	7. Meybohm P, Choorapoikayil S, Wesse review and meta-analysis of prospective
		Cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion: Are combinations of autologous blood transfusion techniques feasible, effective and cost-effective?	Question not derived from the survey but from another source.	 Hong KH, Pan JK, Yang WY, Luo MH, X drainage/no drainage in total knee arthi 9. Barile L, Fominskiy E, Di Tomasso N, A
		Could the volume of blood collected with cell salvage machines be improved so that it would be worth using this tool for more operations?	PRBH	allogeneic red blood cell transfusion in o and Analgesia. 2017 Mar;124(3):743-75.
		Can more research be done into cell saver technology as standard rather than relying on donation	РН	10. Zhou X, Zhang C, Wang Y, Yu L, Yan I transfusion: a meta-analysis. Anesthesia
		Cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion: What are the	Question not derived from the survey but	11. Xie J, Feng X, Ma J, Kang P, Shen B, Y
		long term effects of transfusion on survival and the long-term effects of the serious hazards of transfusion on survival, health status and health related quality of life?	from another source.	meta-analysis of randomized controlled 12. White N, Bayliss S, Moore D. System
		Cell Saver technique, is it proven method of reducing bank blood transfusions ?	BH	craniosynostosis. Journal of Craniofacia 13. Li J, Sun SL, Tian JH, Yang K, Liu R, Li
		Cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion: What are the benefits clinically and as regards patient preferences of avoiding allogeneic blood transfusion by giving autologous transfusion instead?	Question not derived from the survey but from another source.	2015(1):CD007379-CD. 14. Al-Khabori M, Al-Riyami A, Siddiqi S,
		Cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion: (as addendum to the research recommendation) Do these benefits vary by procedure, timing and technique of cell salvage?	Question not derived from the survey but from another source.	systematic review and meta-analysis. Ha
		Cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion:	Question not derived from the survey but from another source.	
		Cell salvage in emergency trauma surgery. Implications for research: We identified only one study that met the inclusion criteria for this review. In the future, multicentre, methodologically rigorous trials are needed to assess the relative efficacy, safety and cost-effectiveness of cell salvage in different surgical procedures.	Question not derived from the survey but from another source.	
		Cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion: Is acute normovolaemic haemodilution more effective and cost-effective than cell salvage?	Question not derived from the survey but from another source.	
At what haemoglobin level [blood count] should a non-surgical, general medical	24	At what haemoglobin level should blood transfusion be considered for critical care patients.	R B H	1. NICE Guideline Recommendations:
patient receive a blood transfusion?		At what Hb threshold should post-partum women be transfused to improve maternal recovery?	ВН	13. Use restrictive red blood cell transfuhave major haemorrhage or
		Transfusion threshold in different situations and context. e.g. TRICC/other trials guide us but for what length of duration in ICU stay does these trials apply? Surely situation at day 20 is very different that day 2.	ВН	 have acute coronary syndrome or need regular blood transfusions for ch 14. When using a restrictive red blood c
		Transfusion thresholds for general intensive care patients with and without acute coronary syndromes	н	concentration target of 70–90 g/litre af 16. Consider setting individual threshold
		Restrictive policies for medical patients for both blood and platelets	н	transfusions for chronic anaemia.
		transfusion trigger in the critically ill	BH	
		what is the correct Hb to transfuse in the postnatal period given that maternal physiology is so different from standard adults	Н	Other refs: 1. Odutayo A, Desborough MJ, Trivella
		What is the optimal blood transfusion threshold for patients at different stages in the evolution of critical illness?	RBH	gastrointestinal bleeding: a systematic i Hepatology. 2017;2(-5):354-60.
		What is the best threshold for blood transfusion on the ICU?	BH	2. Estcourt LJ, Malouf R, Trivella M, Ferg

Huang SH, Liu ZL. Cell salvage used in scoliosis surgery: is it really effective? World 6

en B, Yang J, et al. [The efficacy and safety of postoperative retransfusion drain following s]. Zhonghua Wai Ke Za Zhi [Chinese Journal of Surgery]. 2016;54(-2):108-13.

g J, Yang WY, et al. Postoperative autotransfusion drain after total hip arthroplasty: a metails. Scientific Reports. 2016 Jul 1;6:27461. doi: 10.1038/srep27461

dications and outcomes of cell saver in adolescent scoliosis correction surgery: a systematic 53-E370. doi: 10.1097/BRS.000000000001780.

e A, Chen Y, Nambi GI, Tan J, et al. Do autologous blood transfusion systems reduce allogeneic oplasty? Knee Surgery, Sports Traumatology, Arthroscopy : Official Journal of the Esska. 2016. uo D, Liu J. The efficacy and safety of autologous blood transfusion drainage in patients meta-analysis of 16 randomized controlled trials. Bmc Musculoskeletal Disorders. 2016;17(-

ssels A, Herrmann E, Zacharowski K, Spahn DR. Washed cell salvage in surgical patients: a ive randomized trials under PRISMA. Medicine. 2016;95(-31):e4490-e.

, Xu SC, Liu J. Comparison between autologous blood transfusion drainage and closed-suction throplasty: a meta-analysis. Bmc Musculoskeletal Disorders. 2016;17(-1):142-.

I, Alpizar Castro LE, Landoni G, De Luca M, et al. Acute normovolemic hemodilution reduces in cardiac surgery: a systematic review and meta-analysis of randomized trials. Anesthesia 752.

n M. Preoperative acute normovolemic hemodilution for minimizing allogeneic blood sia & Analgesia. 2015;121(-6):1443-55.

s, Yang J, et al. Is postoperative cell salvage necessary in total hip or knee replacement? A ed trials. International Journal Of Surgery. 2015;21:135-44.

ematic review of interventions for minimizing perioperative blood transfusion for surgery for cial Surgery. 2015;26(1):26-36.

, Li J. Cell salvage in emergency trauma surgery. Cochrane Database of Systematic Reviews.

S, Al-Sabti H. Cell salvage during cardiac surgery may decrease red blood cell transfusion: a Haematologica. 2015;100((S1)):138-9.

fusion thresholds for patients who need red blood cell transfusions and who do not:

chronic anaemia.

d cell transfusion threshold, consider a threshold of 70 g/litre and a haemoglobin after transfusion.

olds and haemoglobin concentration targets for each patient who needs regular blood

a M, Stanley AJ, Doree C, Collins GS, et al. Restrictive versus liberal blood transfusion for c review and meta-analysis of randomised controlled trials. The Lancet Gastroenterology &

ergusson DA, Hopewell S, Murphy MF. Restrictive versus liberal red blood cell transfusion

(For a	THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. The maining questions in other categories please see later in this worksheet).		h			
B&C2	How can the immediate side effects of receiving a blood transfusion be reduced?	25	What is the optimum level ([hb]) to transfuse red cells in the severely ill patient	RH	 without haematopoietic stem cell support 3. Dupuis C, Sonneville R, Adrie C, Gros A intensive care unit: a systematic review at 4. Veigas PV, Callum J, Rizoli S, Nascimen values for the diagnosis of coagulopathy, patients. Scandinavian Journal of Trauma 5. Prescott LS, Taylor JS, Lopez-Olivo MAI and meta-analysis of the impact of restric 2016;46:1-8. 6. Keir A, Pal S, Trivella M, Lieberman L, C systematic review and meta-analysis. Tra 7. Estcourt LJ, Ingram C, Doree C, Trivella anaesthesia for the prevention of compli 2016(-5):CD011980-CD. 8. Christou G, Iyengar A, Shorr R, Tinmou hematopoietic cell transplantation: a sysi 9. Boutin A, Chasse M, Shemilt M, Lauzie brain injury: a systematic review and met 10. McQuilten ZK, Crighton G, Brunskill S, Ratio of Blood Products in Massive Trans 11. Gu Y, Estcourt LJ, Doree C, Hopewell 1 with myelodysplasia, aplastic anaemia, an Reviews. 2015(-10):CD011577-CD. 12. Estcourt LJ, Stanworth SJ, Doree C, Tri for preventing bleeding in people with ha transplantation. Cochrane Database of Si 14. Estcourt LJ, Desborough M, Hopewell insertion of central lines in patients with 15. Fnglish SW: Chasse M. Turreon AF. TI 1. Li SL, Ye Y, Yuan XH. Association between 	
			What complications occur from massive transfusion in children from trauma? Skin preparation with alcohol versus alcohol followed by any antiseptic for preventing bacteraemia or contamination of blood for transfusion. Implications for research: It is common for people who are critically ill to become coagulopathic, and many of these will require insertion of a central venous catheter (CVC). The question of whether prophylactic plasma transfusion is indicated remains unanswered. An adequately- powered trial which is able to recruit sufficient number of participants to address this is required. The ongoing trials that are due to be completed by February 2018 will be unable to answer the primary questions of this review because the studies are too small. To detect a doubling in the number of participants with major bleeding from 1% to 2% would require a two-arm study with over 4600 participants; the three ongoing studies are only planning to recruit 355 participants in total. What is the mortality rate following major blood transfusion What is the true risk to life (attributable mortality) of a red cell transfusion? When undergoing a transfusion what risks can occur? What is the current safety of blood transfusion for recipients?	H Question not derived from the survey but from another source. H H NK H	 Thongprayoon C, Cheungpasitporn W, injury after transcatheter aortic valve rej Mainou M, Alahdab F, Tobian AA, Asi i cytomegalovirus infection: a systematic Kim JL, Park JH, Han SB, Cho IY, Jang K following total hip and knee arthroplasty Keir AK, Wilkinson D, Andersen C, Star morbidity and mortality in preterm infan Jones AR, Frazier SK. Association of bl transfusion: a systematic review. Advance Harnan S, Ren S, Gomersall T, Everson survival in patients with myelodysplastic 2016;136(-1):23-42. Cata JP, Lasala J, Pratt G, Feng L, Shah patients undergoing bladder cancer surg 2016;2016:9876394 Sarai M, Tejani AM. Loop diuretics for 	
DtTr10f	At what haemoglobin level [blood count] should a patient with cancer receivce a	26	There was no individual survey question generated on this topic.		2015(2):CD010138-CD. 11. Muller MC, van Stein D, Binnekade JN and the impact on the onset of transfusion 12. Kwok CS. Sherwood MW. Watson SM	
DUITIO	blood transfusion?	26	There was no manuadal solvey question generated on this topic.			
D12a	If the blood taken from a donor shows a result that might impact their future	27	What would the donor centre do if a test came back with "bad news"	PRPH	No available SR evidence	
	health, how should this best be communicated to the donor?		Would I be told if an abnormality were found in my blood donation?	R B]	
			Can a blood Donor have a full health check of their blood. E.G. Vitamins, Minerals, Hormone Levels and	В]	
DtTr29	How should patients who refuse blood transfusion be managed?		health of the blood. What alternatives can be used to replace blood transfusion in Jehovah's witness patients who have sudden	н	1. Han SB, Kim HJ, Kim TK, In Y, Oh KJ, Ko	
-		28	blood loss due to cardiac cath lab complications?		transfusion requirement following prima	
			how useful are coagulation factors without blood transfusion for Jehovah's witnesses What alternatives do you offer to people who do not wish to have a blood transfusion?	B H NK	Arthroscopy : Official Journal of the Esska	

- gical malignancies treated with intensive chemotherapy or radiotherapy, or both, with or port. The Cochrane Database of Systematic Reviews. 2017(-1):CD011305-CD.
- os A, Darmon M, Bouadma L, et al. Impact of transfusion on patients with sepsis admitted in w and meta-analysis. Annals of Intensive Care. 2017;7(-1):5-.
- nento B, da Luz LT. A systematic review on the rotational thrombelastometry (ROTEM(R)) thy, prediction and guidance of blood transfusion and prediction of mortality in trauma uma, Resuscitation and Emergency Medicine. 2016;24(-1):114-.
- MAMMF, VonVille HM, Lairson DR, Bodurka DC. How low should we go: a systematic review strictive red blood cell transfusion strategies in oncology. Cancer Treatment Reviews.
- L, Callum J, Shehata N, et al. Adverse effects of red blood cell transfusions in neonates: a Transfusion. 2016.
- ella M, Stanworth SJ. Use of platelet transfusions prior to lumbar punctures or epidural nplications in people with thrombocytopenia. The Cochrane Database of Systematic Reviews.
- nouth A, Saidenberg E, Maze D, et al. Optimal transfusion practices after allogeneic systematic scoping review of evidence from randomized controlled trials. Transfusion. 2016. Izier F, Moore L, Zarychanski R, et al. Red blood cell transfusion in patients with traumatic meta-analysis. Transfusion Medicine Reviews. 2016;30(-1):15-24.
- ill S, Morrison JK, Richter T, Waters N, Murphy MF, Wood EM. Optimal Dose, Timing and ransfusion: Results from a Systematic Review. Transfusion Medicine Reviews. 2017. vell S, Vyas P. Comparison of a restrictive versus liberal red cell transfusion policy for patients a, and other congenital bone marrow failure disorders. Cochrane Database of Systematic
- c, Hopewell S, Trivella M, Murphy MF. Comparison of different platelet count thresholds to platelet transfusion for preventing bleeding in people with haematological disorders after tem cell transplantation. Cochrane Database of Systematic Reviews. 2015(-11):CD010983-
- Trivella M, Hopewell S, Blanco P, et al. Different doses of prophylactic platelet transfusion h haematological disorders after myelosuppressive chemotherapy or stem cell of Systematic Reviews. 2015(-10):CD010984-CD.
- well S, Doree C, Stanworth SJ. Comparison of different platelet transfusion thresholds prior to ith thrombocytopenia. Cochrane Database of Systematic Reviews. 2015(-12):CD011771-CD. E. Tinmouth A. Boutin A. Pagliarello G. et al. Red blood cell transfusion and mortality effect in tween allogeneic or autologous blood transfusion and survival in patients after radical nd meta-analysis. Plos One. 2017;12(-1):e0171081-e.
- en B, Yang J, et al. [The efficacy and safety of postoperative retransfusion drain following s]. Zhonghua Wai Ke Za Zhi [Chinese Journal of Surgery]. 2016;54(-2):108-13. w, Gillaspie EA, Greason KL, Kashani KB. Association of blood transfusion with acute kidney e replacement: A meta-analysis. World Journal of Nephrology. 2016;5(-5):482-8. Asi N, Mohammed K, Murad MH, et al. Reducing the risk of transfusion-transmitted
- tic review and meta-analysis. Transfusion. 2016.
- g KM. Allogeneic blood transfusion is a significant risk factor for surgical-site infection sty: a meta-analysis. The Journal of Arthroplasty. 2016.
- itark MJ. Washed versus unwashed red blood cells for transfusion for the prevention of fants. The Cochrane Database of Systematic Reviews. 2016(-1):CD011484-CD.
 f blood component ratio with clinical outcomes in patients after trauma and massive anced Emergency Nursing Journal. 2016;38(-2):157-68.
- son-Hock ES, Sutton A, Dhanasiri S, et al. Association between transfusion status and overall stic syndromes: a systematic literature review and meta-analysis. Acta Haematologica.
- ah JB. Association between perioperative blood transfusions and clinical outcomes in urgery: a systematic review and meta-analysis study. Journal of Blood Transfusion.
- for patients receiving blood transfusions. Cochrane Database of Systematic Reviews.
- : JM, van Rhenen DJ, VlaarAp. Low-risk transfusion-related acute lung injury donor strategies usion-related acute lung injury: a meta-analysis. Transfusion. 2015;55(1):164-75. SM. Nasir SB. Sperrin M. NolanJ. et al. Blood transfusion after percutaneous coronary.

Koh IJ, et al. Computer navigation is effective in reducing blood loss but has no effect on mary total knee arthroplasty: a meta-analysis. Knee Surgery, Sports Traumatology, sska. 2016.

(For a	THE TOP 29 QUESTIONS IN ORDER OF PRIORITY AS AGREED at the Final Workshop. (For all remaining questions in other categories please see later in this worksheet).				Previous Related & up-to-date Res
			Is it now time for retrospective controlled trials to be undertaken in the UK comparing patients who have refused blood transfusion in comparison with those in matching capacities who were transfused?	Jehovah's Witness	
			What alternatives to blood transfusion are best to treat sudden blood loss, in Jehovah's Witness patients, due to cardiac cath lab complications?	н	
			What safe alternatives are available for patients who do not want to receive blood transfusions	н	
			What safe alternatives exist for patients who do not want, or cannot receive, blood transfusions?	ВН	
			Benefits from non-blood transfusion-alternative treatment	н	
D2	Why aren't previous recipients of a blood product transfusion allowed to be blood	29	Why, if it's deemed as safe, to receive blood products can you no longer be a blood donor once you have been transfused?	РВН	No up-to-date evidence.
	donors?	25	Why are people not allowed to donate blood when they have had a transfusion even if it is many years ago?	ВН	
			Why am I unable to donate after having a transfusion, surely the blood is checked before transfusing and is safel?	В	
			is it safe for someone who has previously had a transfusion to donate blood subsequently	P B R H	
			Can you never ever give blood if you've had a transfusion?	P R H	
			I can no longer give blood due to having a blood transfusion 20yrs ago-what is being done to research this	РВН	
			How should we tell blood donors that they can never give blood again after receiving a blood transfusion	РВН	
			Why cannot patients who have received a transfusion then go on to donate?	BRH	
			Why can't people who have received a blood donation give blood?	RH	
			Why did I have to stop being a blood donor after having blood transfusions?	РВ	
			I received a transfusion in 1997 and since then have been told I cannot give blood having been a recipient of a transfusion (I was informed this was standard practice). Is this likely to change in the future? What is the cause of this refusal?	a P B	
			why can't I donate blood after receiving it	В	
			Why can't I donate blood after receiving a transfusion?	РН	
			When will you relax the restriction on people who have had blood transfusions from giving blood	B R	
			Why does having anti bodies following transfusion prevent any future blood donation?	RH	
			Why can individuals who have received blood prior to a certain date not donate?	Р	
			Do we really still need to worry about CJD? This is preventing many possible donors from being able to donate when they have had blood themselves. Isn't it all theoretical now?	н	
			Why can't people who have had IVF donate?	R B H	
			Is vCJD really a legitimate concern for plasma donation in the UK?	н	

c	0	2	r	r	h	
3				L		

The 50 que	stions included in the interim survey	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has	Previous Related & up-to-date Research
D11	What would encourage more	How can we encourage people to donate	н	1. Bagot KL, Murray AL, Masser BM. How can we improve retention of the first-time donor? A systematic review of the current evidence. Transfusion Medicine Reviews. 2016;
		How can the rest of the population (especially minorities) be encouraged to	н	2. Memon A, Moiz B. Why are we losing our precious blood donors? A systematic review from Pakistan. Haematologica. 2016;101((s1)):P877- ABSTRACT NO.PB2222
	ethnic minority groups or people	become regular donors ? How do we encourage more donors?	н	3. Appiah BA, Bates BA. Cultural context and role of communication in promoting adequate blood donation in sub-Saharan Africa: a systematic literature review. Vox Sanguinis
	with rare blood type) to donate	It should be mandatory to donate/ or be paid to do it	В	
	blood?	people should be encouraged to donate more by better campaigning	РВ	
		What would encourage people to donate blood?	н	
		What an we do to encourage more people to become blood donors?	PRBH	
		How can we make giving blood more appealing to the public?	PRBH	
		How can we make donating blood more appealing to the public?	PRBH	
		How is recruitment for more blood donors being developed.	P R B	
		How can we encourage more ethnic minorities to give blood?	RBH	
		How can the public be made aware of the need to be donors? How do you plan getting more people to donate?	R H P B	
		How important is blood type and does marketing for new donors target rare	P	
		types?	-	
		Should be patients friends & family be asked to join campaign to get more donors as they've seen firsthand how it helpsthis happened with me	Р	
		I have a major concern in our declining stock of blood. What is preventing the general public from donating? Is it lack of knowledge? Are they concerned about the safety of receiving another's blood?	н	
		Encouraging people to become donors, but without putting too much pressure	RBH	
		on those already signed up How do we increase number of people donating?	ВН	
		How can more people be encouraged to become donors?	NK	
		How can more people from minority ethnic backgrounds be encouraged to think	В	
		about donating?		•
		How can I help promote the blood donation process? When you give blood it is quite an old fashioned type of service, it needs	B	
		updating to get younger donors interested and involved	В	
		The most effective ways and time to give blood and blood products	RH	
		Would sending information about where/how donations have been received	В	
A2	How can the wastage of donor	increase the popularity of donating blood? How can we reduce the lag time between request and availability of blood for	н	No up-to-date SR evidence
	blood be minimised?	transfusion?		
		What is the basis for the 30 minute rule?	B H B H	
		How ethical is it to collect blood that will be destroyed e.g. from AB+ve females How can we reduce blood wastage by improving transport / administration	н	
		whilst ensuring ready access to blood when required	В	
		How much blood donated is "wasted" by disposal? How might this percentage (i.e. wastage/redundancy) be reduced?	В	
		Why are giving sets not flushed with 0.9% sodium chloride on completion of	вн	1
		transfusion		4
		Why is blood thrown out in the giving set?	Р	4
		Can I be sure my donation will not be wasted? Are too many donations rejected unnecessarily?	B H B H	4
		What happens to unused donations?	вн	1
		What happens to blood that is not used after donation?	РВН]
		Percentage of donations that are transfused	ВH	
		What percentage, if any, of all blood donated for transfusion gets wasted?	Р	
		Does all the blood donated at donor sessions get used?	RBH	4
		When a child needs blood ,why is a whole bag used .why is there so much	вн	
		wasted.		
		Is all collected blood used usefully or is there wastage?	RB	4
		Is all the donated blood used What percentage of blood donations are found to be unusable because of	H	4
		contamination?	В	
		how do I know how my blood is being used?	R B	
		What percentage of donated blood gets used?	В	4
		How many units have been wasted due to 30 minute rule violations? If this information is not captured, why not?	BH	
		information is not captured, why not? How much blood is wasted by the health services and we're is that most common	ВН	1
		What percentage of blood is actually used per year?	R B	1
			BH	1
		How many units are 'wasted' in hospitals (e.g. poor storage)?		
DtTr6	How can patients with anaemia	How many units are wasted in nospitals (e.g. poor storage)? How much blood/blood products is wasted by hospitals which have blood on standby for surgical procedures? Are patients being screened and treated for anaemia before surgery to prevent	РН	1. Potter LJ, Doleman B, Moppett IK. A systematic review of pre-operative anaemia and blood transfusion in patients with fractured hips. Anaesthesia. 2015;70(4):483-500.

016;30(2):81-91.	N
uinis. 2015;109((Suppl. 1)):p128. Abstract P-142	
	N
8-CD.	N

The 50 que	estions included in the interim survey	Original Question received by the survey.	Who generated the question	Previous Related & up-to-date Research
			P = Person who has	
			received a blood	
			transfusion; R =	
		4	relative or carer of someone who has	
				· · · · · · · · · · · · · · · · · · ·
	timely manner so that the need for transfusion ius avoided?	How to promote early identification of patients who are anaemic who are going to need a transfusion and treat it to avoid them needing a transfusion	RBH	 Hogan M, Klein AA, Richards T. The impact of anaemia and intravenous iron replacement therapy on outcomes in cardiac surgery. European Journal of Cardio-Thoracic Surgery Chan AW, de Gara CJ. An evidence-based approach to red blood cell transfusions in asymptomatically anaemic patients. Annals of the Royal College of Surgeons of England. 2
		Does a transfusion to correct anaemia lead to the true cause of the anaemia	н	-5. Borstlap WA, Stellingwerf ME, Moolla Z, Musters GD, Buskens CJ, Tanis PJ, et al. Iron therapy for the treatment of preoperative anaemia in patients with colorectal carcinoma
		beingh missed? How do Blood Transfusion experts penetrate into the Commissioners and GPs in	ВН	Other Types:
		order to fully employ Patient Blood Management which I believe should start in	ВП	1. Bonovas S, Fiorino G, Allocca M, Lytras T, Tsantes A, Peyrin-Biroulet L, et al. Intravenous versus oral iron for the treatment of anemia in inflammatory bowel disease: a system 2016;95(-2):e2308-e.
		the community? How important is anaemia during pregnancy, what are the clinical	BRH	2. Tay HS, Soiza RL. Systematic review and meta-analysis: what is the evidence for oral iron supplementation in treating anaemia in elderly people? Drugs & Aging. 2015;32(2):1
		consequences, how should oral iron be used (including prevention)?	Ditti	
		How should anaemia be managed before elective surgery to reduce the risk of transfusion	PBRH	
		How can GPs be more engaged in the pre-operative process to ensure that	NK	
		blood counts are optimised before admission to hospital?		
		Are hospital patients more or less likely to develop delirium with a lower	ВН	
		haemoglobin		
		Why do general doctors in hospital and GP surgeries understand so few facts about donor blood and the treatment of anaemia?	RBH	
DtTr21	Which patients groups would	Trial of synthetic RBC substitutes vs PRC	н	No SR evidence available
-	benefit most from artificial	where is the development of artificial blood and blood products?	RBH	
	blood* products? *Artifical blood	Are there substances that can be used to avoid blood transfusion	RBH	1
	ois a product made to act as a	Is there research going on into artificial blood replacement? Not just ectoplasm	ВН	
	substitute for red blood cells	but whole blood or RBC? Has there been any successful research in the production of a laboratory	ВН	4
	wiothj the sole purpose of transporting oxygen and carbon	manufactured blood replacement ? Can other products replace blood?	н	
	dioxide throughout the body.	What is the progress on the current research into manufactured red cells?	PR	
		What is the future for factory produced red cells?	вн	4
		How accessible are blood transfusion alternatives?	NK	
		How close are we to 'artificial' blood components so we don't have to rely on donors anymore	RBH	
		How can alternatives to blood transfusions be made more freely available?	NK	
		How do we develop artificial blood products?	ВН	-
		Are there any synthetic alternatives so that one does not have to donate?	РВН	
		Do you see any promise of a safe artificial oxygen carrying agent to replace RBC	Jehovah's Witness	4
		transfusion soon? Is there a likely hood of modified Haemoglobin products come into UK practice	NK	4
		in the near future?	NIN.	
1		Is there an alternative to human blood products	RBH	4
		Why are we not investing more in blood substitutes? Are there government funded projects to promote bloodless alternatives?	H NK	4
1				4
		Will viable blood substitutes be available in the near future? Are non-blood oxygen carrying fluids a viable option?	NK H	4
		Can we use synthetic agents to carry oxygen in the blood until the body is able	н	
		to manufacture its own red cells and therefore avoid the need for interhuman transfusion		
		Have you considered alternatives to blood ?	NK	
1		With the advancement of science has there been true research into alternative's) to blood, considering the hidden implications associated with	NK	
		blood?		
		What are developments in artificial blood currently?	RBH	
D8	What are the most effective ways to educate the general	Need to raise awareness of what blood donations are used for How can we improve the understanding of the general public for transfusion	P PBH	1. Bagot KL, Murray AL, Masser BM. How can we improve retention of the first-time donor? A systematic review of the current evidence. Transfusion Medicine Reviews. 2016;3 2. Memon A, Moiz B. Why are we losing our precious blood donors? A systematic review from Pakistan. Haematologica. 2016;101((s1)):P877- ABSTRACT NO.PB2222
1	public about the process and			3. Appiah BA, Bates BA. Cultural context and role of communication in promoting adequate blood donation in sub-Saharan Africa: a systematic literature review. Vox Sanguinis.
	purpose of blood donation?	To persuade new donors, why not illustrate, say by video maybe speeded up, the immediate improvements transfusions bring	R B	
		How can social media improve the knowledge of transfusion and numbers for	н	
		donation If it doesn't already feature; could blood transfusion and collection be added to	NK	1
		the national curriculum and feature in the PSHE course? Why do you not go into schools explaining the importance of blood donation	R B	4
		Why is the public not educated more about giving blood.	РВН	

gery. 2015;47(2):218-26. J. 2015;97(-8):556-62. ma: a systematic review. Colorectal Disease. 2015;17(-12):1044-54.	
tematic review and meta-analysis of randomized controlled trials. Medicine.	
):149-58.	
	N
6;30(2):81-91.	N
is. 2015;109((Suppl. 1)):p128. Abstract P-142	IN
	l

The 50 que	stions included in the interim survey	Original Question received by the survey.	Who generated the question	Previous Related & up-to-date Research
			question	
			P = Person who has	
			received a blood	
			transfusion; R =	
			relative or carer of	
		-	someone who has	
		Do the general public know about the process of blood transfusion from	BH	
		donation to a patient receiving blood		
		Donor Recruitment - Is there potential for there to be a national campaign	BH	
		(including all four devolved countries) to recruit more donors?		
		How long it takes?	В	
		How do I give bloo0d transfusion	В	
		Why does it appear that you seem reluctant to reward those donors of large	BH	
		numbers of donations nowadays? Cutbacks?		
		Why is the profile of donation days in an area not better flagged ?	BH	
		Do you think being a blood donor could be mandated for all 20-40 year olds	РВН	
		Should blood donation be made compulsory for healthy adults?	н	
			RB	
		Do you approach businesses asking them to send a donation registration pack	КD	
		with their recruitment process? Why don't you raise the profile of blood donation? National campaign; blood		
			В	
		donor day; blood donation featuring in a soap	В	1
		Why isn't there any school/college visits about why giving blood is so important?	в	
1		Mars info on donating plasma -l-t-l-tt-		
		More info on donating plasma, platelets etc	R B	
D6	How can donation sessions be	Many people express frustration at not being able to get an appointment to	н	1. Bagot KL, Murray AL, Masser BM. How can we improve retention of the first-time donor? A systematic review of the current evidence. Transfusion Medicine Reviews. 2016;:
	organised to make them easier	donate blood, there seems to be very limited donor sessions		2. Fisher SA, Allen D, Doree C, Naylor J, Angelantonio ED, Roberts DJ. Interventions to reduce vasovagal reactions in blood donors: a systematic review and meta-analysis. Tran:
	and more convenient for blood			3. Hoogerwerf MD, Veldhuizen IJ, De Kort WL, Frings-Dresen MH, Sluiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a syster
		Why can you not provide enough slots for donors.	BH	
	donors?	Could you have more flexibility for donation sessions	Н	
		Why do donors fall off the active list and how can we look after them better?	BH	
		,		
		Sometimes donor sessions are restricted to specific time slots. Can there be	RBH	
		more scope to turn up without an appointment?		
		I am finding it increasingly difficult to donate as often as I would like, why is that.	R B	
		There seems to be less sessions at my donation centre, why?	R B	
		Why does donating blood affect people differently? (Some faint, some feel no	B	
		effect etc)	b	
		Why do some people give blood easily and quickly compared to others?	В	
		why do some people give blood easily and quickly compared to others?	Б	
		Why can't local health convices he supplemented to take bleed denations?	В	
		Why can't local health services be supplemented to take blood donations?	в	
		How can the decisions around limiting donor pool for platelets and plasma be	В	
		best communicated to the public?	Б	
		Why does it sometimes seem difficult to arrange my next donation as soon as I	BH	
		would be eligible, especially as we have two donation venues in this city? At the	вп	
		one venue there are no future schedules available and the staff are unable to		
		provide information about other local venues.		
		provide information about other local vendes.		
		Would happily donate as often as passible but sessions at the location only	R	
		Would happily donate as often as possible but sessions at the location only twice a year	n	
		Why are some Donation Places so busy that it is hard to get an appointment?	В	1
		any are some ponation makes so busy that it is hard to get an appointifient?	5	
		Why do you not weigh patients who do not know their weight prior to blood	BH	
		donor sessions - instead of turning them away to come back another day	011	
		asito, sessions instead of tarning them away to come back another day		
		Why aren't there more places to donate platelets?	Р	
			BH	1
		Why isn't there more open drop in sessions for blood donors		
		From a donor point of view: when my letter comes through the door with my	BH	
		next appointment the session is already fully booked when I ring up to confirm,		
		this puts me off organising an alternative date.		
		Why do you not put on donation sessions at hospitals?	Н	
		Last donor session booking slot is early evening and gives little time to get back	BRPH	
		from work to attend - whilst understanding the need for packing up time after -		
		can there be later donor slots/evening donor sessions?		
		Miles deale MUCDT have bland 1		4
		Why don't NHSBT have blood donor sessions in hospitals? This would increase	BRPH	
		the number of donors hugely	r	
		Why is there such variation in opportunities or places to donate between	В	
		different areas of England?	-	4
		Why not have more fixed places where donations can take place e.g. at	В	
1		hospitals?		
		Why aren't there more donation centres?	BH	
		Why is the donation service hours so short and everyone stops at lunch and	В	
		breaks		
		Why don't you get donation points at gap surgeries	В	1
		Is the waiting time at donor sessions acceptable?	В	
		I would like to be a platelet donor but the location is not very accessible. Could	В	
		there be more invested in this to have more venues?		
		Could a mobile facility be made available? Obviously cost is at the heart of that	В	1
		question.		
1		Why are there so few platelet donation venues if it is so important?	В	
1		· · · · · · · · · · · ·		

.20/21.01	NI NI
;30(2):81-91. Isfusion Medicine (Oxford, England). 2016;26(1):15-33.	Ν
matic review of the literature. Blood Transfusion. 2015;13(3):354-62.	
	I

Page 19 of 57

				1
The 50 ques	stions included in the interim survey	Original Question received by the survey.	, e	Previous Related & up-to-date Research
			question	
			P = Person who has	
			received a blood	
			transfusion; R =	
			relative or carer of	
			someone who has	
		Why do you not work Saturdays and Sundays? people who work - would be	В	
		easier to donate		
		Why do donors fall off the active list and how can we look after them better?	BH	
		What is the donors experience when doing this specifically to donate to an	н	
		individual. How can blood donors best be thanked and rewarded ?	Н	4
		How can be experience for blood donors be improved	ВН	
		Why do donors get upset if they cannot donate for any reason.	BH	
			PBH	4
		How can we improve the feedback on the fate of blood post transfusion	РБП	
		Have you considered thank you test to donors?	ВН	
		What can we do to improve your experience?	R B	
		Why don't you use skin analgesia prior to donation as I feel this may prevent	RBH	
		donation	NO II	
		Why does a service which relies on public goodwill fail perform so poorly in basic	В	
		customer service at point of delivery?		
		Is it possible to inform the donor when there blood has been used?	R B	
		Why does it seem that by donating blood you are doing me a favour?	В	1
		Could donors be given information while waiting on other forms of donation?	В	1
			-	
		Why are blood donors so undervalued?	R B	1
		Why do people not donate?	P B	1
		Can the process of blood donation be made more efficient?	ВН	1
		How can we make blood donation be made more enclent:	вн	1
				4
		Is there a way of cutting down waiting times especially when attendees are getting cold/dehydrated?	PRBH	
		getting cold/denydrated? Process of donating blood, how to streamline service	ВН	1
				4
		How can the appointment system be refined to ensure prompt donations?	BH	
		Is the waiting time at donor sessions acceptable?	В	4
		Why do you make so many hurdles to people who want to give blood	В	4
			PBRH	4
		How uncomfortable is it to donate and does this put people off coming again?	РБКП	
		Would home self-testing of haemoglobin before attending blood donation	В	
		sessions be acceptable, feasible, accurate, and save time and money?		
		How well rolled out is the text message service notifying donors of usage?	н	
		What would the impact of paying donor expenses be?	РН	
		Is there a way to make the donation process simper/more efficient?	R B	
DtTr1	How can health professionals be	Explore the level of knowledge and understanding of prescribing and	н	1. Hibbs SP, Nielsen ND, Brunskill S, Doree C, Yazer MH, Kaufman RM, et al. The impact of electronic decision support on transfusion practice: a systematic review. Transfusion N
	discouraged from using blood	administrating blood transfusions by healthcare professionals.		
	inapproriately?	What systems can we put in place to limit unnecessary use of blood and blood	ВН	
		products on the ICU?		4
		How can we improve knowledge of and reduce incidence of TRALI	RBH	4
		What can be done to make it easier to give blood in the bleeding patient (i.e. not	н	
		1:1:1) [ratio question]	Quantice and 1	4
		NICE GUIDELINE RESEARCH KEY RECOMMENDATION: Electronic decision	Question not derived	
		support: [Guideline Dev Gp fully assessed all evidence to Jan 2015 =	from the survey but from another source.	
		"inconclusive and of very low quality"]. What is the clinical and cost	nom another source.	
		effectiveness of an electronic decision support system compared with current practice in reducing inappropriate blood transfusions, overall rates of blood		
		transfusion and mortality?		
		,		
		Red cell transfusion: dose, frequency, end points, outcome, home vs. hospital,	н	
		efficacy in patients with chronic malignant haematologic diseases		
		Transfusion is a quick fix, but is it always the best fix?	Н	
		A bigger push on hospitals etc on "Why use 2 when 1 will do". Lets get out	н	
		profesiso		1
		Ensuring that all hospital staff realise that blood transfusion is akin to	RBH	
		transplantation and not be blase about administering it		4
		How can Hospitals reduce the requirements for Blood Transfusions	R B H	4
		How can the risks and complications associated with blood transfusions be more	NK	
		clearly understood by the wider medical community?		
		How can we improve the hospitals clinicians that blood is a limited resource, I	ВН	1
		feel they should be encouraged to be donors.	51	
		How do we encourage staff to use blood only when necessary	н	1
		How do we unify blood transfusion practices across disciplines (.e.g. cardiac	RBH	1
		surgery vs. general ICU)?		
		Should blood and blood product transfusion in trauma be better applied in NHS	н	1
		hospitals? Is current guidance actually being followed?		
		To save time and resources (for both patients and health care professionals) is	ВН	
		it possible to reduce the amount of blood products that are prescribed?		
				4
		What measures could prevent blood transfusions?	н	
1 1				

on Medicine Reviews. 2015;29(1):14-23.	N
on Medicine Reviews. 2015;29(1):14-23.	N

-1 -1				
The 50 que	stions included in the interim survey	Original Question received by the survey.	Who generated the question	Previous Related & up-to-date Research
			P = Person who has	
			received a blood	
			transfusion; R =	
		-	relative or carer of	
			someone who has	
		Why do clinical staff seemingly ignore SOPs and improvise a procedure and end up getting it wrong - move to A7?	В	
		Who should decide that a patient should receive a blood transfusion?	RBH	
		How decision to transfuse is made	RBH	
		How can health care professionals in general be better informed about	NK	
		alternatives to blood transfusion? How can we ensure that evidence based best practice regarding optimising pre-	н	
		op haemoglobin is implemented		
		What factors are the most important to ward clinical staff (consultants & junior doctors) in deciding when to initiate blood transfusion	н	
		How do we promote transfusion triggers and make doctors keep to it!	R B H	
		Should doctors have mandatory updates on blood transfusion, no matter what their seniority?	ВН	
		What factors influence the usage demand for donated blood products & can waste be reduced?	В	
		What should determine the need to transfuse?	Н	
		When is blood transfusion absolutely indicated and when can it be avoided	RBH	
		When should I transfuse patients? Would it be beneficial to transfuse blood based on an ideal body weight rather	н	
		than everyone receiving a similar amount?		
A1	What is the best administrative	How can modern technology e.g. apps for patients/healthcare professionals	н	1. NICE Guideline Recommendation: Electronic patient identification
	process for hospital blood	improve the transfusion process ? Why do you have to replicate all the info about blood transfusions on two	RBH	12. Consider using a system that electronically identifies patients to improve the safety and efficiency of the blood transfusion process.
	transfusion to keep patients safe and minimises delay?	separate forms that repeat the same information		 Sellen KM, Jovanovic A, Perrier L, Chignell M. Systematic review of electronic remote blood issue. Vox Sanguinis. 2015;109(-1):35-43.
	and minimises delay!	Can we rationalise the requesting process to reduce delays in urgent situations	н	3. Manning N, Heddle NM, Arnold D, Crowther MA, Siegal D. Interventions to reduce blood loss from laboratory testing in critically ill patients and impact on transfusion: a syste
		Is it possible to design a "reminder" for staff regarding component times for transfusion that is easy to access and carry?	н	4. Manning M, Heddle N, Arnold D, Crowther MA, Siegal DM. Interventions to reduce blood loss from laboratory testing in critically ill patients and impact on transfusion: a systematic as a systematic structure of the systemati
		How can we be sure there are no errors in blood product delivery?	РВН	5. Hibbs SP, Nielsen ND, Brunskill S, Doree C, Yazer MH, Kaufman RM, et al. The impact of electronic decision support on transfusion practice: a systematic review. Transfusion N
		How can the experience of blood transfusion for mothers during/after labour be	NK	6. Coustasse A, Cunningham B, Deslich S, Willson E, Meadows P. Benefits and barriers of implementation and utilization of Radio-Frequency Identification (RFID) systems in tran 2015;12((Fall)):1d-d.
		improved? Is there a more efficient way of networking to support optimal use of blood bank supplies than our existing methods	PRBH	
		How to maintain safety for recipients of blood and blood products	BH	
		Why do we (West Yorkshire) need a second patient checker when areas in	PRBH	
		Scotland don't Is the procedure for prescription through to administration of a transfusion standardised across all NHS trusts?	Р	
		How can we reduce lengthy stays in hospital due to transfusion?	BH	
		How do we ensure patient safety individually and collectively in blood	н	
		transfusion ? How safe is it for a patient to have a transfusion in their own home rather than	BH	
		travel to the hospital?		
		why does each trust have a different transfusion record	ВН	
		Why is there not a universal procedure when administering prescribed blood products, documentation often differs in other health boards.	н	
		How can patients receiving a transfusion experience a higher rate of safety?	R B	
		Avoid transfusion errors	PRH	
		Do the control measures designed to ensure 'safe blood' have an evidence base	R B H	
		or are some based on assumption of risk? Are there any strategies to reduce the development of Abs in Tx dependent	R B H	
		patients? Improving safety of community transfusions (with aim to reduce acute hospital	ВН	
		bed use)	вH	
		How can we improve communication between hospitals for patients needing special requirements?	РВН	
		Why don't patient ID wristbands have barcodes/ matrix to be scanned instead of	P R B H	
		second checker What checks are made to ensure a patient receives the right type and amount of blood?	NK	
		Why can we not have a way of using patient barcodes to link to the computer	R B H	
		system, to reduce risk of mis-labelling? Why can't transfusions be given evenings and weekends (in all hospitals) for	P R	
		patients on long term transfusion regimes?		
		Are the donor exclusion criteria truly evidence based?	R B	1. Pasricha S, Speedy J, Low M. What do systematic reviews of iron supplementation in women tell us about the functional consequences of donor iron deficiency? Vox Sanguin
		When is safe to donate blood after contacting hepatitis A? Why do I need to wait after travelling abroad if I have not been unwell or	P B B H	 Hoogerwerf MD, Veldhuizen IJ, De Kort WL, Frings-Dresen MH, Sluiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a system 3.Estcourt LJ, Malouf R, Hopewell S, Trivella M, Doree C, Stanworth SJ, Murphy MF. Pathogen-reduced platelets for the prevention of bleeding. Cochrane Database of Systemati
	donor?	vaccinated?		10.1002/14651858.CD009072.pub3.
		Can a person with HIV be able to donate blood?	РН	4. Chasse M, McIntyre L, English SW, Tinmouth A, Knoll G, Wolfe D, et al. Effect of blood donor characteristics on transfusion outcomes: a systematic review and meta-analysis.
			n	IT Chasse M. Tipmouth AT English CW Melatura I. Knoll C. Welte D. et al. Effect of blood denor characteristics on transfusion subcomes a sustainable review and mate analysis
		Why can't people with diabetes give blood - are there real evidence based reasons for the ban?	В	5. Chasse M, Tinmouth AT, English SW, McIntyre L, Knoll G, Wolfe D, et al. Effect of blood donor characteristics on transfusion outcomes: a systematic review and meta-analysis
		reasons for the ban?	PB	6. De Buck E, Dieltjens T, Compernolle V, Vandekerckhove P. Is having sex with other men a risk factor for transfusion-transmissible infections in male blood donors in Western

	Y
ystematic review. Journal of Thrombosis and Haemostasis. 2015;13((Suppl. 2)):974-	
systematic review. Blood. 2015. on Medicine Reviews. 2015;29(1):14-23. transfusion medicine. Perspectives in Health Information Management.	
guinis. 2015;109((Suppl. 1)):58 tematic review of the literature. Blood Transfusion. 2015;13(-3):354-62. natic Reviews 2017, Issue 7. Art. No.: CD009072. DOI:	N
rsis. Transfusion Medicine Reviews. 2016. Iysis. Transfusion. 2015;55((Suppl. 3)):123A-A. ern countries? A systematic review. PLoS ONE [Electronic Resource].	
usion. Cochrane Database of Systematic Reviews. 2015(2):CD007948-CD.	

-1	atterne to all and that the the	Original Occurting provided by the	Mathe a	Paralest Delay d Dava de das Devende
The 50 ques	stions included in the interim survey	Original Question received by the survey.	Who generated the question	Previous Related & up-to-date Research
			P = Person who has	
			received a blood	
			transfusion; R =	
		-	relative or carer of someone who has	
		What are the criteria for being able to donate blood?	R H	
		Donor Selection	RBH	
		Can I give blood after having had meningococcal septicaemia?	В	
		It is not clear on the blood donation that first time donors of 17 or 18 years old	BH	
		need to have eaten within the 4 hours prior to donation. It just states eaten and		
		drunk that day. Does it really matter if they have not eaten within 4 hours - not		
		everyone eats that regularly		
		How to insure donors and their health	RBH	
		I have ALL, therefore I have been told I can't give blood any more. I suspect I had	P B	
		blood cancer for a while before I was told by my GP. Does the service test		
		donations for blood cancer before giving blood to a recipient?		
		I have a blood cancer, how would it be picked up if I tried to donate blood?	R B	
		There a blood cancer, now would it be picked up in threa to donate blood.	N D	
		Can a person who suffers with Chronic Lymphatic leukaemia donate blood if that	NK	
		patients HB is high enough?	-	
		I assume that now I am diagnosed with a blood cancer I would not be able to give blood!!	В	
		Is the blood drop iron level test a good indicator of ability to donate?	В	
		Can any use be made of blood components (other than abnormal cells) if	Р	
		donated by MPN patients For someone who has not participated in the donation of blood, is there any	NK	
		qualitative aspect to the pre-screening questions?		
		How are donors screened?	NK	
		Why is it getting harder to meet the criteria to give blood, as it seems to change	В	
		every time I go? What if someone lies on their medical form?	RBH	
		Why are patients having had illegal (? Should this be illeal) conduit surgery that	В	
		did not receive a transfusion during surgery unable to ever give blood in the	5	
		future?		
		What precautions should be taken and the blood tests to be carried out?	RH	
		Why exclude ALL females from plasma donation regardless of history of previous	RBH	
		(possible) pregnancies? Assumption that HLA/HPA antibodies present in all		
		females.		
		I'm asthmatic, so if there is a connection to blood donation and asthma I'd be	В	
		interested. What medications stop you from donating blood = make a single question	н	
		What can be done to safely relax existing rules around donation, for people who	РН	
		want to donate but are exempt i.e. with individual consultant permission , or further screening?		
		After a critical illness, can I safely donate again?	РВ	
		Does the general fitness of the donor have any impact on the quality of blood	NK	
		donated? If so, would it/should it be part of the collection strategy to target		
		sections of society who maintain a healthier life-style e.g. Health-centres and		
		gymnasiums etc? Is it good enough to rely on people's honesty about their health?	R B	
D12a	If the blood taken from a donor	What would the donor centre do if a test came back with "bad news"	PRPH	No available SR evidence
	shows a result that might impact	Would I be told if an abnormality were found in my blood donation?	RB	
	their future health, how should	Can a blood Donor have a full health check of their blood. E.G. Vitamins,	B	
	this best be communicated to	Minerals, Hormone Levels and health of the blood.		
	the donor?			
	How can the blood transfusion	How can we educate healthcare professionals to adopt best practice in RBC	BH	No available up-to-date evience.
	process be delivered more safely	transfusion Is the training given to junior doctors on transfusion enough?	ВН	
	in hospitals?	JUNIOR DOCTORS. How consistent is their training in Transfusion Avoidance	Jehovah's Witness	
		June 2015 and use of Alternatives?		
		Nursing and medical team to have a better and in depth understanding of the	ВН	
		side effects of blood transfusions and be aware of common haematology medical problems which can interfere with blood donation/transfusion.		
		needed provents which can little lere with blood duildtion/traisiusion.		
		Shouldn't NMS put more money in to researching and training surgeons in blood	NK	
		conservation techniques?		
		Why can't medical staff give advice on non-blood products?	NK	
		Why is there such a disconnect between knowledge and practice regarding transfusion requirements in clinical medicine? i.e. Are medical students taught	н	
		the indications and evidence for transfusion?		
		How do we improve the sharing of knowledge in transfusion science to juniors staff	BH	
		stan Why is blood transfusion training not a nationally required core mandatory	н	
		training subject		
		How do we safeguard unnecessary transfusion?	н	
1		Why can't experienced nursing staff prescribe blood?	R B H	

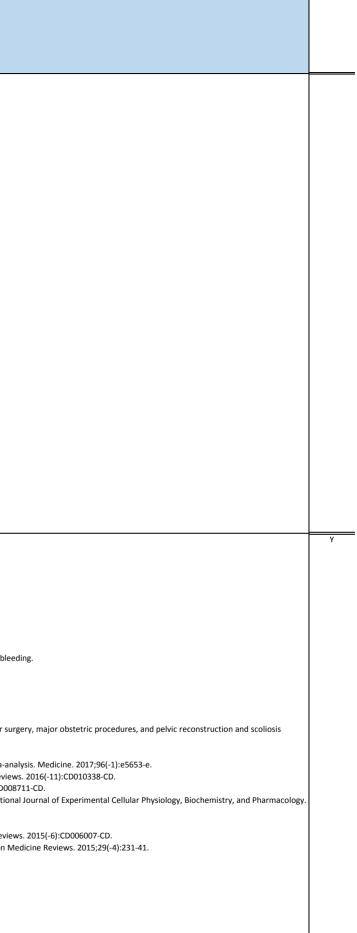
N
N

The 50 ques	stions included in the interim survey	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has	Previous Related & up-to-date Research
		Do you reassess after giving each unit?	Н	
		Is ever a 1 or 2 pint transfusion valid since this amount can be donated by an individual?	NK	
B&C4	How can any negative long term	What future harm does a transfusion cause	РВН	1. Li SL, Ye Y, Yuan XH. Association between allogeneic or autologous blood transfusion and survival in patients after radical prostatectomy: a systematic review and meta-analysis.
	effects of blood transfusion be	Harm caused by blood transfusion	R B H	2. Xie JW, Xu B, Kang PD, Zhou ZK, Shen B, Yang J, et al. [The efficacy and safety of postoperative retransfusion drain following total hip arthroplasty: a meta-analysis]. Zhonghua Wa
	prevented?	What proportion of frequent platelet recipients develop HLA or specific	н	3. Thongprayoon C, Cheungpasitporn W, Gillaspie EA, Greason KL, Kashani KB. Association of blood transfusion with acute kidney injury after transcatheter aortic valve replacement
		antibodies? What are the effects of blood transfusion on the immune system, infection	ВН	4. Mainou M, Alahdab F, Tobian AA, Asi N, Mohammed K, Murad MH, et al. Reducing the risk of transfusion-transmitted cytomegalovirus infection: a systematic review and meta-a 5. Kim JL, Park JH, Han SB, Cho IY, Jang KM. Allogeneic blood transfusion is a significant risk factor for surgical-site infection following total hip and knee arthroplasty: a meta-analys
		rates, cancer recurrence etc?	511	6. Keir AK, Wilkinson D, Andersen C, Stark MJ. Washed versus unwashed red blood cells for transfusion for the prevention of morbidity and mortality in preterm infants. The Cochra
		What are the long-term consequences of blood product transfusion?	BH	7. Jones AR, Frazier SK. Association of blood component ratio with clinical outcomes in patients after trauma and massive transfusion: a systematic review. Advanced Emergency N
		Long term risks	В	-8. Harnan S, Ren S, Gomersall T, Everson-Hock ES, Sutton A, Dhanasiri S, et al. Association between transfusion status and overall survival in patients with myelodysplastic syndrom
		What are the long term risks of receiving a blood transfusion?	BH	2016;136(-1):23-42. 9. Cata JP, Lasala J, Pratt G, Feng L, Shah JB. Association between perioperative blood transfusions and clinical outcomes in patients undergoing bladder cancer surgery: a systemat
		Are any patients at particular risk of long-term complications when receiving	ВН	
		blood transfusion?		10. Sarai M, Tejani AM. Loop diuretics for patients receiving blood transfusions. Cochrane Database of Systematic Reviews. 2015(2):CD010138-CD.
		What is the long term effect on health of blood transfusion What is the relationship between blood transfusion and poorer outcome in the	вн	11. Muller MC, van Stein D, Binnekade JM, van Rhenen DJ, Vlaar Ap. Low-risk transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related
		era of leukocyte-depleted blood?		12. Kwok CS, Sherwood MW, Watson SM, Nasir SB, Sperrin M, NolanJ, et al. Blood transfusion after percutaneous coronary intervention and risk of subsequent adverse outcomes:
		Are there any dangers associated with Blood Transfusion?	Р	2015;8(3):436-46.
		With multiple transfusions how do the risks of complications increase with each	н	13. Kopolovic I, Ostro J, Tsubota H, Lin Y, Cserti-Gazdewich CM, Messner HA, et al. A systematic review of transfusion-associated graft-versus-host disease. Blood. 2015;126(-3):406 14. Keir AK, Pal S, Trivella M, Lieberman L, Callum J, Shehata N, et al. A systematic review and meta-analysis of risks of red cell transfusion for neonatal morbidities or mortality. Vo
		additional unit transfused Is there any long term follow up for patients who have received the wrong unit	PBRH	15. Keir A, Pal S, Trivella M, Lieberman L, Callum J, Sheheta N, et al. Adverse effects of RBC transfusions in neonates: a systematic review and meta-analysis. Abstracts of the HAA 20
		of blood?		16. Balvers K, Wirtz MR, van Dieren S, Goslings JC, Juffermans NP. Risk factors for trauma-induced coagulopathy and transfusion-associated multiple organ failure in severely injure
		what are the long term problems after blood transfusion	н	
		Can we produce more evidence regarding risks and benefits of blood transfusion in different clinical scenarios.	н	
		Risk of transfusion	н	
		what are the risks of blood transfusions	н	
		How does a blood transfusion impact on the recipient's future health. Are there	РВ	
		any negative outcomes that we know of? What about as yet unknown risks?	RBH	
		What can be done to decrease the number of reactions in multitransfused	PR	4
		patients?		
		Are all transfusions safe to have?	RBH	-
		Benefits and risks from treatment with blood transfusion What is the effect of blood product transfusion on immunity?	н	-
		Are breast cancer surgeons aware of the potential immunosuppressive effects	RBH	
		of blood transfusion (or tissue trauma)		
DtTr24	Does the use of oral or	The role of iron in the management of chemotherapy-induced anaemia in cancer	Question not derived	Nice Guideline Recommendations:
	intravenous iron for patients with	patients receiving erythropoiesis-stimulating agents. Implications for research:	from the survey but	Alternatives to blood transfusion for patients having surgery: Oral iron, IV iron and erythropoietin
	iron deficiency anaemia reduce	Since the included RCTs had shorter follow-up duration (up to 20 weeks), the long-term effects of iron supplementation are unknown. Nonetheless, further	from another source.	2. Offer oral iron before and after surgery to patients with iron-deficiency anaemia.
	the need for some transfusions?	studies are required to define the optimal dosage of iron. Future trials with a		 3. Consider intravenous iron before or after surgery for patients who: • have iron-deficiency anaemia and cannot tolerate or absorb oral iron, or are unable to adhere to oral iron treatment (see the NICE guideline on medicines adherence)
		longer follow-up and various re-dosing regimens are also required to determine the rick of adverse events and the impact of iron supplementation on mortality.		are diagnosed with functional iron deficiency
		the risk of adverse events and the impact of iron supplementation on mortality as well as the optimal re-dosing schedule after the patients received the initial		• are diagnosed with iron-deficiency anaemia, and the interval between the diagnosis of anaemia and surgery is predicted to be too short for oral iron to be effective.
		cumulative iron supplementation.		4. For guidance on managing anaemia in patients with chronic kidney disease, see the NICE guideline on anaemia management in chronic kidney disease.
				5. For guidance on managing blood transfusions for people with acute upper gastrointestinal bleeding, see section 1.2 in the NICE guideline on acute upper gastrointestinal bleeding
		Does use of pre-op/pre-procedure iv iron in iron deficient patients improve clinic	н	1. Aksan A, Isik H, Radeke HH, Dignass A, Stein J. Systematic review with network meta-analysis: comparative efficacy and tolerability of different intravenous iron formulations for
		outcomes and reduce peri-operative blood product use?		bowel disease. Alimentary Pharmacology & Therapeutics. 2017.
				2. Shepshelovich D, Rozen-Zvi B, Avni T, Gafter U, Gafter-Gvili A. Intravenous versus oral iron supplementation for the treatment of anemia in CKD: an updated systematic review and
		Is their good evidence for the use of iron to reduce risk of needing a transfusion in the setting of a normal ferritin level	н	of the National Kidney Foundation. 2016.
		Oral or parenteral iron supplementation to reduce deferral iron deficiency	Question not derived	 Shah A, Roy NB, McKechnie S, Doree C, Fisher SA, Stanworth SJ. Iron supplementation to treat anaemia in adult critical care patients: a systematic review and meta-analysis. Criti Rognoni C, Venturini S, Meregaglia M, Marmifero M, Tarricone R. Efficacy and safety of ferric carboxymaltose and other formulations in iron-deficient patients: a systematic revi
		and/or anaemia in blood donors.	from the survey but	Investigation. 2016;36(-3):177-94.
			from another source.	5. Roger SD, Tio M, Park HC, Choong HL, Goh B, Cushway TR, et al. Intravenous iron and erythropoiesis-stimulating agents in haemodialysis: a systematic review and meta-analysis.
		Would controlling the HB status with alternatives such as iron prevent the need	В	6. Qian C, Wei B, Ding J, Wu H, WangY. The efficacy and safety of iron supplementation in patients with heart failure and iron deficiency: a systematic review and meta-analysis. The
		for some blood transfusions?		7. Mhaskar R, Wao H, Miladinovic B, Kumar A, Djulbegovic B. The role of iron in the management of chemotherapy-induced anemia in cancer patients receiving erythropoiesis-stim 2):CD009624-CD.
			н	2/.000/3024-00.
		Does intravenous iron reduce the need for blood transfusion post op?		8. Jankowska EA, Tkaczyszyn M, Suchocki T, Drozd M, von Haehling S. Doehner W. et al. Effects of intravenous iron therany in iron-deficient natients with systolic heart failure: a me
		Does intravenous iron reduce the need for blood transfusion post op?	н	8. Jankowska EA, Tkaczyszyn M, Suchocki T, Drozd M, von Haehling S, Doehner W, et al. Effects of intravenous iron therapy in iron-deficient patients with systolic heart failure: a me Failure. 2016.
		Does avoiding peri-operative transfusion improve outcomes? Does improving Hb preoperatively improve outcomes? Would you try iron therapy first?	н	Failure. 2016. 9. Clevenger B, Gurusamy K, Klein AA, Murphy GJ, Anker SD, Richards T. Systematic review and meta-analysis of iron therapy in anaemic adults without chronic kidney disease: upda 2016.
		Does avoiding peri-operative transfusion improve outcomes? Does improving Hb preoperatively improve outcomes? Would you try iron therapy first? what is best regime for managing pre-op anaemia for elective surgical patients (H H H Question not derived	Failure. 2016. 9. Clevenger B, Gurusamy K, Klein AA, Murphy GJ, Anker SD, Richards T. Systematic review and meta-analysis of iron therapy in anaemic adults without chronic kidney disease: upda 2016. 10. Bonovas S, Fiorino G, Allocca M, Lytras T, Tsantes A, Peyrin-Biroulet L, et al. Intravenous versus oral iron for the treatment of anemia in inflammatory bowel disease: a systemat
		Does avoiding peri-operative transfusion improve outcomes? Does improving Hb preoperatively improve outcomes? Would you try iron therapy first?	H H H	Failure. 2016. 9. Clevenger B, Gurusamy K, Klein AA, Murphy GJ, Anker SD, Richards T. Systematic review and meta-analysis of iron therapy in anaemic adults without chronic kidney disease: upda 2016.

eding.		
eding. eding. if or the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis American Journal of Kidney Diseases : the Official Journal Critical Care (London, England), 2016; 52(-2):151-9. itimulating agents. The Corkman Database of Systematic Reviews, 2016; 7		
eding. eding. if or the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis American Journal of Kidney Diseases : the Official Journal Critical Care (London, England), 2016; 52(-2):151-9. itimulating agents. The Corkman Database of Systematic Reviews, 2016; 7		
eding. eding. if or the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis American Journal of Kidney Diseases : the Official Journal Critical Care (London, England), 2016; 52(-2):151-9. itimulating agents. The Corkman Database of Systematic Reviews, 2016; 7		
eding. eding. if or the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis American Journal of Kidney Diseases : the Official Journal Critical Care (London, England), 2016; 52(-2):151-9. itimulating agents. The Corkman Database of Systematic Reviews, 2016; 7		
eding. eding. if or the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis American Journal of Kidney Diseases : the Official Journal Critical Care (London, England), 2016; 52(-2):151-9. itimulating agents. The Corkman Database of Systematic Reviews, 2016; 7	ysis. Plos One. 2017;12(-1):e0171081-e.	N
chrane Database of Systematic Reviews. 2016(-1):CD011484-CD. cy Nursing Journal. 2016;38(-2):157-68. romes: a systematic literature review and meta-analysis. Acta Haematologica. matic review and meta-analysis study. Journal of Blood Transfusion. elated acute lung injury: a meta-analysis. Transfusion. 2015;55(1):164-75. nes: a systematic review and meta-analysis. JACC: Cardiovascular Interventions. :406-14. ' Vox Sanguinis. 2015;109((Suppl. 1)):31-2. V. 2015 Annual Scientific Meeting. 2015:196-7. jured trauma patients. Frontiers in Medicine. 2015.	a Wai Ke Za Zhi [Chinese Journal of Surgery]. 2016;54(-2):108-13. ment: A meta-analysis. World Journal of Nephrology. 2016;5(-5):482-8. :ta-analysis. Transfusion. 2016.	
eding. eding. eding. if or the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis of randomized controlled trials. Clinical Drug yis. Repirology (Cartion, Vic). 2016. The Canadian Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016; 32(-2):151-9. Stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Updated and abridged Cochrane review. European Journal of Heart Updated and abridged Cochrane review. European Journal of Heart Updated and abridged Cochrane review. European Journal of Heart Updated and abridged Cochrane review. European Journal of Heart Updated and abridged Cochrane review. European Journal of Heart Updated and abridged Cochrane review. European Journal of Heart Updated and abridged Cochrane review. European Journal of Heart Updated and abridged Cochrane review. European Journal of Heart Updated and abridged Cochrane review. European Journal of Heart Updated and abridged Cochrane review. Europe	ochrane Database of Systematic Reviews. 2016(-1):CD011484-CD. cy Nursing Journal. 2016;38(-2):157-68.	
elated acute lung injury: a meta-analysis. Transfusion. 2015;55(1):164-75. nes: a systematic review and meta-analysis. JACC: Cardiovascular Interventions. 2406-14. 2406-14. 2400 Sanguinis. 2015;109((Suppl. 1)):31-2. 2401 Sanguinis. 2015;109((Suppl. 2015:196-7. jured trauma patients. Frontiers in Medicine. 2015. 3400 Figure 100 Section 100 Sectio		
res: a systematic review and meta-analysis. JACC: Cardiovascular Interventions. 2406-14. 24 Yor Sanguinis. 2015;109((Suppl. 1)):31-2. 24 2015 Annual Scientific Meeting. 2015:196-7. 2015 Jured trauma patients. Frontiers in Medicine. 2015. 2015 Jured trauma patients. Frontiers in Medicine. 2015. 2016 Jured trauma patients. Frontiers in Medicine. 2015. 2017 Jured trauma patients. Frontiers in Medicine. 2015. 2018 Jured trauma patients. Frontiers in Medicine. 2015. 2019 Jured trauma patients. Frontiers in Medicine. 2015. 2019 Jured trauma patients. Frontiers in Medicine. 2015. 2010 Jured trauma patients. Frontiers in Medicine. 2015. 2010 Jured trauma patients. Frontiers in Medicine. 2015. 2010 Jured trauma patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal 2011 Critical Care (London, England). 2016. Sep 29;20(1):306. 2016 Jured Traubasis of randomised controlled trials. Clinical Drug 2016; Jured Traubasis of randomised ontrolled trials. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart 2014 Supplementary	mate review and meta analysis study, southar of blood mansfusion.	
.: Vox Sanguinis. 2015;109((Suppl. 1)):31-2. VX 2015 Annual Scientific Meeting. 2015:196-7. jured trauma patients. Frontiers in Medicine. 2015. view Scientific Meeting. 2015:196-7. geding.		
eding. is for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.	v. Vox Sanguinis. 2015;109((Suppl. 1)):31-2. NA 2015 Annual Scientific Meeting. 2015:196-7.	
eding. is for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		
eding. is for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		
eding. is for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		
eding. is for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		
eding. is for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		
eding. is for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		
eding. is for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		
eding. is for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		
eding. is for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		
eding. is for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		
s for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		Y
s for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		
s for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		
s for the treatment of iron deficiency anaemia in patients with inflammatory w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		
w and meta-analysis. American Journal of Kidney Diseases : the Official Journal Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.	eding.	
Critical Care (London, England). 2016. Sep 29;20(1):306 review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.	for the treatment of iron deficiency anaemia in patients with inflammatory	
review and network meta-analysis of randomised controlled trials. Clinical Drug ysis. Nephrology (Carlton, Vic). 2016. . The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.	w and meta-analysis. American Journal of Kidney Diseases : the Official Journal	
The Canadian Journal of Cardiology. 2016;32(-2):151-9. stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- a meta-analysis of randomized controlled trials. European Journal of Heart updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.		
updated and abridged Cochrane review. European Journal of Heart Failure. ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.	. The Canadian Journal of Cardiology. 2016;32(-2):151-9.	
ematic review and meta-analysis of randomized controlled trials. Medicine. :149-58.	a meta-analysis of randomized controlled trials. European Journal of Heart	
:149-58.	updated and abridged Cochrane review. European Journal of Heart Failure.	
	ematic review and meta-analysis of randomized controlled trials. Medicine.	

				· · · · · · · · · · · · · · · · · · ·
The 50 qu	uestions included in the interim survey	Original Question received by the survey.	-	Previous Related & up-to-date Research
			question P = Person who has	
			received a blood	
			transfusion; R =	
			relative or carer of	
			someone who has	
				13. Peyrin-Biroulet L, Williet N, Cacoub P. Guidelines on the diagnosis and treatment of iron deficiency across indications: a systematic review. American Journal of Clinical Nutrition. 2015;102(-6):1585-94.
		research: After 40 years of research and 22 included studies on the subject, we	from the survey but	14. Pasricha S, Speedy J, Low M. What do systematic reviews of iron supplementation in women tell us about the functional consequences of donor iron deficiency? Vox Sanguinis. 2015;109((Suppl. 1)):58
		are still not able to make a clear statement on how we should treat the clinical	from another source.	15. Nielsen OH, Ainsworth M, Coskun M, Weiss G. Management of iron-deficiency anemia in inflammatory bowel disease: a systematic review. Medicine. 2015;94(-23):e963-e.
		consequences of postpartum iron deficiency anaemia. The reasons for this are trial quality, the chosen interventions, the chosen outcomes and the many		16. Ng O, Keeler BD, Mishra A, Simpson A, Neal K, Brookes MJ, et al. Iron therapy for pre-operative anaemia. Cochrane Database of Systematic Reviews. 2015(-12):CD011588-CD.
		different study designs. Researchers tend to evaluate efficacy trough Hb values.		17. Markova V, Norgaard A, Jorgensen KJ, Langhoff-Roos J. Treatment for women with postpartum iron deficiency anaemia. Cochrane Database of Systematic Reviews. 2015(-8):CD010861-CD.
		The correlation between Hb levels and anaemia symptoms in postpartum		18. Jin HX, Wang RS, Chen SJ, Wang AP, Liu XY. Early and late iron supplementation for low birth weight infants: a meta-analysis. Italian Journal of Pediatrics. 2015;41(1):16
		women has not yet been clarified. We strongly encourage authors to choose		19. Hogan M, Klein AA, Richards T. The impact of anaemia and intravenous iron replacement therapy on outcomes in cardiac surgery. European Journal of Cardio-Thoracic Surgery. 2015;47(2):218-26.
		clinically relevant outcomes, using validated measuring tools. Researchers		20. Borstlap WA, Stellingwerf ME, Moolla Z, Musters GD, Buskens CJ, Tanis PJ, et al. Iron therapy for the treatment of preoperative anaemia in patients with colorectal carcinoma: a systematic review. Colorectal Disease. 2015;17(-12):1044-54.
		should distinguish between anaemia symptoms and adverse effects of		21. Bauer M, Ressl S, Walter E. Iron deficiency in patients with chronic heart failure: a systematic literature review. Value in Health. 2015;18(-7):A405-A.
		treatment to evaluate the overall clinical effect. Also, researchers should choose		22. Avni T, Amir B, Alon G, Hefziba G, Leonard L, Anat GG. The safety of intravenous iron preparations: systematic review and meta-analysis. Mayo Clinic Proceedings. 2015;90(1):12-23.
		clinically relevant time points during follow-up. Studies should report on survival		
		and severe morbidity in all study participants. Trials should be designed		
		following the CONSORT Consolidated Standards of Reporting Trials) guidelines in order to minimise sources of bias. We encourage future researchers to conduct		
		more randomised controlled trials on the treatment for postpartum iron		
		deficiency anaemia focusing on interventions such as oral iron and IV iron		
		treatment, comparing these with each other or placebo. Multicentre trials with		
		large populations are encouraged. Due to the risk of irreversible adverse effects		
		to mother and child, RBC transfusion studies should be reserved for bleeding or		
		severe anaemia, and care should be taken to monitor all adverse effects,		
		including allo-immunisation. Also, it is of great importance to investigate the		
		long-term effects of any treatment on both mother and child.		
		Should we use more iron/epo therapy in ICU, rather than transfusions?	BH	
		If a healthy woman refuses to have a blood transfusion (recommended after	BH	
		childbirth because of hb7 for e.g.), how long, on average, would it take for her hb to recover to a normal level by taking an iron supplement?		
		no to recover to a normal level by taking an iron supplement?		
		Iron therapy for pre-operative anaemia. Implications for research: Higher quality	Question not derived	
		studies are required to determine the efficacy of iron therapy for the treatment	from the survey but	
		of pre-operative anaemia. Ideally these should be adequately powered large	from another source.	
		multi-centre trials across the surgical specialities. They should include only		
		anaemic patients and assess for iron deficiency. Outcome measurements should		
		include some measure of quality of life, post-operative complications, morbidity		
		and mortality in addition to the haematological parameters and frequency of allogeneic blood transfusion reported in current studies. It will be important in		
		the design of any future studies to also include strict transfusion guidelines and		
		definitions of iron deficiency.		
DtTr28	How cost effective is cell	How can we use cell salvage to reduce the need for donor blood?	н	NICE Guideline Recommendations:
	salvage* for the avoidance of	Cell salvage and alternative methods of minimising perioperative allogeneic		Alternatives to blood transfusion for patients having surgery: Cell salvage and tranexamic acid
	transfusion of donor blood	blood transfusion: What are the wider economic costs and benefits of		8. Do not routinely use cell salvage without tranexamic acid.
	during major surgery?	alternative autologous techniques?	nom another source.	9. Consider intra-operative cell salvage with tranexamic acid for patients who are expected to lose a very high volume of blood (for example in cardiac and complex vascular surgery, major obstetric procedures, and pelvic reconstruction and scoliosis
		Are we using Autologous blood systems efficiently?	703	surgery).
		Allogeneic blood is a precious and life saving resource. but need to be used	н	Other refs:
		wisely and only in situations where it is unavoidable. There are many situations		1. Liu JM, Fu BQ, Chen WZ, Chen JW, Huang SH, Liu ZL. Cell salvage used in scoliosis surgery: is it really effective? World Neurosurgery. 2017. May;101:568-576
		where 'cell salvage' can be used to minimise the use of allogeneic blood but is		2. Xie JW, Xu B, Kang PD, Zhou ZK, Shen B, Yang J, et al. [The efficacy and safety of postoperative retransfusion drain following total hip arthroplasty: a meta-analysis]. Zhonghua Wai Ke Za Zhi [Chinese Journal of Surgery]. 2016;54(-2):108-13.
		not currently in wide practice. How can we ensure that this 'recycling' of spilt		3. Xie H, Pan JK, Hong KH, Guo D, Fang J, Yang WY, et al. Postoperative autotransfusion drain after total hip arthroplasty: a meta-analysis of randomized controlled trials. Scientific Reports. 2016 Jul 1;6:27461. doi: 10.1038/srep27461
		blood is encouraged.		4. Stone N, Sardana V, Missiuna P. Indications and outcomes of cell saver in adolescent scoliosis correction surgery: a systematic review. Spine. 2017 Mar 15;42(6):E363-E370. doi: 10.1097/BRS.000000000001780.
		Is there a risk of disseminating micrometastases when reinfusing cell saved blood	н	5. Pawaskar A, Salunke AA, Kekatpure A, Chen Y, Nambi GI, Tan J, et al. Do autologous blood transfusion systems reduce allogeneic blood transfusion in total knee arthroplasty? Knee Surgery, Sports Traumatology, Arthroscopy : Official Journal of the Essk
		Can the use of cell salvage be expanded?	н	2016.
		Why the current cell savers are not efficient enough to avoid blood transfusion	ВН	6. Pan JK, Hong KH, Xie H, Luo MH, Guo D, Liu J. The efficacy and safety of autologous blood transfusion drainage in patients undergoing total knee arthroplasty: a meta-analysis of 16 randomized controlled trials. Bmc Musculoskeletal Disorders. 2016;17(
				1):452
		How do we promote cell salvage so it is routine	R B H	7. Meybohm P, Choorapoikayil S, Wessels A, Herrmann E, Zacharowski K, Spahn DR. Washed cell salvage in surgical patients: a review and meta-analysis of prospective randomized trials under PRISMA. Medicine. 2016;95(-31):e4490-e.
		How can cell salvage be better resourced within hospitals? (Money and trained	NK	8. Hong KH, Pan JK, Yang WY, Luo MH, Xu SC, Liu J. Comparison between autologous blood transfusion drainage and closed-suction drainage/no drainage in total knee arthroplasty: a meta-analysis. Bmc Musculoskeletal Disorders. 2016;17(-1):142
		staff)	_	9. Barile L, Forminskiy E, Di Tomasso N, Alpizar Castro LE, Landoni G, De Luca M, et al. Acute normovolemic hemodilution reduces allogeneic red blood cell transfusion in cardiac surgery: a systematic review and meta-analysis of randomized trials.
		How can cell salvage machines be adapted for low income countries? (e.g. simplified, battery back-up, works in high temperatures))	В	Anesthesia and Analgesia. 2017 Mar;124(3):743-752.
		simplified, battery back-up, works in high temperatures))		10. Zhou X, Zhang C, Wang Y, Yu L, Yan M. Preoperative acute normovolemic hemodilution for minimizing allogeneic blood transfusion: a meta-analysis. Anesthesia & Analgesia. 2015;121(-6):1443-55. 11. Xie J, Feng X, Ma J, Kang P, Shen B, Yang J, et al. Is postoperative cell salvage necessary in total hip or knee replacement? A meta-analysis of randomized controlled trials. International Journal Of Surgery. 2015;21:135-44.
		How can we make cell salvage better for major haemorrhage situations	BH	12. White N, Bayliss S, Moore D. Systematic review of interventions for minimizing perioperative blood transfusion for surgery for craniosynostosis. Journal of Craniofacial Surgery. 2015;26(1):26-36.
				12. Li J, Sun SL, Tian JH, Yang K, Liu R, Li J. Cell salvage in emergency trauma surgery. Cochrane Database of Systematic Reviews. 2015(1):CD007379-CD.
		Post-operative cell salvage: For patients having cardiac surgery with a	Question not derived	14. Al-Khabori M, Al-Riyami A, Siddiqi S, Al-Sabti H. Cell salvage during cardiac surgery may decrease red blood cell transfusion: a systematic review and meta-analysis. Haematologica. 2015;100((S1)):138-9.
		significant risk of post-operative blood loss, is post-operative cell salvage and	from the survey but	
		reinfusion clinically and cost effective in reducing red blood cell use and	from another source.	
		improving clinical outcomes, compared with existing practice		
		Cell salvage and alternative methods of minimising perioperative allogeneic	Question not derived	1
		blood transfusion: Are combinations of autologous blood transfusion	from the survey but	
		techniques feasible, effective and cost-effective?	from another source.	
			ļ	

The 50 qu	estions included in the interim survey	Original Question received by the survey.	Who generated the	Previous Related & up-to-date Research
			question P = Person who has	
			received a blood	
			transfusion; R =	
			relative or carer of	
]	someone who has	
		Could the volume of blood collected with cell salvage machines be improved so	PRBH	
		that it would be worth using this tool for more operations?		
		Con more recearch he done into cell cover technology on standard rether then	РН	
		Can more research be done into cell saver technology as standard rather than relying on donation	РП	
		Cell salvage and alternative methods of minimising perioperative allogeneic	Question not derived	
		blood transfusion: What are the long term effects of transfusion on survival and	from the survey but	
		the long-term effects of the serious hazards of transfusion on survival, health	from another source.	
		status and health related quality of life?		
		Cell Saver technique, is it proven method of reducing bank blood transfusions ?	ВН	
			511	
		Cell salvage and alternative methods of minimising perioperative allogeneic	Question not derived	
		blood transfusion: What are the benefits clinically and as regards patient	from the survey but	
		preferences of avoiding allogeneic blood transfusion by giving autologous	from another source.	
		transfusion instead? Cell salvage and alternative methods of minimising perioperative allogeneic	Question not derived	
		blood transfusion: (as addendum to the research recommendation) Do these	from the survey but	
		benefits vary by procedure, timing and technique of cell salvage?	from another source.	
		Cell salvage and alternative methods of minimising perioperative allogeneic	Question not derived	
		blood transfusion:	from the survey but from another source.	
			nom another source.	
		Cell salvage in emergency trauma surgery. Implications for research: We	Question not derived	
		identified only one study that met the inclusion criteria for this review. In the	from the survey but	
		future, multicentre, methodologically rigorous trials are needed to assess the	from another source.	
		relative efficacy, safety and cost-effectiveness of cell salvage in different surgical		
		procedures. Cell salvage and alternative methods of minimising perioperative allogeneic	Question not derived	
		blood transfusion: Is acute normovolaemic haemodilution more effective and	from the survey but	
		cost-effective than cell salvage?	from another source.	
DTtR18	Are drugs* a cost effective	What alternatives provide the best outcome	PBH	1. NICE Guideline Recommendations 1-5: Alternatives to blood transfusion for patients having surgery: Oral iron, IV iron and erythropoietin
	alternative to blood transfusion	Minimising the use of donated blood and blood products, without compromising	RBH	 Do not offer erythropoietin to reduce the need for blood transfusion in patients having surgery, unless: the patient has anaemia and meets the criteria for blood transfusion, but declines it because of religious beliefs or other reasons or
	for the management of anaemia?	Alternatives to transfusion in children	RBH	 the appropriate blood type is not available because of the patient's red cell antibodies.
	*Drug alternatives are medicines	What are the alternatives to receiving a blood transfusion?	RB	2. Offer oral iron before and after surgery to patients with iron-deficiency anaemia.
	that can be used in place of a	Why are alternatives to transfusions not more widely offered.	NK	3. Consider intravenous iron before or after surgery for patients who:
	blood transfusion, for examples	What strategies exist to avoid transfusion in chronic anaemia?	BH	have iron-deficiency anaemia and cannot tolerate or absorb oral iron, or are unable to adhere to oral iron treatment (see the NICE guideline on medicines adherence)
	drugs such as iron and	How can we minimize blood transfusions?	Н	are diagnosed with functional iron deficiency
	recombinant erythropoetin for	Alternatives to blood transfusion	н	• are diagnosed with iron-deficiency anaemia, and the interval between the diagnosis of anaemia and surgery is predicted to be too short for oral iron to be effective.
	the treatment of anaelia.	what happens when an individual cannot receive transfusion due to reaction	РН	4. For guidance on managing anaemia in patients with chronic kidney disease, see the NICE guideline on anaemia management in chronic kidney disease.
				5. For guidance on managing blood transfusions for people with acute upper gastrointestinal bleeding, see section 1.2 in the NICE guideline on acute upper gastrointestinal blee
		When considering transfusion alternatives, how can more money be put into	NK	
		researching these alternatives and sharing the knowledge of these alternatives?		NICE Guideline Recommendations 6-9: Alternatives to blood transfusion for patients having surgery: Cell salvage and transxamic acid
		Alternative strategies	н	6. Offer tranexamic acid to adults undergoing surgery who are expected to have at least moderate blood loss (greater than 500 ml)
		What are the alternatives to blood transfusion	R	 Consider tranexamic acid for children undergoing surgery who are expected to have at least moderate blood loss (greater than 10% blood volume). Do not routinely use cell salvage without tranexamic acid.
		What are all the alternatives to transfusion?	Н	 Do not routinely use cell salvage without transvanic acid. Consider intra-operative cell salvage with transvanic acid for patients who are expected to lose a very high volume of blood (for example in cardiac and complex vascular sur
		If an alternative is appropriate, how efficient is this compared to transfusion?	н	surgery).
		Alternative options for blood products to treat patients needing transfusion	BRH	2. Li C, Gong Y, Dong L, Xie B, Dai Z. Is prophylactic tranexamic acid administration effective and safe for postpartum hemorrhage prevention? A systematic review and meta-ana
		What further can be done to mitigate the need for a transfusion	NK	3. Ray S, Ray A. Non-surgical interventions for treating heavy menstrual bleeding (menorrhagia) in women with bleeding disorders. The Cochrane Database of Systematic Review
		The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents	Question not derived	4. Prutsky G, Domecq JP, Salazar CA, Accinelli R. Antifibrinolytic therapy to reduce haemoptysis from any cause. The Cochrane Database of Systematic Reviews. 2016(-11):CD008
		(epoetin and darbepoetin) for treating cancer treatment-induced anaemia: It	from the survey but	5. Jiang M, Chen P, Gao Q. Systematic review and network meta-analysis of upper gastrointestinal hemorrhage interventions. Cellular Physiology and Biochemistry : International
		may also be helpful to explore reasons why improved anaemia may lead to	from another source.	2016;39(-6):2477-91.
		better outcomes; that is, whether ESAs allow better compliance with		6. Roberts I, Shakur H, Ker K, Coats T, collaborators C-T. Antifibrinolytic drugs for acute traumatic injury. Cochrane Database of Systematic Reviews. 2015;5:CD004896-CD.
		chemotherapy.		7. Marti-Carvajal AJ, Sola I. Antifibrinolytic amino acids for upper gastrointestinal bleeding in people with acute or chronic liver disease. Cochrane Database of Systematic Review
		The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents	Question not derived	8. Alam A, Choi S. Prophylactic use of tranexamic acid for postpartum bleeding outcomes: a systematic review and meta-analysis of randomized controlled trials. Transfusion M
		(epoetin and darbepoetin) for treating cancer treatment-induced anaemia: More evidence is needed to assess the impact of Hb normalisation on utility. If	from the survey but from another source.	
		clinical studies of normalisation are conducted it would also be valuable for	nom another source.	
		HRQoL outcomes to be measured, preferably using the EQ-5D or another		
		universal HRQoL questionnaire, so that incremental QALYs resulting from		
		normalising from a higher Hb level can be modelled directly rather than by using		
		the surrogate of Hb level.		
-				



The EQ questions included in the interim surrow	Original Question received by the supre-	Who gongrated the	Previous Related & up-to-date Research
The 50 questions included in the interim survey	Original Question received by the survey.	Who generated the question	רופיוטעי הכומובע מ עוף-וט-עמוב הביצמורה
		P = Person who has	
		received a blood	
		transfusion; R =	
	-	relative or carer of	
		someone who has	
	Early versus delayed erythropoietin for the anaemia of end-stage kidney disease. Implications for research: This Cochrane Review has highlighted a need	Question not derived from the survey but	
	for well-designed, high-quality RCTs to assess the benefits and harms of early	from another source.	
	versus delayed erythropoietin for the anaemia of end-stage kidney disease. The		
	potential study should include main clinical outcomes (patients-oriented		
	outcomes) such as all-cause mortality, cardiovascular mortality, quality of life,		
	adverse events and cardiovascular events according to their occurrence during		
	study follow-up. The study should be reported according to the Consolidated standards of reporting trials (CONSORT) statement for improving the quality of		
	reporting of efficacy and to get better reports of harms in clinical research		
	(Ioannidis 2004; Moher 2010; Turner 2012). Future studies should be planned		
	according to the recommendations of Standard Protocol Items:		
	Recommendations for Interventional Trials (SPIRIT) (Chan 2013a; Chan 2013b)		
	and the Foundation of Patient-Centered Outcomes Research (Gabriel 2012; PCORI 2012). Future studies should be conducted by independent researchers		
	and reported according to the Consolidated Standards of Reporting Trials		
	(CONSORT) guidelines (Ioannidis 2004; Moher 2010) and using the Foundation of		
	Patient-Centered Outcomes Research recommendations (Gabriel 2012; PCORI		
	2012).		
	Recombinant human erythropoietin versus placebo or no treatment for the	Question not derived	1
	anaemia of chronic kidney disease in people not requiring dialysis. Implications	from the survey but	
	for research: A future RCT to look specifically at whether rHuEPO can delay or	from another source.	
	hasten RRT in patients with chronic kidney failure is required. Nephrology is a		
	low volume specialty and multicentre studies are therefore necessary to recruit sufficient numbers to achieve acceptable statistical power. Further RCTs should		
	be designed to be large enough and of long enough duration to address this		
	question adequately. These studies could also examine the proposition that a		
	patient with a higher haemoglobin is in better health and better able to cope		
	with the commencement of dialysis when it is eventually necessary.		
	Hospitalisation duration for initiation of dialysis, hospitalisation rates and		
	mortality for the first three months of RRT should provide further relatively hard end-points. Considering the demonstrable effectiveness of rHuEPO in improving		
	haemoglobin it may be impossible to blind health care providers effectively in		
	such a study.		
		Quantizer and desired	4
	The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents (epoetin and darbepoetin) for treating cancer treatment-induced anaemia: If	Question not derived from the survey but	
	ESAs are thought to have a major potential for improving cancer care, large RCTs	from another source.	
	meeting current methodological and reporting standards with adequate follow-		
	up are needed to evaluate ESAs as administered in line with current marketing		
	authorisations (including licence criteria for Hb levels)		
	The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents	Question not derived	4
	(epoetin and darbepoetin) for treating cancer treatment-induced anaemia:	from the survey but	
	There is a need for improved estimates of the impact of ESAs on tumour	from another source.	
	response and mortality; if these estimates are neutral or slightly beneficial it is		
	plausible that ESAs could be cost-effective.		
	The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents	Question not derived	4
	(epoetin and darbepoetin) for treating cancer treatment-induced anaemia:	from the survey but	
	There should be assessment of the frequency of the key potential AEs related to	from another source.	
	ESA administration.		
	The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents	Question not derived	
	(epoetin and darbepoetin) for treating cancer treatment-induced anaemia:	from the survey but	
	More data are needed to assess the impact of ESAs on HRQoL. Such studies should include the effect of ESAs on the EQ-5D.	from another source.	
	The second of the circle of condition and the beginning		
	The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents	Question not derived	1
	(epoetin and darbepoetin) for treating cancer treatment-induced anaemia: In	from the survey but	
	addition to new trials it may be valuable to revisit the Cochrane IPD meta-	from another source.	
	analysis7 and select studies that better fit 'licensed recommendations' with		
	respect to Hb criteria and dose administered.		
	What are best regimes for managing immediate peri-operative anaemia in	н	1
	various common conditions e.g. emergency laparotomy, hip fracture, distal		
	femur fracture (could include Hb transfusion trigger or other agents e.g.		
	tranexamic acid)		4
	What cheaper alternatives are their to blood transfusion	NK	4
	What are alternative options to a transfusion	В	
	What alternatives are there to blood transfusions Are we doing enough with patient blood management?	H B H	-

The 50 que	stions included in the interim survey	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has	Previous Related & up-to-date Research
	What are the best drug alternatives* to blood transfusion to reduce the need and prevent bleeding in no- surgical patients? *Drug alternatives are medicines that can be used in place of a blood transfusion or example tranexamic acid, desmopressin, aprotinin and fibrin sealants for the prevention of bleeding.	Antifibrinolytic amino acids for upper gastrointestinal bleeding in people with acute or chronic liver disease. Implications for research: This updated Cochrane review has identified the need for well-designed, adequately powered randomised clinical trials to assess the benefits and harms of antifibrinolytic amino acids in people with upper gastrointestinal bleeding due to acute or chronic liver disease. According to Brown 2006, questions such as the following could be answered using randomised clinical trials. What regimen is most effective: single or combined? When can intravenous antifibrinolytic regimens be switched to oral administration? The randomised clinical trials should include participant-relevant clinical outcomes such as mortality, failure to control bleeding, and adverse events. Potential trials should be planned according to SPIRIT (Standard Protocol Items: Recommendations for Interventional Trials) statement (Chan 2013; Chan 2013b). The trials should be reported according to the CONSORT (CONsolidated Standards Of Reporting Trials) statement (Moher 2010), which helps in improving the quality of reporting of benefits and harms in clinical research (Ioannidis 2004; Moher 2010). Trials should include participant-	Question not derived from the survey but from another source.	 Zhang P, Liang Y, Chen P, Fang Y, He J, Wang J. Combined application versus topical and intravenous application of tranexamic acid following primary total hip arthroplasty: a 2. Xie J, Hu Q, Huang Q, Ma J, Lei Y, Pei F. Comparison of intravenous versus topical tranexamic acid in primary total hip and knee arthroplasty: an updated meta-analysis. Thror 3. Wu Y, Yang T, Zeng Y, Si H, Li C, Shen B. Tranexamic acid reduces blood loss and transfusion requirements in primary simultaneous bilateral total knee arthroplasty: a meta-ara International Journal in Haemostasis and Thrombosis. 2017. Watterson C, Beacher N. Preventing perioperative bleeding in patients with inherited bleeding disorders. Evidence-Based Dentistry. 2017;18(-1):28-9. Topsoee MF, Settnes A, Ottesen B, Bergholt T. A systematic review and meta-analysis of the effect of prophylactic tranexamic acid treatment in major benign uterine surgery International Federation of Gynaecology and Obstetrics. 2017;136(-2):120-7. Takagi H, Ando T, Umemoto T. Seizures associated with tranexamic acid for cardiac surgery: a meta-analysis of randomized and non-randomized studies. The Journal of Cardia 7. Mi B, Liu G, Zhou W, Lv H, Liu Y, Zha K, et al. Intra-articular versus intravenous tranexamic acid application in total knee arthroplasty: a meta-analysis of randomized controlle 8. Mi B, Liu G, Lv H, Liu Y, Zha K, Wu Q, et al. Is combined use of intravenous and intraarticular tranexamic acid superior to intravenous or intraarticular tranexamic acid alone ir Journal of Orthopaedic Surgery and Research. 2017 Apr 18;12(1):61. doi: 10.1186/s13018-017-0559-2. Meena S, Benazzo F, Dwivedi S, Ghiara M. Topical versus intravenous tranexamic acid in total knee arthroplasty. Journal of Orthopaedic Surgery (Hong Kong).2017 Jan;25(1):210. Liu X, Liu J, Sun G. A comparison of combined intravenous and topical administration of tranexamic acid with intravenous tranexamic acid alone for blood loss reduction after (London, E
		centred outcomes such as mortality, re-bleeding, and serious and non-serious adverse events as recommended by the Patient-Centered Outcomes Research Institute (P-CORI) statement (Selby 2013; Frank 2014; Selby 2014).		 Research. 2017;12(-1):22. 12. Li C, Gong Y, Dong L, Xie B, Dai Z. Is prophylactic tranexamic acid administration effective and safe for postpartum hemorrhage prevention? A systematic review and meta-a 13. Chen TP, Chen YM, Jiao JB, Wang YF, Qian LG, Guo Z, et al. Comparison of the effectiveness and safety of topical versus intravenous tranexamic acid in primary total knee ar Orthopaedic Surgery and Research. 2017;12(1):11. 14. Cannon JW, Khan MA, Raja AS, Cohen MJ, Como JJ, Cotton BA, et al. Damage control resuscitation in patients with severe traumatic hemorrhage: a practice management gu Trauma and Acute Care Surgery. 2017;82(3):605-17.
		Tranexamic acid for preventing postpartum haemorrhage. Implications for research: Further research is needed to examine the effects of TA on maternal mortality, severe morbidity and thromboembolic events. Studies assessing TA for preventing PPH in high-risk women with placenta praevia, placental abruption, uterine rupture and other conditions causing PPH are important. Comparison of different doses of TA as well as prophylactic use of TA without prophylactic uterotonics is necessary, using large, well-designed trials.	Question not derived from the survey but from another source.	 I5. Zhang XQ, Ni J, Ge WH. Combined use of intravenous and topical versus intravenous tranexamic acid in primary total joint arthroplasty: a meta-analysis of randomized cont 16. Zhang P, Liang Y, Chen P, Fang Y, He J, Wang J. Intravenous versus topical tranexamic acid in primary total hip replacement: a meta-analysis. Medicine. 2016;95(-50):e5573-e 17. Yuan ZF, Yin H, Ma WP, Xing DL. The combined effect of administration of intravenous and topical tranexamic acid on blood loss and transfusion rate in total knee arthropla 61. 18. Yuan QM, Zhao ZH, Xu BS. Efficacy and safety of tranexamic acid in reducing blood loss in scoliosis surgery: a systematic review and meta-analysis. European Spine Journal. 2 19. Winter SF, Santaguida C, Wong J, Fehlings MG. Systemic and topical use of tranexamic acid in spinal surgery: a systematic review. Global Spine Journal. 2016;6(-3):284-95. 20. Weng K, Zhang X, Bi Q, Zhao C. The effectiveness and safety of tranexamic acid in bilateral total knee arthroplasty: A meta-analysis. Medicine. 2016;95(-39):e4960-e. 21. Wang S, Gao X, An Y. Topical versus intravenous tranexamic acid in total knee arthroplasty: a meta-analysis of randomized controlled trials. International Orthopaedics. 201
		Antifibrinolytic drugs for acute traumatic injury. Implications for research: The knowledge that TXA safely reduces the risk of death from traumatic bleeding raises the possibility that it might also be effective in other situations where bleeding can be life threatening or disabling and further research is warranted to explore this potential. Randomised trials involving patients with isolated traumatic brain injury (TBI) that assess both mortality and disability outcomes are required before TXA can be recommended for use in these patients. The ongoing NCT01402882 trial with a planned sample size of 10,000 patients with TBI and the planned trial of prehospital TXA in TBI (NCT01990768), will contribute to resolving the uncertainty about the effects of TXA in this group.	Question not derived from the survey but from another source.	 Sun X, Dong Q, Zhang YG. Intravenous versus topical tranexamic acid in primary total hip replacement: a systemic review and meta-analysis. International Journal of Surgery 23. Simonazzi G, Bisulli M, Saccone G, Moro E, Marshall A, Berghella V. Tranexamic acid for preventing postpartum blood loss after cesarean delivery: a systematic review and r Scandinavica. 2016;95(-1):28-37. Shin YS, Yoon JR, Lee HN, Park SH, Lee DH. Intravenous versus topical tranexamic acid administration in primary total knee arthroplasty: a meta-analysis. Knee Surgery, Spot 25. Shang J, Wang H, Zheng B, Rui M, Wang Y. Combined intravenous and topical tranexamic acid versus intravenous use alone in primary total knee and hip arthroplasty: a met (London, England). 2016. Ray S, Ray A. Non-surgical interventions for treating heavy menstrual bleeding (menorrhagia) in women with bleeding disorders. The Cochrane Database of Systematic Review 27. Prutsky G, Domecq JP, Salazar CA, Accinelli R. Antifibrinolytic therapy to reduce haemoptysis from any cause. The Cochrane Database of Systematic Reviews. 2016(-11):CD0 28. Olsen JJ, Skov J, Ingerslev J, Thorn JJ, Pinholt EM. Prevention of bleeding in orthognathic surgery - a systematic review and meta-analysis of randomized controlled trials. Jou Association of Oral and Maxillofacial Surgeons. 2016;74(-1):139-50. Murphy GR, Glass GE, Jain A. The efficacy and safety of tranexamic acid in cranio-maxillofacial and plastic surgery. The Journal of Craniofacial Surgery. 2016;27(-2):374-9.
		Antifibrinolytics (lysine analogues) for the prevention of bleeding in people with haematological disorders. Implications for research: The only evidence available is for adults with acute leukaemia receiving chemotherapy. We await the results of the two ongoing trials that are expected to recruit 916 participants in total by 2020. These studies are recruiting adults with a mixture of haematological malignancies. There is currently no evidence for the use of antifibrinolytics in children with haematological disorders who are thrombocytopenic and usually require treatment with platelet transfusions and there are no ongoing studies that include children.	-	 McNicol ED, Tzortzopoulou A, Schumann R, Carr DB, Kalra A. Antifibrinolytic agents for reducing blood loss in scoliosis surgery in children. The Cochrane Database of System 31. Lin Z, Xiaoyi Z. Tranexamic acid-associated seizures: a meta-analysis. Seizure. 2016;36:70-3. Lin C, Qi Y, Jie L, Li HB, Zhao XC, Qin L, et al. Is combined topical with intravenous tranexamic acid superior than topical, intravenous tranexamic acid alone and control grou Medicine. 2016;95(-51):e5344-e. Li J, Zhang Z, Chen J. Comparison of efficacy and safety of topical versus intravenous tranexamic acid in total hip arthroplasty: a meta-analysis. Medicine. 2016;95(-36):e468: 34. Li G, Sun TW, Luo G, Zhang C. Efficacy of antifibrinolytic agents on surgical bleeding and transfusion requirements in spine surgery: a meta-analysis. European Spine Journal Deformity Society, and the European Section of the Cervical Spine Research Society. 2016. Kietpeerakool C, Supoken A, Laopaiboon M, Lumbiganon P. Effectiveness of tranexamic acid in reducing blood loss during cytoreductive surgery for advanced ovarian cance 36. Ker K, Shakur H, Roberts I. Does tranexamic acid prevent postpartum haemorrhage? A systematic review of randomised controlled trials. Bjog : an International Journal of Correct Mathematics and specific acid in epistaxis: a systematic review. Clinical Otolaryngology : Official Journal of Ent-Uk ; Official Journal of Netherlands Society for Oto-Rhing.
DtTr3	How can patients, relatives and carers be empowered to have greater say about their choices in	Could alternatives be further explained to patients prior to transfusion route? How can the world of medicine become more open minded with patients who	B H H	 Jiang X. Ma XL. Ma IX. Efficiency and safety of intravenous tranexamic acid in simultaneous bilateral total knee arthroplasty: a systematic review and meta-analysis. Orthops 1. NICE Guideline Recommendations: Patient information 43. Provide verbal and written information to patients who may have or who have had a transfusion, and their family members or carers (as appropriate), explaining:
	relation to blood transfusion and it's alternatives?	do no desire a blood transfusion as treatment Should people about to undergo transfusion be counselled about their future ability to donate blood? How do we improve public perception that having a blood transfusion is not the	РВН	the reason for the transfusion the risks and benefits the transfusion process
		"answer to everything" How could we empower patients to improve anaemia? Once a decision is made, why are Jehovah's Witnesses put under pressure to	R H NK	 any transfusion needs specific to them any alternatives that are available, and how they might reduce their need for a transfusion that they are no longer eligible to donate blood that they are encouraged to ask questions.
		change their minds? Why are there so many different blood products. How do I know which is right for me? Why was I put under pressure by hospital staff to change my decision to avoid	R B H	 44. Document discussions in the patient's notes. 45. Provide the patient and their GP with copies of the discharge summary or other written communication that explains: • the details of any transfusions they had
		blood and its derivatives? Where blood products are refused are there still clinicians who consider this an affront to their superior knowledge?	NK	 the reasons for the transfusion any adverse events that they are no longer eligible to donate blood.
		Is it automatically assumed that the traditional use of blood products is the only option, or is it standard practise to advise patients of alternatives? Transfusion Avoidance	NK R B H	46. For guidance on communication and patient-centred care for adults, see the NICE guideline on patient experience in adult NHS services
		Transistin Avoidance Do I really need a transfusion? How can I be sure that my wishes regarding the avoidance of blood transfusion will be respected?	R B H NK	
		How can patients be empowered to ensure they get only appropriate transfusion?	Н]

/: a meta-analysis. Bmc Musculoskeletal Disorders. 2017;18(-1):90 rombosis Research. 2017;153:28-36.
a-analysis of randomized controlled trials. Blood Coagulation & Fibrinolysis : an
ery. International Journal of Gynaecology and Obstetrics: the Official Organ of the
ardiovascular Surgery. 2017 Aug;58(4):633-641 olled trials. Archives of Orthopaedic and Trauma Surgery. 2017 Jul;137(7):997-1009. e in total knee arthroplasty? A meta-analysis of randomized controlled trials.
1):2309499016684300. doi: 10.1177/2309499016684300. after total hip arthroplasty: a meta-analysis. International Journal of Surgery
neta-analysis of randomised controlled trials. Journal of Orthopaedic Surgery and
a-analysis. Medicine. 2017;96(-1):e5653-e. e arthroplasty: a meta-analysis of randomized controlled trials. Journal of
t guideline from the Eastern Association for the Surgery of Trauma. The Journal of
ontrolled trials. International Journal of Surgery (London, England). 2016. 73-e. plasty: Combined tranexamic acid for TKA. Bone & Joint Research. 2016;5(-8):353-
al. 2016.
2016. gery (London, England). 2016. Id meta-analysis of randomized controlled trials. Acta Obstetricia et Gynecologica
ports Traumatology, Arthroscopy : Official Journal of the Esska. 2016. meta-analysis of randomized controlled trials. International Journal of Surgery
eviews. 2016(-11):CD010338-CD. D008711-CD. Journal of Oral and Maxillofacial Surgery : Official Journal of the American
ematic Reviews. 2016(-9):CD006883-CD.
roups for blood loss controlling after total knee arthroplasty: a meta-analysis.
1689-e. nal : Official Publication of the European Spine Society, the European Spinal
ncer. The Cochrane Database of Systematic Reviews. 2016(-1):CD011732-CD. of Obstetrics and Gynaecology. 2016. nino-Laryngology & Cervico-Facial Surgery. 2016.

Y

The 50 que	stions included in the interim survey	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has	Previous Related & up-to-date Research
		How much information is given to patients so that they can make an individual	NK	
		choice whether to have blood or alternatives? To avoid a blood transfusion how can I build up my red blood cell count	В	
		How could we empower patients to avoid unnecessary transfusion?	RH	-
		We need more of an awareness of the alternatives to blood transfusion. It	Н	
		should not always be the first thing thought of when a patient presents with a low Hb. Lets think about optimising with oral iron/IV iron/ Health Promotion on diet and be strict on a cut off point if the patient is asymptomatic. Are all patients being told that they cannot be a blood donor once they have become a receiver? Perhaps this may give cause for the patient to think further about receiving in cases where they are asymptomatic and other forms are optimisation may be as effective for them?		
		What information is available to tell people if the alternatives to a blood transfusion?	R B H	
DtTr10b	At what haemoglobin level	At what haemoglobin level should blood transfusion be considered for critical care patients.	R B H	1. NICE Guideline Recommendations: 13. Use restrictive red blood cell transfusion thresholds for patients who need red blood cell transfusions and who do not:
	[blood count] should a non- surgical, general medical patient	At what Hb threshold should post-partum women be transfused to improve maternal recovery?	ВH	have major haemorrhage or
	receivce a blood transfusion?	Transfusion threshold in different situations and context. e.g. TRICC/other trials	ВH	have acute coronary syndrome or need regular blood transfusions for chronic anaemia.
		guide us but for what length of duration in ICU stay does these trials apply? Surely situation at day 20 is very different that day 2.		14. When using a restrictive red blood cell transfusion threshold, consider a threshold of 70 g/litre and a haemoglobin concentration target of 70–90 g/litre after transfusion. 16. Consider setting individual thresholds and haemoglobin concentration targets for each patient who needs regular blood transfusions for chronic anaemia.
		Transfusion thresholds for general intensive care patients with and without acute coronary syndromes	н	Other refs:
		Restrictive policies for medical patients for both blood and platelets	Н	1. Odutayo A, Desborough MJ, Trivella M, Stanley AJ, Doree C, Collins GS, et al. Restrictive versus liberal blood transfusion for gastrointestinal bleeding: a systematic review and Hepatology. 2017;2(-5):354-60.
		transfusion trigger in the critically ill	ВH	2. Estcourt LJ, Malouf R, Trivella M, Fergusson DA, Hopewell S, Murphy MF. Restrictive versus liberal red blood cell transfusion strategies for people with haematological malign
		what is the correct Hb to transfuse in the postnatal period given that maternal physiology is so different from standard adults	Н	without haematopoietic stem cell support. The Cochrane Database of Systematic Reviews. 2017(-1):CD011305-CD. 3. Dupuis C, Sonneville R, Adrie C, Gros A, Darmon M, Bouadma L, et al. Impact of transfusion on patients with sepsis admitted in intensive care unit: a systematic review and m
		What is the optimal blood transfusion threshold for patients at different stages in the evolution of critical illness?	R B H	4. Veigas PV, Callum J, Rizoli S, Nascimento B, da Luz LT. A systematic review on the rotational thrombelastometry (ROTEM(R)) values for the diagnosis of coagulopathy, predicti
		What is the best threshold for blood transfusion on the ICU?	ВH	patients. Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine. 2016;24(-1):114 5. Prescott LS, Taylor JS, Lopez-Olivo MAMMF, VonVille HM, Lairson DR, Bodurka DC. How low should we go: a systematic review and meta-analysis of the impact of restrictive
		What is the optimum level ([hb]) to transfuse red cells in the severely ill patient		 2016;46:1-8. 6. Keir A, Pal S, Trivella M, Lieberman L, Callum J, Shehata N, et al. Adverse effects of red blood cell transfusions in neonates: a systematic review and meta-analysis. Transfusion 7. Estcourt LJ, Ingram C, Doree C, Trivella M, Stanworth SJ. Use of platelet transfusions prior to lumbar punctures or epidural anaesthesia for the prevention of complications in 2016(-5):CD011980-CD. 8. Christou G, Iyengar A, Shorr R, Tinmouth A, Saidenberg E, Maze D, et al. Optimal transfusion practices after allogeneic hematopoietic cell transplantation: a systematic scopin 9. Boutin A, Chasse M, Shemilt M, Lauzier F, Moore L, Zarychanski R, et al. Red blood cell transfusion in patients with traumatic brain injury: a systematic review and meta-analy 10. McQuilten ZK, Crighton G, Brunskill S, Morrison JK, Richter T, Waters N, Murphy MF, Wood EM. Optimal Dose, Timing and Ratio of Blood Products in Massive Transfusion: Rt 11. Gu Y, Estcourt LJ, Doree C, Hopewell S, Vyas P. Comparison of a restrictive versus liberal red cell transfusion policy for patients with myelodysplasia, aplastic anaemia, and or Systematic Reviews. 2015(-10):CD011977-CD. 12. Estcourt LJ, Stanworth S, Doree C, Trivella M, Murphy MF. Comparison of different platelet count thresholds to guide administration of prophylactic platelet transplantation. Cochrane Database of Systematic Reviews. 2015(-11):CD010983-CD. 13. Estcourt LJ, Desborough M, Hopewell S, Blanco P, et al. Different doses of prophylactic platelet transfusion for preventing bleeding in people with haemato transplantation. Cochrane Database of Systematic Reviews. 2015(-11):CD010983-CD. 14. Estcourt LJ, Desborough M, Hopewell S, Doree C, Stanworth SJ. Comparison of different platelet transfusion thresholds prior to insertion of central lines in patients with thre 12):CD011771-CD. 15. English SW, Chasse M, Turgeon AF, Tinmouth A, Boutin A, Pagliarello G, et al. Red blood cell transfusion and mortality effect in aneurysmal subarac
DtTr8	Do patients and their relatives	Are patients given enough information about the potential side effects ?	РВН	I. NICE Guideline Recommendations:
	and/or carers receive enough information to help them	Are there any requirements or preparations I need to do before receiving a	Р	Patient information 43. Provide verbal and written information to patients who may have or who have had a transfusion, and their family members or carers (as appropriate), explaining:
	understand about blood	blood transfusion? Did you understand the information provided to you before you were given a	Н	the reason for the transfusion the risks and benefits
	transfusion?	Blood Transfusion? do patients receive enough information about blood transfusion	ВH	the transfusion process
		How can I be sure the transfusion is safe.	Р	 • any transfusion needs specific to them • any alternatives that are available, and how they might reduce their need for a transfusion
		How can we reassure the public that the transfusion is virus free How certain are you that patients understand the risks of blood transfusions?	H R B H	that they are no longer eligible to donate blood that they are encouraged to ask questions.
		How certain are you that patients understand the risks of blood transfusions?	RBH	 that they are encouraged to ask questions. 44. Document discussions in the patient's notes. 45. Provide the patient and their GP with copies of the discharge summary or other written communication that explains:
		How do I explain side effects	R B H	the details of any transfusions they had the reasons for the transfusion
		How do I know that my transfusion blood is free from any health conditions that could be detrimental to me	R B	the reasons for the transfusion any adverse events
		How do we best inform/consent patients for blood transfusion How effective is the consent process for patients? Do recipients of blood	H R B H	that they are no longer eligible to donate blood. 46. For guidance on communication and patient-centred care for adults, see the NICE guideline on patient experience in adult NHS services

	Y
nd meta-analysis of randomised controlled trials. The Lancet Gastroenterology &	
gnancies treated with intensive chemotherapy or radiotherapy, or both, with or	
meta-analysis. Annals of Intensive Care. 2017;7(-1):5 iction and guidance of blood transfusion and prediction of mortality in trauma	
e red blood cell transfusion strategies in oncology. Cancer Treatment Reviews.	
ion. 2016. in people with thrombocytopenia. The Cochrane Database of Systematic Reviews.	
ping review of evidence from randomized controlled trials. Transfusion. 2016. alysis. Transfusion Medicine Reviews. 2016;30(-1):15-24. Results from a Systematic Review. Transfusion Medicine Reviews. 2017.	
other congenital bone marrow failure disorders. Cochrane Database of	
transfusion for preventing bleeding in people with haematological disorders after	
atological disorders after myelosuppressive chemotherapy or stem cell	
hrombocytopenia. Cochrane Database of Systematic Reviews. 2015(- ystematic review and meta-analysis protocol. Systems Review. 2015;4(-1):41	
its with haematological disorders after myelosuppressive chemotherapy or stem	
d. 2015;97(-8):556-62.	
	Y

The 50 que	stions included in the interim survey	Original Question received by the survey.	Who generated the	Previous Related & up-to-date Research
			question	
			P = Person who has	
			received a blood transfusion; R =	
			relative or carer of	
			someone who has	
		How much chance is there of getting illness through transfused blood	Р	
		How well are the risks associated with blood transfusion conveyed to potential	RH	
		recipients? How well recipient of transfusion know the adverse reactions?	РВН	
		if I have a blood transfusion am I likely to stay in hospital longer	вн	
		If I needed an operation how much blood would I need?	В	
		if I have a blood transfusion is my cancer more likely to reoccur	BH	
		If I have a blood transfusion, can I be sure that I won't catch any viruses from it?	В	
		In non urgent transfusions is it possible to discuss with the recipient if requested	Р	
		the moral/ethical/religious implications of accepting someone else's blood into		
		their body?		
		Is it possible that my body will reject or react badly to blood from a transfusion?	В	
		Is receipt of a blood transfusion protective against allergic disorders?	н	
		What are the dangers from a blood transfusion	В	
		What are the implications of receiving bloodlike a leaflet to read	Р	
		What are the known risks?	RBH	
		How do I know I have had a blood transfusion?	B	
		I don't think anyone is actually informed about what they received, how much and why.	RBH	
		Why do we not give relatives a simple comprehensive information leaflet when	Н	
DtTr13	What is the optimal blood	their relative is having a transfusion Is it better to give a little blood, i.e. 1 unit at a time to top a patient up in the	ВН	1. NICE Guideline Recommendations:
DUITS	transfusion dose [number of	BMT process rather than say a 3 unit transfusion to last a longer time.	5.1	17. Consider single-unit red blood cell transfusions for adults (or equivalent volumes calculated based on body weight for children or adults with low body weight) who do not hav
	units] [in any situation] for			18. After each single-unit red blood cell transfusion (or equivalent volumes calculated based on body weight for children or adults with low body weight), clinically reassess and ch
	maximum patient benefit?	Why do blood transfusions always include two units and not just one?	Р	
		How much blood can one transfuse in an acute setting?	н	1. Torres ME, Rodriguez JN, Ramos JL, Gomez FA. Transfusion in palliative cancer patients: a review of the literature. Journal of Palliative Medicine. 2014;17(1):88-104
DTtR18a	Are drugs* an effective	IS IT TIME for a risk-adjusted, retrospective trial comparing "bloodless" and	NK	1. Ray S, Ray A. Non-surgical interventions for treating heavy menstrual bleeding (menorrhagia) in women with bleeding disorders. The Cochrane Database of Systematic Reviews.
	alternative to blood transfusion	transfusion strategies in the UK? Trials at Johns Hopkins, Baltimore, Englewood,NJ in USA and in Brussels,Belgium	NK	2. Desborough MJ, Oakland KA, Landoni G, Crivellari M, Doree C, Estcourt LJ, et al. Desmopressin for treatment of platelet dysfunction and reversal of antiplatelet agents: a system
	for the prevention of bleeding in	indicate that there are similar or better outcomes with equivalent lower costs in	INK	Thrombosis & Haemostasis. 2016.
	patients undergoing surgery?	the bloodless care group. If this is correct research should be undertaken in the		 Desborough M, Hadjinicolaou AV, Chaimani A, Trivella M, Vyas P, Doree C, et al. Alternative agents to prophylactic platelet transfusion for preventing bleeding in people with th systematic review. The Cochrane Database of Systematic Reviews. 2016(-10):CD012055-CD.
	*drug alternatives are medicines	UK		4. Desborough M, Estcourt LJ, Doree C, Trivella M, Hopewell S, Stanworth SJ, et al. Alternatives, and adjuncts, to prophylactic platelet transfusion for people with haematological i
	that can be used in pl;ace of a	Are drugs that are known to reduce blood loss and transfusion such as aprotinin	н	transplantation. The Cochrane Database of Systematic Reviews. 2016(-8):CD010982-CD.
	blood transfusion, for example	and tranexamic acid being used appropriately in all suitable patients		5. Karanth L, Barua A, Kanagasabai S, Nair S. Desmopressin acetate (DDAVP) for preventing and treating acute bleeds during pregnancy in women with congenital bleeding disorder
	tranexamic acid, desmopressin, aprotinin and fibrin sealants for	Novel haemostatic agents either given topically or intravenously to arrest	ВH	1. Hahn D, Esezobor CI, Elserafy N, Webster AC, Hodson EM. Short-acting erythropoiesis-stimulating agents for anaemia in predialysis patients. The Cochrane Database of Systema
	the prevention of bleeding.	haemorrhage Optimisation of surgical patients using alternative techniques to avoid blood	ВН	2. Zhao Y, Jiang C, Peng H, Feng B, Li Y, Weng X. The effectiveness and safety of preoperative use of erythropoietin in patients scheduled for total hip or knee arthroplasty: a system
		transfusion - in particular safe low levels of Hb		2016;95(-27):e4122-e.
		Can drugs, such as desmopressin or tranexamic acid, be used instead of fresh	н	3. Zhang H, Zhang P, Zhang Y, Yan J, Dong P, Wang Y, et al. Effects of erythropoiesis-stimulating agents on heart failure patients with anemia: a meta-analysis. Postepy W Kardiolog
		frozen plasmaor platelets to prevent bleeding for people undergoing invasive procedures?		53.
	1	Effectiveness of tranexamic acid in reducing blood loss during cytoreductive	Question not derived	4. Voorn VM, van der Hout A, So-Osman C, Vliet Vlieland TP, Nelissen RG, van den Akker-van Marle ME, et al. Erythropoietin to reduce allogeneic red blood cell transfusion in patie
		surgery for advanced ovarian cancer. Implications for research: There is a need	from the survey but	5. Park S, Fenaux P, Greenberg P, Mehta B, Callaghan F, Kim C, et al. Efficacy and safety of darbepoetin alpha in patients with myelodysplastic syndromes: a systematic review and 6. Mhaskar R, Wao H, Miladinovic B, Kumar A, Djulbegovic B. The role of iron in the management of chemotherapy-induced anemia in cancer patients receiving erythropoiesis-stin
		for an adequately sized, placebo-controlled trial with a well-defined protocol for	from another source.	 Minaskar R, Wao R, Minaumovic B, Kumar A, Djubegovic B. The role of non-in-the management of chemotherapy-induced anemia in cancer patients receiving erythropolesis-still 2):CD009624-CD.
		blood transfusion and a protocol for evaluating tranexamic acid-related adverse		7. Kang J, Park J, Lee JM, Park JJ, Choi DJ. The effects of erythropoiesis stimulating therapy for anemia in chronic heart failure: a meta-analysis of randomized clinical trials. Interna
		events to shed more light on the effectiveness of tranexamic acid given perioperatively to reduce blood loss during cytoreductive surgery for advanced		8. French CJ, Glassford NJ, Gantner D, Higgins AM, Cooper DJ, Nichol A, et al. Erythropoiesis-stimulating agents in critically ill trauma patients: a systematic review and meta-analy
		ovarian cancer.		9. Crathorne L, Huxley N, Haasova M, Snowsill T, Jones-Hughes T, Hoyle M, et al. The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents (epoetin and darber
				technology appraisal no. 142): a systematic review and economic model. Health Technology Assessment (Winchester, England). 2016;20(-13):1-588.
		What are the risks and benefits of tranexamic acid when trying to avoid blood transfusion for hip fracture surgery?	RBH	10. Collister D, Komenda P, Hiebert B, Gunasekara R, Xu Y, Eng F, et al. The effect of erythropoietin-stimulating agents on health-related quality of life in anemia of chronic kidney Medicine.2016; 164(7):472-478. doi: 10.7326/M15-1839
		Fibrin sealants for the prevention of postoperative pancreatic fistula following	Question not derived	11. Christou G, Ivengar A, Shorr R, Tinmouth A, Saidenberg E, Maze D, et al. Optimal transfusion practices after allogeneic hematopoietic cell transplantation: a systematic scoping
		pancreatic surgery. Implications for research: Further trials with low risk of bias	from the survey but	12. Xin H, Ge YZ, Wu R, Yin Q, Zhou LH, Shen JW, et al. Effect of high-dose erythropoietin on graft function after kidney transplantation: A meta-analysis of randomized controlled in the second seco
		and sufficient sample size are necessary to assess various fibrin sealants (e.g.	from another source.	13. Wilhelm-Leen ER, Winkelmayer WC. Mortality risk of darbepoetin alfa versus epoetin alfa in patients with CKD: systematic review and meta-analysis. American Journal of Kidne
		glue, patch) for preventing postoperative pancreatic fistula. Future trials should		14. White N, Bayliss S, Moore D. Systematic review of interventions for minimizing perioperative blood transfusion for surgery for craniosynostosis. Journal of Craniofacial Surgery
		report the rate and the grade of the postoperative pancreatic fistula according to the definition of the International Study Group on Pancreatic Fistula (Bassi		15. Wang H, Zhang L, Jin Y. A meta-analysis of the protective effect of recombinant human erythropoietin (rhEPO) for neurodevelopment in preterm infants. Cell Biochemistry & B
		2005). Future randomized trials should use adequate methods of randomization		16. Vlachopanos G, Kassimatis TI, Agrafiotis A. Perioperative administration of high-dose recombinant human erythropoietin for delayed graft function prevention in kidney transp
		and allocation concealment. Future trials need to employ blinding of participants		17. Potter LJ, Doleman B, Moppett IK. A systematic review of pre-operative anaemia and blood transfusion in patients with fractured hips. Anaesthesia. 2015;70(4):483-500.
		and outcome assessors.		18. Markova V, Norgaard A, Jorgensen KJ, Langhoff-Roos J. Treatment for women with postpartum iron deficiency anaemia. Cochrane Database of Systematic Reviews. 2015(-8):C
				19. Lopez E, Beuchee A, Truffert P, Pouvreau N, Patkai J, Baud O, et al. [Recombinant human erythropoietin in neonates: guidelines for clinical practice from the French Society of 20. Lindquist DE, Cruz JL, Brown JN. Use of erythropoiesis-stimulating agents in the treatment of anemia in patients with systolic heart failure. Journal of Cardiovascular Pharmaco
		•		 Endquist DE, Cruz JC, Brown JN. Ose of ergunopolesis-stimulating agents in the treatment of anemia in patients with systolic near failure. Journal of Cardio-Association Pharmacol 21. Hogan M, Klein AA, Richards T. The impact of anaemia and intravenous iron replacement therapy on outcomes in cardiac surgery. European Journal of Cardio-Thoracic Surgery
				22. Ferguson T, Xu Y, Gunasekara R, Lerner B, Macdonald K, Rigatto C, et al. The cost effectiveness of erythropoietin-stimulating agents for treating anemia in patients on dialysis:
				 Ferguson T, Xu Y, Gunasekara R, Lerner B, Macdonald K, Rigatto C, et al. The cost effectiveness of erythropoietin-stimulating agents for treating anemia in patients on dialysis: Coronado DJ, Marti-Carvajal AJ, Ariza Garcia A, Rodelo Ceballos J, Yomayusa Gonzalez N, Paez-Canro C, et al. Early versus delayed erythropoietin for the anaemia of end-stage CD011122-CD.
				 Coronado DJ, Marti-Carvajal AJ, Ariza Garcia A, Rodelo Ceballos J, Yomayusa Gonzalez N, Paez-Canro C, et al. Early versus delayed erythropoietin for the anaemia of end-stage CD011122-CD. Li SL, Ye Y, Yuan XH. Association between allogeneic or autologous blood transfusion and survival in patients after radical prostatectomy: a systematic review and meta-analysis
				 Coronado DJ, Marti-Carvajal AJ, Ariza Garcia A, Rodelo Ceballos J, Yomayusa Gonzalez N, Paez-Canro C, et al. Early versus delayed erythropoietin for the anaemia of end-stage CD011122-CD. Li SL, Ye Y, Yuan XH. Association between allogeneic or autologous blood transfusion and survival in patients after radical prostatectomy: a systematic review and meta-analysi Pawaskar A, Salunke AA, Kekatpure A, Chen Y, Nambi GI, Tan J, et al. Do autologous blood transfusion systems reduce allogeneic blood transfusion in total knee arthroplasty? Kr
				 Coronado DJ, Marti-Carvajal AJ, Ariza Garcia A, Rodelo Ceballos J, Yomayusa Gonzalez N, Paez-Canro C, et al. Early versus delayed erythropoietin for the anaemia of end-stage 12):CD011122-CD. Li SL, Ye Y, Yuan XH. Association between allogeneic or autologous blood transfusion and survival in patients after radical prostatectomy: a systematic review and meta-analysis. Pawaskar A, Salunke AA, Kekatpure A, Chen Y, Nambi GI, Tan J, et al. Do autologous blood transfusion systems reduce allogeneic blood transfusion in total knee arthroplasty? Kr 2016.
				 Coronado DJ, Marti-Carvajal AJ, Ariza Garcia A, Rodelo Ceballos J, Yomayusa Gonzalez N, Paez-Canro C, et al. Early versus delayed erythropoietin for the anaemia of end-stage CD011122-CD. Li SL, Ye Y, Yuan XH. Association between allogeneic or autologous blood transfusion and survival in patients after radical prostatectomy: a systematic review and meta-analysi Pawaskar A, Salunke AA, Kekatpure A, Chen Y, Nambi GI, Tan J, et al. Do autologous blood transfusion systems reduce allogeneic blood transfusion in total knee arthroplasty? Kr

	_
ot have active bleeding. Ind check haemoglobin levels, and give further transfusions if needed.	Y
views. 2016(-11):CD010338-CD. rystematic review and meta-analysis of randomised controlled trials. Journal of vith thrombocytopenia due to chronic bone marrow failure: a meta-analysis and gical malignancies undergoing intensive chemotherapy or stem cell isorders. Cochrane Database of Systematic Reviews. 2015(-9):CD009824-CD. stematic Reviews. 2017(-1):CD011690-CD. systematic review and meta-analysis of randomized controlled trials. Medicine. diologii Interwencyjnej = Advances in Interventional Cardiology. 2016;12(-3):247- n patients undergoing total hip or knee arthroplasty. Vox Sanguinis. 2016. w and meta-analysis. British Journal of Haematology. 2016. is-stimulating agents. The Cochrane Database of Systematic Reviews. 2016(- ternational Journal of Cardiology. 2016;218:12-22. analysis. Annals of Surgery.January 2017, p 54–62 larbepoetin) for treating cancer treatment-induced anaemia (including review of dney disease: a systematic review and meta-analysis. Annals of Internal toping review of evidence from randomized controlled trials. Transfusion. 2016. olled trials. Biomedicine & Pharmacotherapy. 2015;69:29-33. f Kidney Diseases. 2015;66(-1):69-74. urgery. 2015;26(1):26-36. ry & Biophysics. 2015;71(2):795-802. transplantation: a meta-analysis. Transplant International. 2015;28(3):330-40.	
(-8):CD010861-CD. tty of Neonatology]. [French]. Archives de Pediatrie. 2015;22(-10):1092-7. macology & Therapeutics. 2015;20(1):59-65. urgery. 2015;47(2):218-26. lysis: a systematic review. American Journal of Nephrology. 2015;41(2):89-97. stage kidney disease. Cochrane Database of Systematic Reviews. 2015(- unalysis. Plos One. 2017;12(-1):e0171081-e. ty? Knee Surgery, Sports Traumatology, Arthroscopy : Official Journal of the Esska. ysis of 16 randomized controlled trials. Bmc Musculoskeletal Disorders. 2016;17(-	

pplasty: a meta-analysis. Bmc Musculoskeletal Disorders. 2016;17(-1):142-.

The 50 que	stions included in the interim survey	Original Question received by the survey.	Who generated the	Previous Related & up-to-date Research
			question P = Person who has	
			received a blood	
			transfusion; R =	
		-	relative or carer of someone who has	
		The role and optimal use of alternatives like desmopressin/tranexamic acid to	BH	5. White N, Bayliss S, Moore D. Systematic review of interventions for minimizing perioperative blood transfusion for surgery for craniosynostosis. Journal of Craniofacial Surger
		cover invasive procedures in sick patients		
	•	What is the evidence for systematic targeted preoperative haemoglobin	н	. Bajwa MS, Tudur-Smith C, Shaw RJ, Schache AG. Fibrin sealants in soft-tissue surgery of the head and neck: a systematic review and meta-analysis of randomised controlled tri. Netherlands Society for Oto-Rhino-Laryngology & Cervico-Facial Surgery. 2017.
		optimisation reducing the rate of preoperative blood transfusion		 Weniger M, D'Haese JG, Crispin A, Angele MK, Werner J, Hartwig W. Autologous but not fibrin sealant patches for stump coverage reduce clinically relevant pancreatic fistula
				Journal of Surgery. 2016.
		Effectiveness of various methods of improving Hb preoperatively. What are the best methods of preventing/ reducing haemorrhage during	H B H	3. Wang Z, Xiao L, Guo H, Zhao G, Ma J. The efficiency and safety of fibrin sealant for reducing blood loss in primary total hip arthroplasty: a systematic review and meta-analysis
		myomectomy?	ВП	4. Li J, Li HB, Zhao XC, Qin L, Jiang XQ, Zhang ZH. A systematic review and meta-analysis of the topical administration of fibrin sealant in total hip and knee arthroplasty. Internati 5. Kayaalp C, Ertugrul I, Tolan K, Sumer F. Fibrin sealant use in pilonidal sinus: systematic review. World Journal of Gastrointestinal Surgery. 2016;8(-3):266-73.
		Antifibrinolytic agents for reducing blood loss in scoliosis surgery in children.	Question not derived	 Gao F, Ma J, Sun W, Guo W, Li Z, Wang W. Topical fibrin sealant versus intravenous tranexamic acid for reducing blood loss following total knee arthroplasty: a systematic rev
		Implications for research: Evidence demonstrating reduced blood loss and less requirement for transfusion is based on very limited numbers of participants	from the survey but from another source.	2016.
		and is susceptible to publication bias. Therefore, larger studies are required to	nom another source.	7. Esposito F, Angileri FF, Kruse P, Cavallo LM, Solari D, Esposito V, et al. Fibrin sealants in dura sealing: a systematic literature review. PLoS ONE [Electronic Resource]. 2016;11(-
		increase the robustness of our findings. Future studies should assess head-to-		 Edwards SJ, Crawford F, van Velthoven MH, Berardi A, Osei-Assibey G, Bacelar M, et al. The use of fibrin sealant during non-emergency surgery: a systematic review of eviden England). 2016;20(-94):1-224.
		head comparisons of different antifibrinolytic drugs to identify any differences in effectiveness or safety. Studies should also enrol more patients with secondary		 Cheng Y, Ye M, Xiong X, Peng S, Wu HM, Cheng N, et al. Fibrin sealants for the prevention of postoperative pancreatic fistula following pancreatic surgery. The Cochrane Data
		scoliosis and should report results separately for this population. Optimal dosing		10. Yang TQ, Geng XL, Ding MC, Yang MX, Zhang Q. The efficacy of fibrin sealant in knee surgery: A meta-analysis. Orthopaedics & traumatology, surgery & research. 2015;101(-3
		regimens have not been established; studies employing different regimens for		11. Li ZJ, Fu X, Tian P, Liu WX, Li YM, Zheng YF, et al. Fibrin sealant before wound closure in total knee arthroplasty reduced blood loss: a meta-analysis. Knee Surgery, Sports Tra
		the same agent will help to clarify this question. Although challenging, we also recommend that the long-term safety of antifibrinolytic drugs in children should		12. Lee KT, Mun GH. Fibrin sealants and quilting suture for prevention of seroma formation following latissimus dorsi muscle harvest: a systematic review and meta-analysis. Ae
		be evaluated in view of safety concerns with some antifibrinolytic drugs when		13. Weldrick C, Bashar K, O'Sullivan TA, Gillis E, Clarke Moloney M, Tang TY, et al. A comparison of fibrin sealant versus standard closure in the reduction of postoperative morbin Journal of Surgical Oncology. 2014;40(11):1391-8.
		used in adults.		14. Wang H, Shan L, Zeng H, Sun M, Hua Y, Cai Z. Is fibrin sealant effective and safe in total knee arthroplasty? A meta-analysis of randomized trials. Journal of Orthopaedic Surge
				15. Orci LA, Oldani G, Berney T, Andres A, Mentha G, Morel P, et al. Systematic review and meta-analysis of fibrin sealants for patients undergoing pancreatic resection. [Review
				16. Liu J, Cao JG, Wang L, Ma XL. Effect of fibrin sealant on blood loss following total knee arthroplasty: a systematic review and meta-analysis. International Journal Of Surgery.
				17. Sanjay P, Watt DG, Wigmore SJ. Systematic review and meta-analysis of haemostatic and biliostatic efficacy of fibrin sealants in elective liver surgery. Journal of Gastrointest
				 Rousou JA. Use of fibrin sealants in cardiovascular surgery: a systematic review. Journal of Cardiac Surgery. 2013;28(3):238-47. Ding H, Yuan JQ, Zhou JH, Zheng XY, Ye P, Mao C, et al. Systematic review and meta-analysis of application of fibrin sealant after liver resection. Current Medical Research &
				20. Dhillon S. Fibrin sealant (Evicel [®] , Quixil [®] /Crosseal): a review of its use as
	and to the second se			
D2		Why, if it's deemed as safe, to receive blood products can you no longer be a blood donor once you have been transfused?	РВН	No up-to-date evidence.
	a blood product transfusion allowed to be blood donors?	Why are people not allowed to donate blood when they have had a transfusion	ВН	1
	anowed to be blood donors?	even if it is many years ago?	-	4
		Why am I unable to donate after having a transfusion, surely the blood is checked before transfusing and is safe!?	В	
		is it safe for someone who has previously had a transfusion to donate blood	PBRH	
		subsequently		4
		Can you never ever give blood if you've had a transfusion?	PRH	4
		I can no longer give blood due to having a blood transfusion 20yrs ago-what is being done to research this	РВН	
		How should we tell blood donors that they can never give blood again after	РВН	1
		receiving a blood transfusion		4
		Why cannot patients who have received a transfusion then go on to donate?	BRH	
		Why can't people who have received a blood donation give blood?	RH	
		Why did I have to stop being a blood donor after having blood transfusions?	РВ	1
		I received a transfucion in 1007 and since then have been told I senset -	0.0	4
		I received a transfusion in 1997 and since then have been told I cannot give blood having been a recipient of a transfusion (I was informed this was standard	РВ	
		practice). Is this likely to change in the future? What is the cause of this refusal?		
		why can't I donate blood ofter receiving it	n	4
		why can't I donate blood after receiving it Why can't I donate blood after receiving a transfusion?	B P H	4
		When will you relax the restriction on people who have had blood transfusions	BR	4
		from giving blood		
		Why does having anti bodies following transfusion prevent any future blood	RH	
		donation? Why can individuals who have received blood prior to a certain date not donate?	Р	4
		Do we really still need to worry about CJD? This is preventing many possible	н	
		donors from being able to donate when they have had blood themselves. Isn't it all theoretical now?		
		all theoretical now? Why can't people who have had IVF donate?	RBH	4
		Is vCJD really a legitimate concern for plasma donation in the UK?	н	1
		-	•	·

gery. 2015;26(1):26-36.	
trials. Clinical Otolaryngology : Official Journal of Ent-Uk ; Official Journal of	
ala in distal pancreatectomy: a systematic review and meta-analysis. World	
rsis. International Journal of Surgery (London, England). 2016;37:50-7. ational Journal of Surgery (London, England). 2016.	
eview and meta-analysis. International Journal of Surgery (London, England).	
1(-4):e0151533-e. ence of benefits and harms. Health Technology Assessment (Winchester,	
tabase of Systematic Reviews. 2016(-2):CD009621-CD. .(-3):331-9. Traumatology, Arthroscopy. 2015;23(-7):2019-25. Aesthetic Plastic Surgery. 2015;39(-3):399-409. rbidity after groin dissection: A systematic review and meta-analysis. European	
rgery. 2014;9(36). ew]. HPB. 2014;16(1):3-11. ry. 2014;12(2):95-102. estinal Surgery. 2013;17(4):829-36.	
& Opinion. 2013;29(4):387-94.	
	Ν

The E0	estions included in the interim survey	Original Question received by the survey.	Who generated the	Previous Related & up-to-date Research
The SU que	estions included in the interim survey	onginai Question received by the survey.	who generated the question	
			P = Person who has	
			received a blood	
			transfusion; R =	
		-	relative or carer of	
			someone who has	
DtTr10g	At what haemoglobin level	Comparison of a restrictive versus liberal red cell transfusion policy for patients	Question not derived	
	[blood count] should a patient	with myelodysplasia aplastic anaemia and other congenital bone marrow failure	from the survey but	
	who has experienced a	disorders. Implications for research: As the incidence of MDS rises with an	from another source.	
	haematological (blood or bone	ageing population, many of whom are unable to tolerate curative therapy,		
		further clinical trials with robust methodology are now required to develop the optimal transfusion strategy for such people.		
	transfusion?	optimar transfusion strategy for such people.		
		Patients with cancer/haematological malignancies/leukaemia/MDS, and	BH	
		production failure, what are the optimal red cell transfusion strategies		
		Does transfusion to a haemoglobin >100 or >110 or >120 improve the quality of	BH	
		life of MDS patients?		
		Red cell transfusion thresholds in the management of patients with AML	н	
		What is the optimal red cell transfusion threshold for patients with acute	R B H	
DtTr10f	At what haemoglobin level	leukaemia receiving intensive treatment? There was no individual survey question generated on this topic.	1	
DUITIO	U	There was no individual survey question generated on this topic.		
	[blood count] should a patient			
	with cancer receive a blood			
	transfusion?			
		Transfering assistants for the state of the		
B&C 8	What is the psychological impact	Transfusion recipients feelings about the transfusion and its effect on them	PRBH	1. Brunskill SJ, Millette SL, Shokoohi A, Pulford EC, Doree C, Murphy MF, et al. Red blood cell transfusion for people undergoing hip fracture surgery. Cochrane Database of Syst
	of blood transfusion on the	Regular long-term red blood cell transfusions for managing chronic chest	Question not derived	1
	patient?	complications in sickle cell disease. Implications for research: There is a need for	from the survey but	
		RCTs looking at the effect of long-term transfusion therapy on pulmonary	from another source.	
		hypertension and chronic sickle lung disease. The most likely starting point for		
		any series of trials will be the effect of transfusion on existing pulmonary		
		hypertension. The effect of transfusion on disease incidence and mortality		
		would require trials with longer-term follow-on, making them more costly and		
		conceptually more difficult. The definition of chronic sickle lung disease include		
		is not agreed by consensus and this is a stumbling block for further studies in		
		this area. New trials could consider using a combination of objective and		
		subjective outcome measures. Effectiveness could be measured objectively, for		
		example, through echocardiogram or pulmonary function testing, or subjectively by measuring symptoms such as chest pain on a standardised scale. Such trials		
		might provide useful information on the rate of deterioration in chronic chest		
		complications. Given the chronic nature of the condition, trials could consider		
		measuring pre-intervention 'severity' using an extended baseline 'steady state'		
		period. It should be remembered that transfusions may reduce symptoms such		
		as breathlessness by increasing the haemoglobin level rather than having any		
		beneficial effect per se on the chronic chest complication. Future RCTs in this		
		area should have clear protocols for the aims of transfusion (such as a target		
		haemoglobin level, or target sickle haemoglobin percentage) and how the long-		
		term transfusion programme is to be carried out, for example, by simple or		
		exchange transfusion. Possible transfusion complications are a key concern, and it would be important to collect information on the complications arising from		
		it would be important to collect information on the complications arising from long-term transfusion therapy in trial participants		
		iong-term transfusion therapy in that participants		
		Blood transfusions for treating acute chest syndrome in people with sickle cell	Question not derived	
		disease.Implications for research: We found only one very small randomised	from the survey but	
		controlled trial; this is not enough to make any reliable conclusion to support the	from another source.	
		use of blood transfusion. This review highlights the need of further high quality		
		research to provide reliable evidence for the effectiveness of these		
		interventions for the relief of the symptoms of ACS in people with sickle cell		
		disease.		
		What is the psychological impact on a patient, of a blood transfusion?	RBH	1
		the participation of a participation of a block transition		
		Are the improvements in blood pressure after tansfusion related to simple	н	1
		mchanges in blood volumen or the nitric oxide scavenging effects of hamoglobin		
		in stored blood increasing resting vascular tone and improving blood pressure by		
		this mechanism? i.e. increasing after load as well as pre-load?		
				4
		Does transfusion reduce length of stay after hip & knee replacement surgery?	ВН	
				4
		Did you feel better after your transfusion for anaemia? If so how quickly?	PRH	
		What are the early symptomatic honofite of blood transfusion often his for the	RBH	1
		What are the early symptomatic benefits of blood transfusion after hip fracture?	квн	
		Does receipt of a whole blood transfusion confer any cell mediated immunity on	н	1
		the recipient?		
		Does the body attempt a rejection process after transfusion?	Jehovah's Witness	1
		What is the patient's perception on going through blood transfusion?	RH	1
		•	•	

stematic Reviews. 2015.	N

The 50 ques	tions included in the interim survey	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R =	Previous Related & up-to-date Research
			relative or carer of someone who has	
	How should patients who refuse blood transfusion be managed?	What alternatives can be used to replace blood transfusion in Jehovah's witness patients who have sudden blood loss due to cardiac cath lab complications?	н	1. Han SB, Kim HJ, Kim TK, In Y, Oh KJ, Koh IJ, et al. Computer navigation is effective in reducing blood loss but has no effect on transfusion requirement following primary total Arthroscopy : Official Journal of the Esska. 2016.
		how useful are coagulation factors without blood transfusion for Jehovah's witnesses	ВН	
		What alternatives do you offer to people who do not wish to have a blood transfusion?	NK	
		Is it now time for retrospective controlled trials to be undertaken in the UK	Jehovah's Witness	
		comparing patients who have refused blood transfusion in comparison with those in matching capacities who were transfused?		
		What alternatives to blood transfusion are best to treat sudden blood loss, in Jehovah's Witness patients, due to cardiac cath lab complications?	н	
		What safe alternatives are available for patients who do not want to receive blood transfusions	н	
		What safe alternatives exist for patients who do not want, or cannot receive, blood transfusions?	ВН	
549		Benefits from non-blood transfusion-alternative treatment	н	
	What is the impact of iron deficiency on blood donors and how may its impact be prevented?	Research elsewhere suggests women would need iron supplements to prevent anaemia if donating more than twice a year, should this be included in recommendations?	ВН	1. Pasricha S, Speedy J, Low M. What do systematic reviews of iron supplementation in women tell us about the functional consequences of donor iron deficiency? Vox Sanguir
	What characteristics identify	What is the benefit of blood transfusion in patients with evidence of poor oxygen delivery/ organ dysfunction?	н	1. Hunt H; Stanworth S; Curry N; Woolley T; Cooper C; UkoumunneO; Zhelev Z; Hyde C. Thromboelastography (TEG) and rotational thromboelastometry (ROTEM) for trauma- Database of Systematic Reviews. 2015;(2):CD010438
	patients who would benefit from a blood transfusion?	How well does donated blood carry oxygen in particular for patients with respiratory disease?	R B H	Database of Systematic Reviews. 2015,(2).CD010456
		what is the reason for blood transfusion?	RH	
		What should be the criteria for transfusion?	ВН	
		Will it benefit my patient in the best possible way	RBH	•
		blood products given to a lot of patients who should possibly not be given one- need robust data to decide	RBH	
		Does transfusion improve patient's outcome?	ВН	
		What clinical markers should we use to show that patients have benefited from blood transfusion (particularly in preterm neonates)?	RH	
	How can the immediate side effects of receiving a blood	What detrimental effects are caused my transfusing blood products in a surgical bleed?	RH	1. Li SL, Ye Y, Yuan XH. Association between allogeneic or autologous blood transfusion and survival in patients after radical prostatectomy: a systematic review and meta-analy 2. Xie JW, Xu B, Kang PD, Zhou ZK, Shen B, Yang J, et al. [The efficacy and safety of postoperative retransfusion drain following total hip arthroplasty: a meta-analysis]. Zhonghua
	transfusion be reduced?	What compl; ications occur from massive transfusion in children from trauma?	н	 Thongprayoon C, Cheungpasitporn W, Gillaspie EA, Greason KL, Kashani KB. Association of blood transfusion with acute kidney injury after transcatheter aortic valve replacer Mainou M, Alahdab F, Tobian AA, Asi N, Mohammed K, Murad MH, et al. Reducing the risk of transfusion-transmitted cytomegalovirus infection: a systematic review and me
		Skin preparation with alcohol versus alcohol followed by any antiseptic for	Question not derived	5. Kim JL, Park JH, Han SB, Cho IY, Jang KM. Allogeneic blood transfusion is a significant risk factor for surgical-site infection following total hip and knee arthroplasty: a meta-ar
		preventing bacteraemia or contamination of blood for transfusion. Implications for research: It is common for people who are critically ill to become	from the survey but from another source.	6. Keir AK, Wilkinson D, Andersen C, Stark MJ. Washed versus unwashed red blood cells for transfusion for the prevention of morbidity and mortality in preterm infants. The Co
		coagulopathic, and many of these will require insertion of a central venous		7. Jones AR, Frazier SK. Association of blood component ratio with clinical outcomes in patients after trauma and massive transfusion: a systematic review. Advanced Emergen
		catheter (CVC). The question of whether prophylactic plasma transfusion is		8. Harnan S, Ren S, Gomersall T, Everson-Hock ES, Sutton A, Dhanasiri S, et al. Association between transfusion status and overall survival in patients with myelodysplastic synd 2016;136(-1):23-42.
		indicated remains unanswered. An adequately-powered trial which is able to recruit sufficient number of participants to address this is required. The ongoing		9. Cata JP, Lasala J, Pratt G, Feng L, Shah JB. Association between perioperative blood transfusions and clinical outcomes in patients undergoing bladder cancer surgery: a syste
		trials that are due to be completed by February 2018 will be unable to answer		2016;2016:9876394
		the primary questions of this review because the studies are too small. To detect a doubling in the number of participants with major bleeding from 1% to		10. Sarai M, Tejani AM. Loop diuretics for patients receiving blood transfusions. Cochrane Database of Systematic Reviews. 2015(2):CD010138-CD.
		2% would require a two-arm study with over 4600 participants; the three		11. Muller MC, van Stein D, Binnekade JM, van Rhenen DJ, VlaarAp. Low-risk transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related acute lung injury donor strategies and the impact on the onset of transfusion-related acute lung injury donor strategies acute lung i
		ongoing studies are only planning to recruit 355 participants in total.		2015;8(3):436-46.
				 Kopolovic I, Ostro J, Tsubota H, Lin Y, Cserti-Gazdewich CM, Messner HA, et al. A systematic review of transfusion-associated graft-versus-host disease. Blood. 2015;126(-3). Keir AK, Pal S, Trivella M, Lieberman L, Callum J, Shehata N, et al. A systematic review and meta-analysis of risks of red cell transfusion for neonatal morbidities or mortality
		What is the mortality rate following major blood transfusion What is the true risk to life (attributable mortality) of a red cell transfusion?	н	15. Keir A, Pal S, Trivella M, Lieberman L, Callum J, Sheheta N, et al. Adverse effects of RBC transfusions in neonates: a systematic review and meta-analysis. Abstracts of the HA
				16. Balvers K, Wirtz MR, van Dieren S, Goslings JC, Juffermans NP. Risk factors for trauma-induced coagulopathy and transfusion-associated multiple organ failure in severely in
		When undergoing a transfusion what risks can occur?	NK	
		What is the current safety of blood transfusion for recipients?	н	
DtTr12a	What is the optimal type and	Are major haemorrhage protocols optimised for different age groups e.g.	Н	1. Yu F, Zhong T, Wu G. [Efficacy of high versus low plasma: red blood cell ratio resuscitation in patients with severe trauma requiring massive blood transfusion: a meta-analysi
	combination of blood products	elderly? How can we clarify and improve the guidance on massive haemorrhage?	ВH	2017;37(-1):119-23. 2. Wikkelso A, Wetterslev J, Moller AM, Afshari A. Thromboelastography (TEG) or rotational thromboelastometry (ROTEM) to monitor haemostatic treatment in bleeding patie
	[red blood cells, platelets, frozen plasma] for adult patients* with	In major haemorrhage settings for example trauma, is there any information	н	Anaesthesia. 2017. Apr;72(4):519-531. doi: 10.1111/anae.13765
	a major haemorrhage that	how older or younger patients respond to generic major haemorrhage		 Cannon JW, Khan MA, Raja AS, Cohen MJ, Como JJ, Cotton BA, et al. Damage control resuscitation in patients with severe traumatic hemorrhage: a practice management gui Trauma and Acute Care Surgery. 2017;82(-3):605-17.
	requires a transfusion of 4 or	protocols? Improved protocols for massive haemorrhages in the critical care unit	ВH	A. Fahrendorff M, Oliveri RS, Johansson PI. The use of viscoelastic haemostatic assays in goal-directing treatment with allogeneic blood products - a systematic review and meta Medicine. 2017;25(-1):39
	more units of blood]? * Aged over 16 years old.	Wider knowledge of best way to manage brisk haemorrhage i.e. ratio of	PRBH	5. Deppe AC, Weber C, Zimmermann J, Kuhn EW, Slottosch I, Liakopoulos OJ, et al. Point-of-care thromboelastography/thromboelastometry-based coagulation management in
	more units of blood]? * Aged		Р R В Н В Н	 Deppe AC, Weber C, Zimmermann J, Kuhn EW, Slottosch I, Liakopoulos OJ, et al. Point-of-care thromboelastography/thromboelastometry-based coagulation management in Research. 2016;203(-2):424-33. Wikkelso A, Wetterslev J, Moller AM, Afshari A. Thromboelastography (TEG) or thromboelastometry (ROTEM) to monitor haemostatic treatment versus usual care in adults of a subscription.
	more units of blood]? * Aged	Wider knowledge of best way to manage brisk haemorrhage i.e. ratio of blood:FFP:platelets		5. Deppe AC, Weber C, Zimmermann J, Kuhn EW, Slottosch I, Liakopoulos OJ, et al. Point-of-care thromboelastography/thromboelastometry-based coagulation management in Research. 2016;203(-2):424-33.

al knee arthroplasty: a meta-analysis. Knee Surgery, Sports Traumatology,	Ν
uinis. 2015;109((Suppl. 1)):58. Abstract No. 4C-S25-03.	Ν
na-induced coagulopathy in adult trauma patients with bleeding. Cochrane	N
alysis. Plos One. 2017;12(-1):e0171081-e. nua Wai Ke Za Zhi [Chinese Journal of Surgery]. 2016;54(-2):108-13. cement: A meta-analysis. World Journal of Nephrology. 2016;5(-5):482-8. neta-analysis. Transfusion. 2016. analysis. The Journal of Arthroplasty. 2016. Cochrane Database of Systematic Reviews. 2016(-1):CD011484-CD. ency Nursing Journal. 2016;38(-2):157-68. ndromes: a systematic literature review and meta-analysis. Acta Haematologica. tematic review and meta-analysis study. Journal of Blood Transfusion. n-related acute lung injury: a meta-analysis. Transfusion. 2015;55(1):164-75. omes: a systematic review and meta-analysis. JACC: Cardiovascular Interventions. 3):406-14. ity. Vox Sanguinis. 2015;109((Suppl. 1)):31-2. HAA 2015 Annual Scientific Meeting. 2015:196-7. injured trauma patients. Frontiers in Medicine. 2015.	N
ysis]. Nan Fang Yi Ke Da Xue Xue Bao = Journal of Southern Medical University. tients: a systematic review with meta-analysis and trial sequential analysis. guideline from the Eastern Association for the Surgery of Trauma. The Journal of eta-analysis. Scandinavian Journal of Trauma, Resuscitation and Emergency : in cardiac surgery: a meta-analysis of 8332 patients. The Journal of Surgical ts or children with bleeding. The Cochrane Database of Systematic Reviews. 2016(- ency Nursing Journal. 2016;38(-2):157-68. vian Journal of Trauma, Resuscitation and Emergency Medicine. 2016;24(-1):23	N

The 50 que	estions included in the interim survey	Original Question received by the survey.	Who generated the	Previous Related & up-to-date Research
Jo que			question P = Person who has received a blood transfusion; R =	
			relative or carer of someone who has	
		What are the ideal ratios of a major haemorrhage policy e.g. RBC:FFP: platelets: cryo. Which strategies & techniques result in improved patient outcomes?	н	9. Boutin A, Chasse M, Shemilt M, Lauzier F, Moore L, Zarychanski R, et al. Red blood cell transfusion in patients with traumatic brain injury: a systematic review and meta-analy 10. McQuilten ZK, Crighton G, Engelbrecht S, Gotmaker R, Brunskill SJ, Murphy MF, et al. Transfusion interventions in critical bleeding requiring massive transfusion: a systematic
		In major trauma bleeding, there is evidence of early platelet dysfunction and the PROPPR study gave upfront platelets, however not all trauma units have readily available stocks of platelets. Are there alternatives to platelet transfusion e.g. fibrinogen replacement that might compensate for this?	н	-11. Balvers K, Wirtz MR, van Dieren S, Goslings JC, Juffermans NP. Risk factors for trauma-induced coagulopathy and transfusion-associated multiple organ failure in severely inju
		how should we arrange blood product transfusion in major haemorrhage, and can near-patient testing help?	н	
		What is the optimal 'formulation' of blood (i.e., combination of packed red blood cells, platelets, fresh frozen plasma, whole blood) for patients prescribed a massive transfusion (e.g., more than four units of blood)?	RH	
		Role of whole blood in managing trauma haemorrhage	ВН	
		Can more be done to promote better blood loss management?	NK	
		should we have whole blood available for major haemorrhage Why haven't we adopted the military usage of using blood products: not RBC	ВН	-
		but more platelets & WC?	511	
		How much thought is put into the option of using alternatives to blood in an emergency situation?	NK	
		Is blood transfusion still the best treatment for sudden blood loss due to cardiac cath lab complications?	н	
		How can over transfusion be prevented for patients with traumatic haemorrhage?	RBH	
		Is blood transfusion still the best treatment for sudden haemorrhage due to cardiac cath lab complications?	н	
		What are ideal products for trauma haemorrhage Rhesus in the prehospital environment? Saline, FFP alone, RBC & FFP or RBC & lyoplas or fibrinogen concentrate/ cryo?	н	
D4	Can donating blood be beneficial		н	No SR evidence available
	to the health of the donor?	Are there any benefits to the donor of giving blood.	В	
A7	What training is required for the	Why is it up to the nurses to give blood transfusions?	ВH	1. NICE Guideline Recommendation:
	safe administration of blood	Who is to order blood transfusion DR or NURSE and what observation to be checked on the recipient	RH	Monitoring for acute reactions 10. Monitor the patient's condition and vital signs before, during and after blood transfusions, to detect acute transfusion reactions that may need immediate investigation and
		Why can't we have specific blood transfusion specialist, who are there to set up infusions and stay for the duration?	BH	11. Observe patients who are having or have had a blood transfusion in a suitable environment with staff who are able to monitor and manage acute reactions.
		Why are some staff allowed to undertake transfusion practices i.e. collecting blood when they have no proven competency?	н	2. Kopolovic I, Ostro J, Tsubota H, Lin Y, Cserti-Gazdewich CM, Messner HA, et al. A systematic review of transfusion-associated graft-versus-host disease. Blood. 2015;126(-3):40
		Do you think it's a waste of a registered nurses working day to pick up the units of blood from the lab as the wrong unit has been given at bedside in the past?	ВН	
		Best way to diagnose transfusion reactions - to refute or confirm early so that we can get on with these. [BT Guideline: 7 Monitoring for Acute BT Reactions - 7.4 Evidence statements.	BRH	
		"Clinical: No clinical evidence was identified for this review. Economic: No relevant economic evaluations were identified."]		
DtTr19	What is the optimal combination	Would non blood surgery not be of greater benefit to the public?	NK	NICE Guideline Recommendations 1-5: Alternatives to blood transfusion for patients having surgery: Oral iron, IV iron and erythropoietin
	of drug alternatives and clinical	Why is bloodless surgery see in a negative light? Would not blood conservation and bloodless surgery be the aim for all surgeons	NK NK	 Do not offer erythropoietin to reduce the need for blood transfusion in patients having surgery, unless: the patient has anaemia and meets the criteria for blood transfusion, but declines it because of religious beliefs or other reasons or
	procedures to enable surgery without the use of allogeneic	would not blood conservation and bloodless surgery be the aim for all surgeons wanting to give their patients the best possible outcome?		the appropriate blood type is not available because of the patient's red cell antibodies.
	blood?	Does improving Hb preoperatively improve outcomes?	н	 Offer oral iron before and after surgery to patients with iron-deficiency anaemia. Consider intravenous iron before or after surgery for patients who:
		Why use donated blood for pre-arranged elective surgery when safe alternatives are available?	NK	 A consider inclusion of before of after surgery for patients who. have iron-deficiency anaemia and cannot tolerate or absorb oral iron, or are unable to adhere to oral iron treatment (see the NICE guideline on medicines adherence) are diagnosed with functional iron deficiency
S1	When should whole blood transfusion be given? Whole blood transfusion means that thew blood unit undergoes minimal processing and all the components of blood (red cells, white cells, plasma and platelets)	What are the indications for fresh whole blood transfusion	BRH	• are diagnosed with functional iron deficiency No available SR evidence
	are transfused.			
D1	What are the adverse effects or	Is there any risk to my health by giving blood?	BH	Short Term:
	complications of donating blood,	Have you ever had a complication from giving blood? Is there some loss of personal vitality or weakening to the individual who gives	В	 Fisher SA, Allen D, Doree C, Naylor J, Angelantonio ED, Roberts DJ. Interventions to reduce vasovagal reactions in blood donors: a systematic review and meta-analysis. Transi Van Remoortel H, De Buck E, Compernolle V, Deldicque L, Vandekerckhove P. The effect of a standard whole blood donation on oxygen uptake and exercise capacity: a system
	whether temporary (e.g. feeling faint or tired) or longer term (e.g.	blood?		3. Hoogerwerf MD, Veldhuizen IJ, De Kort WL, Frings-Dresen MH, Sluiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a system
	anaemia)?	How common is the development of anaemia after giving blood? Is there any way to help the tiredness that lasts a few days after donating	B	
				Longer Term: 4. Pasricha S, Speedy J, Low M. What do systematic reviews of iron supplementation in women tell us about the functional consequences of donor iron deficiency? Vox Sanguin
		Is there any known detriment to the donor? When giving blood what happens if you take too much?	B H NK	4
		Why do some people feel no different when they give a pint of blood?	В	

alysis. Transfusion Medicine Reviews. 2016;30(-1):15-24. atic review. Transfusion Medicine Reviews. 2015;29(-2):127-37. injured trauma patients. Frontiers in Medicine. 2015.	
	N
nd treatment. :406-14.	Y
	Y
	N
nsfusion Medicine (Oxford, England). 2016;26(1):15-33. tematic review and meta-analysis. Transfusion. 2016;57(2):451-62. ematic review of the literature. Blood Transfusion. 2015;13(3):354-62. ninis. 2015;109((Suppl. 1)):58. Abstract No. 4C-S25-03.	N

		144	
The 50 questions included in the interim survey	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has	Previous Related & up-to-date Research
combination of blood products [red blood cells, platelets, frozen plasma] for paediatric patients* with a major haemorrhage that requires a transfusion of 4 or more units of blood]? * Aged less than 16 years old.	What ratio should we transfuse children in trauma, massive haemorrhage?	н	No available SR evidence
prophylactic* platelets be given to reduce procedural bleeding complications in patients with low platelets? *Prophylactic platelets are given to prevent bleeding.	How can platelets be used efficiently to prevent peri-procedural bleeding in patients with thrombocytopenia Different doses of prophylactic platelet transfusion for preventing bleeding in future trials - One of the difficulties within this review was the variability between studies in assessing and grading bleeding. The WHO classification of bleeding, although widely used, has never been validated, and therefore the assumption that all WHO grade 2 bleeding is clinically significant has been brought into question. For future studies, an agreed international consensus on assessing and grading bleeding would greatly enhance the ability to compare platelet transfusion trials. This would need to be validated and to take into account the impact bleeding has upon the patient from both a medical perspective and with regard to their quality of life. The Biomedical Excellence for Safer Transfusion (BEST) Collaborative is currently developing a standardised bleeding assessment form. It is acknowledged that blinding in platelet transfusion trials is difficult. However, whenever possible, the bleeding assessor should be blinded to the intervention.ematological disorders after myelosuppressive chemotherapy or stem cell transplantation. Implications for research: One of the main constraints in performing the meta-analysis in this review was the different time periods in which trials reported bleeding. Implications for future research include standardised consensus time periods for reporting outcomes of interest such as bleeding. Further research is needed to identify the subgroups of patients for which it may be safe to adopt a therapeutic-only platelet transfusion policy, in particular patients receiving autologous HSCT. Whether the conditioning regimens, indication for HSCT, and number of viable CD34 positive cells in the autologous HSCT have any impact on duration of thrombocytopenia and bleeding rates. Another cohort of haematology patients who currently receive regular platelet transfusions include people with myelodyspl	R B H Question not derived from the survey but from another source.	 1. NICE Guideline Recommendations: Plateit: Thresholds and Targets Plateit: Thresholds (up to a maximum of 100x109 per litre) for patients with thrombocytopenia and either of the following: evere bleding (WHO grads 3 and 4) bleding in critical sites, such as the central nervous system (including eyes). Plateits thro are not bledding or having invasive procedures or surgery 20. Offer prophydicic platelet transfusions to patients with a platelet count below 10x109 per litre who are not bledding or having invasive procedures or surgery, and who do a chonic bone marrow falure e autoimmune thrombocytopenia heparin induced thrombocytopenia heparin induced thrombocytopenia thrombocytopenia (prophydicic platelet transfusions to patients with a platelet count above 50x109 per litre in patients who are having invasive procedures or surgery. 22. Consider prophydactic platelet transfusions to raise the platelet count above 50x109 per litre in patients who are having invasive procedures or surgery. 23. Consider prophydactic platelet transfusions to raise the platelet count above 50x109 per litre in patients who are having invasive procedures or surgery. 23. Consider prophydactic platelet transfusions to raise the platelet count above 100x109 per litre in patients having surgery in critical sites, such as the central nervous system lively offer prophydactic platelet transfusions to patients with any of the following: e-thronic bore marrow fallure a-any consisting causes of abnormal haemostatis. 24. Consider prophydactic platelet transfusions to patients with any of the following: e-thronic bore marrow fallure a-any consisting rome fallowing to patients with any of the following: e-thromb

	x
	Y
ow 30×109 per litre.	
o not have any of the following conditions:	
ount:	
n (including the posterior segment of the eyes).	
having bone marrow aspiration and trephine biopsy.	
rous system (including eyes).	
in people with thrombocytopenia. The Cochrane Database of Systematic Reviews.	
th thrombocytopenia due to chronic bone marrow failure: a meta-analysis and	
ical malignancies undergoing intensive chemotherapy or stem cell	
16-27. ransfusion for preventing bleeding in people with haematological disorders after	
ological disorders after myelosuppressive chemotherapy or stem cell	

	The 50 ques	stions included in the interim survey	Original Question received by the survey.	Who generated the	Previous Related & up-to-date Research
				question	
				P = Person who has	
				received a blood	
				transfusion; R =	
_				relative or carer of	
				someone who has	
			Comparison of different platelet count thresholds to guide administration of	Question not derived	transplantation. Cochrane Database of Systematic Reviews. 2015(-10):CD010984-CD.
			prophylactic platelet transfusion for preventing bleeding in people with	from the survey but	8. Estcourt LJ, Desborough M, Hopewell S, Doree C, Stanworth SJ. Comparison of different platelet transfusion thresholds prior to insertion of central lines in patients with thromb
			haematological disorders after myelosuppressive chemotherapy or stem cell	from another source.	
				nom another source.	
			transplantation. Conclusions on the non-inferiority of a platelet count threshold		9. Crighton GL, Estcourt LJ, Wood EM, Trivella M, Doree C, Stanworth S. A therapeutic-only versus prophylactic platelet transfusion strategy for preventing bleeding in patients with
			of 10 x 109/L compared to 20 x 109/L or 30 x 109/L have been based on		cell transplantation. Cochrane Database of Systematic Reviews. 2015(-9):CD010981-CD.
			underpowered studies leading to imprecise estimates for the outcomes within		
			this review. In the Rebulla 1997 study (255 participants), the power calculations		
			were based on the assumption that the rate of WHO Grade 2 or above bleeding		
			was 30%, but the actual rate in this study was 20%. To detect a 50% increase in		
			the rate of bleeding (that is from 20% to 30%) with 90% power would require		
			392 participants per arm of the study, and to detect a 25% increase in the rate of		
			bleeding (that is from 20% to 25%) with 80% power would require 1098		
			participants per arm of the study. The combined results from all three studies		
			would not be sufficiently powered to detect a 50% increase in the rate of		
			bleeding in the standard platelet transfusion threshold (10 x 109/L) arm, if we		
			assumed the rate of bleeding was 20% in all three studies. No RCTs have		
			compared a lower platelet count threshold (5 x 109/L) versus standard platelet		
			transfusion threshold (10 x 109/L); different platelet count thresholds (5 x 109/L,		
			20 x 109/L, 30 x 109/L, or 50 x 109/L) that did not include a comparison against		
			the standard platelet transfusion threshold (10 x 109/L); or alternative		
			thresholds to guide prophylactic platelet transfusions (for example platelet		
			mass, immature platelet fraction, absolute immature platelet number) in people		
			with haematological malignancies. Additional evidence is required from new		
			RCTs to determine the most appropriate platelet transfusion threshold to guide		
			prophylactic platelet transfusions. Assessment of bleeding in future trials: One		
			of the difficulties within this review was the variability between studies in		
			assessing and grading bleeding. The WHO classification of bleeding, although		
			widely used, has never been validated, and therefore the assumption that all		
			Grade 2 bleeding is clinically significant has been brought into question. For		
			future studies, an international consensus on assessing and grading bleeding		
			would greatly enhance the ability to compare platelet transfusion trials. This		
			would need to be validated and to take into account the impact that bleeding		
			has upon the patient from both a medical perspective and with regard to quality		
			of life. It is acknowledged that blinding in platelet transfusion trials is difficult.		
			However, whenever possible, the bleeding assessor should be blinded to the		
			intervention.		
			Use of platelet transfusions prior to lumbar punctures or epidural anaesthesia	Question not derived	
			for the prevention of complications in people with thrombocytopenia.	from the survey but	
			Implications for research: It is unlikely that any future randomised controlled	from another source.	
			trials will be performed with a primary outcome of major bleeding because the	nom another source.	
			event is rare. To detect a doubling in the number of participants with major		
			bleeding from 0.1% to 0.2% would require a study with more than 47,000		
			participants. A summary of the best available evidence from non-randomised		
			studies is required, the last systematic search of the non-randomised literature		
			was performed before 2010.		
			Alternative agents to prophylactic platelet transfusion for preventing bleeding in	Question not derived	
			people with thrombocytopenia due to chronic bone marrow failure: a meta-	from the survey but	
			analysis and systematic review. Implications for research: Our search strategy	from another source.	
			has identified four further trials of TPO mimetics (eltrombopag) with 837		
			participants, which are presently underway for people with bone marrow		
			failure. In order to demonstrate a fall in bleeding events from 26 in 100 to 16 in		
			100 participants (as seen in the eltrombopag data), a study would need to		
			recruit 514 participants (80% power, 5% significance) and it is likely that the		
			publication of additional data from ongoing trials will answer this question.		
			There are no adequate randomised controlled trials assessing artificial platelet		
			substitutes, platelet-poor plasma, rFVIIa, rFXIII, interleukin 6, interleukin 11,		
			fibrinogen concentrate, DDAVP or antifibrinolytics for people with bone marrow		
			failure and this remains a potential area for future research.		
I	I			I	1

rombocytopenia. Cochrane Database of Systematic Reviews. 2015(-12):CD011771-	
ts with haematological disorders after myelosuppressive chemotherapy or stem	
	I

The 50 que	stions included in the interim survey	Original Question received by the survey.	Who generated the	Previous Related & up-to-date Research
			question P = Person who has	
			received a blood	
			transfusion; R =	
			relative or carer of	
			someone who has	
		Alternatives and adjuncts to prophylactic platelet transfusion for people with	Question not derived	
		haematological malignancies undergoing intensive chemotherapy or stem cell	from the survey but	
		transplantation. Implications for research: Our search strategy identified five further trials of TPO mimetics (eltrombopag) that are presently underway for	from another source.	
		participants undergoing intensive chemotherapy and one further trial of		
		AMG531 (romiplostim) that was completed but the results have not yet been		
		reported. The problems with reporting outcomes of the trials in this systematic		
		review make it difficult to interpret the value of additional trials of TPO mimetics		
		and without further data, a recommendation cannot be made. To detect a		
		decrease in the proportion of participants with clinically significant bleeding from 12 in 100 to 6 in 100 would require a trial containing at least 708		
		participants (80% power, 5% significance). Detection of a decrease from 43 in		
		100 to 22 in 100 would require a trial containing at least 150 participants (80%		
		power, 5% significance). The search identified no trials of other alternative		
		agents such as artificial platelets, fibrinogen concentrate, rFVIIa or DDAVP and further research will be necessary to determine whether these agents have a		
		role in preventing bleeding for people with thrombocytopenia undergoing		
		intensive chemotherapy.		
		Comparison of different platelet transfusion thresholds prior to insertion of	Question not derived	
		central lines in patients with thrombocytopenia. Implications for research: The	from the survey but	
		ongoing trial that compares two different platelet count thresholds and is due to	from another source.	
		be completed in December 2017 will be unable to answer the primary questions		
		of this review because the study is too small. To detect a doubling in the number		
		of participants with major bleeding from 1% to 2% would require a study with over 4600 participants; the ongoing study is only planning to recruit 165		
		participants. No trials have been identified that compared no platelet		
		transfusions versus a prespecified platelet count threshold. Further randomised		
		controlled clinical trials are now required, in order to develop the optimal		
		transfusion strategy for patients who are thrombocytopenic and require a central line insertion.		
		central line insertion.		
S2	What guidelines should there be	Is there any guidelines on when to withdrawal transfusion from palliative	РН	1. Torres ME, Rodriguez JN, Ramos JL, Gomez FA. Transfusion in palliative cancer patients: a review of the literature. Journal of Palliative Medicine. 2014;17(1):88-104
	on the approriate withdrawal of	patients		
	transfusion from palliative			
	patients			
D20	What is the impact of an	Why aren't gay people allowed to donate blood?	В	1. De Buck E, Dieltjens T, Compernolle V, Vandekerckhove P. Is having sex with other men a risk factor for transfusion-transmissible infections in male blood donors in Western cou
	individual's sexual practice on	Why can a monogamous homosexual male not give blood?		2015;10(4):е0122523-е.
	the safety of their blood?	What effect would allowing donations from men who have sex with men have	BH	
		on the safety of blood transfusions? Why are gay men barred from blood donation (stupid 12-month rules	н	
		notwithstanding)?		
1		Why can't homosexuals donate blood?	BH	
		Why is there a ban on gay men donating blood if they practice safe sex?	В	
		How come homosavuals can't donate blood over theursh they get tests of for	В	
		How come homosexuals can't donate blood even though they get tested for STDs and HIV at least 3 times a year?	в	
		Why deny donations from homosexual men? It seems antiquated.	R B H	
		I used to give blood, but recently, as I was born abroad, I have found I am having	BH	
		difficulty giving. Why?		
		If I have sex in Africa but with my girlfriend that I travelled there with why do	В	
		you need to know this? Years ago my offer of blood donation was refused on the grounds of having lived	В	
		abroad in Africa. Why was this and is this still a general rule?		
DtTr27	In patients with an acquired	Recombinant factor VIIa concentrate versus plasma-derived concentrates for		1. National Guideline Recommendations:
	bleeding disorder what are the	treating acute bleeding episodes in people with haemophilia and inhibitors.	from the survey but	Prothrombin complex concentrate: thresholds and targets
	best drug alternatives* to blood	Implications for research: There is need for further well-designed, adequately- powered randomised controlled trials to assess the relative benefits and risks of	from another source.	39. Offer immediate prothrombin complex concentrate transfusions for the emergency reversal of warfarin anticoagulation in patients with either:
	transfusion to prevent or treat	using rFVIIa compared to human plasma-derived concentrates in people with		severe bleeding or head injury with suspected intracerebral becomerchage
	bleeding?	haemophilia with inhibitors. It is advisable that researchers in the field define		 head injury with suspected intracerebral haemorrhage. A0 For guidance on reversing anticoagulation treatment in people who have a stroke and a primary intracerebral haemorrhage see recommendation 1.4.2.8 in the NICE guideline.
		commonly agreed objective outcome measures in order to enable easier pooling		 For guidance on reversing anticoagulation treatment in people who have a stroke and a primary intracerebral haemorrhage, see recommendation 1.4.2.8 in the NICE guideline Consider immediate prothrombin complex concentrate transfusions to reverse warfarin anticoagulation in patients having emergency surgery, depending on the level of antico
		of their results thus increasing the power of comparisons. To the same, scope		 Consider immediate protinonial complex concentrate transforms to reverse warann anticoogulation in patients naving emergency surgery, depending on the reverse management of the second antico a
		reporting concordant and discordant pairs in cross-over trials would be recommended. Both tasks are difficult to pursue, but very relevant and should		
		be sought in view of the high societal costs of treating people with haemophilia		2. Zeng L, Choonara I, Zhang L, Li Y, Shi J. Effectiveness of prothrombin complex concentrate (PCC) in neonates and infants with bleeding or risk of bleeding: a systematic review and
		with inhibitors.		3. Iorio A, Krishnan S, Myren KJ, Lethagen S, McCormick N, Yermakov S, et al. Indirect comparisons of efficacy and weekly factor consumption during continuous prophylaxis with re
1				factor VIII products. Haemophilia : the Official Journal of the World Federation of Hemophilia. 2017.
				4. Tone KJ, James TE, Fergusson DA, Tinmouth A, Tay J, Avey MT, et al. Acquired factor XIII inhibitor in hospitalized and perioperative patients: a systematic review of case reports a
		How may factor concentrates be optimally used to avoid administration of large	н	5. Pocoski J, Li N, Ayyagari R, Church N, Maas Enriquez M, Xiang Q, et al. Matching-adjusted indirect comparisons of efficacy of BAY 81-8973 vs two recombinant factor VIII for the p
		volumes of FEP when attempting to prevent (or troat) blooding in patients with		
		volumes of FFP when attempting to prevent (or treat) bleeding in patients with a coagulopathy?		7:129-37, 2016. 2016. 6. Minget Castellane ME, Alvarez Reman MT, Lenez Foreandez ME, Resa CA, Hiravk ML, Limenez Yuste V, et al. Spanish concernus guidelines on prenhylavis with hypersing agents f
		volumes of FFP when attempting to prevent (or treat) bleeding in patients with a coagulopathy? Are factor and fibrinogen concentrates safer than blood products to treat	н	6. Mingot-Castellano ME, Alvarez-Roman MT, Lopez-Fernandez MF, Roca CA, Hirnyk MI, Jimenez-Yuste V, et al. Spanish consensus guidelines on prophylaxis with bypassing agents f
		a coagulopathy? Are factor and fibrinogen concentrates safer than blood products to treat coagulapathies?		6. Mingot-Castellano ME, Alvarez-Roman MT, Lopez-Fernandez MF, Roca CA, Hirnyk MI, Jimenez-Yuste V, et al. Spanish consensus guidelines on prophylaxis with bypassing agents f Haematology. 2016;96(-5):461-74.
		a coagulopathy? Are factor and fibrinogen concentrates safer than blood products to treat	H	6. Mingot-Castellano ME, Alvarez-Roman MT, Lopez-Fernandez MF, Roca CA, Hirnyk MI, Jimenez-Yuste V, et al. Spanish consensus guidelines on prophylaxis with bypassing agents

level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
N Western countries? A systematic review. PLoS ONE [Electronic Resource]. N UCE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. leve concentrate. Atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. r VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
IICE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. rr VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		N
IICE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. rr VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
IICE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. rr VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine	n Western countries? A systematic review. PLoS ONE [Electronic Resource].	N
IICE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
IICE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
IICE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
IICE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
IICE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
IICE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
IICE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
IICE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
IICE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
IICE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
IICE guideline on the initial diagnosis and management of stroke. level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		Y
level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
ex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine		
atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine	IICE guideline on the initial diagnosis and management of stroke.	
hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine	level of anticoagulation and the bleeding risk.	
case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine	level of anticoagulation and the bleeding risk. lex concentrate.	
or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine	level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017.	
	level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. hylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant	
assing agents for surgery in patients with indemoprinid and infinitions. European Journal of	level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017.	
	level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. whylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016. or VIII for the prophylactic treatment of severe hemophilia A. Journal of Blood Medicine	
thesiologica Scandinavica. 2016. A-analysis of randomized controlled trials, Journal of Cardiothoracic and Vascular	level of anticoagulation and the bleeding risk. lex concentrate. atic review and meta-analysis. European Journal of Pediatrics. 2017. whylaxis with recombinant factor VIII Fc fusion protein and conventional recombinant case reports and case series. Transfusion Medicine Reviews. 2016.	

The 50 que	estions included in the interim survey	Original Question received by the survey.	Who generated the question P = Person who has received a blood transfusion; R = relative or carer of someone who has Question not derived	Previous Related & up-to-date Research
		treatment in bleeding and non-bleeding patients. Implications for research: Further trials are urgently needed, and great emphasis must be placed on attempts to reduce bias and increase power to show differences in patient- relevant clinical outcomes (i.e. mortality).	from the survey but from another source.	 S. Di Mino MN, Ambrosino P, Myasoedova VA, Amato M, Ventre I, Tremoli E, et al. Recombinant activated factor VII (eptacog alfa activated, NovoSeven (R)) in patients with ra procedures. Current Pharmaceutical Design. 2016. D. Devlin R, Bonanno L, Badeaux J. The incidence of thromboembolism formation following the use of recombinant factor VII an patients suffering from blunt force trauma con Systematic Reviews and Implementation Reports. 2016;14(-3):116-38. Desborough M, Hadjinicolaou AV, Chaimani A, Trivella M, Vyas P, Doree C, et al. Alternative agents to prophylactic platelet transfusion for preventing bleeding in people with systematic review. The Cochrane Database of Systematic Reviews. 2016(-10):CD012055-CD. Desborough M, Estcourt LJ, Doree C, Trivella M, Hopewell S, Stanworth SJ, et al. Alternatives, and adjuncts, to prophylactic platelet transfusion for people with haematologic transplantation. The Cochrane Database of Systematic Reviews. 2016(-8):CD010982-CD. Chai-Adisaksopha C, Hillis C, Siegal DM, Movilla R, Heddle N, Iorio A, et al. Prothrombin complex concentrates versus fresh frozen plasma for warfarin reversal. A systematic : 28:116(5):879-880 Xi M, Blanchette V, Blatny J, Collins P, Dunn A, Fischer K, et al. Pharmacokinetic characteristics of factor VIII and IX concentrates – a systematic review. Journal of Thrombosis 5. Wikkelso, Aj. The role of fibrinogen and haemostatic assessment in postpartum haemorrhage. Danish Medical Journal. 2015;61(4):pii: B5055-pii: B. Ranucci M, Jeppsson A, Baryshnikova E. Pre-operative fibrinogen supplementation in cardiac surgery patients: an evaluation of different trigger values. Acta Anaesthesiologic 7. MCQuilten 2K, Crighton G, Engelorecht S, Gotmaker R, Brunskill SJ, Murphy MF, et al. Transfusion interventions in critical bleeding requiring massive transfusion: a systematic 12: CD004449-CD. Manto D, Makris M, Dwan K, D'Amico R, Iorio A. Recombinant factor VI
B&C1	Does blood transfusion increase the incidence of necrotising entercolitis*in preterm infants and how can we prevent this?	Does blood transfusion lead to necrotising enterocolitis in preterm babies? Among preterm infants who require a packed red cell transfusion (P), does withholding milk feeds around the time of infusion (before, during and after) (I), compared with feeding as usual (C), reduce the risk of developing necrotising	вн	 Keir AK, Wilkinson D, Andersen C, Stark MJ. Washed versus unwashed red blood cells for transfusion for the prevention of morbidity and mortality in preterm infants.Cochran Keir A, Pal S, Trivella M, Lieberman L, Callum J, Shehata N, et al. Adverse effects of red blood cell transfusions in neonates: a systematic review and meta-analysis. Transfusion Keir AK, Pal S, Trivella M, Lieberman L, Callum J, Shehata N, et al. Adverse effects of red blood cell transfusions in neonates: a systematic review and meta-analysis. Transfusion Keir AK, Pal S, Trivella M, Lieberman L, Callum J, Shehata N, et al. Asystematic review and meta-analysis of risks of red cell transfusion for neonatal morbidities or mortality. V Keir A, Pal S, Trivella M, Lieberman L, Callum J, Shehata N, et al. Adverse effects of RBC transfusions in neonates: a systematic review and meta-analysis. Abstracts of the HAA
	*Necrotising entercolitis is a serious illness in which tissues in the intestine (gut) become inflamed and start to die. This can lead to a very dangerous infection.	enterocolitis (O)? What harm is blood transfusion associated with in preterm and low birth weight babies? Does blood transfusion increase the incidence of NEC in preterm infants and by what mechanism? How can we prevent this?	ВН	
DtTr10e	At what haemoglobin level [blood count] should a patient who has experienced major trauma (e.g. a car accident) receivce a blood transfusion?			
DtTr10a	At what haemoglobin level [blood count] should patients in a perioperative* setting receivce a blood transfusion? *Perioperative means occuring or performed at or around the time of a transfusion.	Are liberal or restrictive transfusion practices in the peri-operative setting associated with benefit or harm? Preoperative blood transfusions for sickle cell disease. Implications for research: Although information from a well-designed prospective randomised controlled trial of preoperative blood transfusion in people with SCD is ideal in order to make recommendations for the optimal use of this therapy, there are significant challenges in conducting randomised trials in people with haemoglobinopathies. In the Howard trial, out of 342 people screened only 70 were recruited with reasons for exclusion being decisions by treating clinicians, transfusion within the previous three months, refusal of consent, logistical reasons, low haemoglobin concentration, acute chest syndrome and orthopaedic surgery (Howard 2013). Issues that were not addressed in the included trials includes managing those with low risk surgery, efficacy of a regime of several top-up transfusions over four to six weeks in lieu of exchange transfusions, and the management of people with HBSC or HbS&+ disease. Can we agree on transfusion algorithms in the preoperative setting (evidence based, point of care tests used)? Based on clinical trials of patient outcomes, blood transfusion in critical care is now much more conservative than in the past, have similar trials taken place for blood transfusion in other situations such as surgery or on medical wards? In major joint replacement cases, what Hb % is the trigger point for PRBC transfusion? Does immediate postoperative [Hb] measurement after hip fracture improve patient outcome compared to standard postoperative [Hb] measurement?	H Question not derived from the survey but from another source. H H H R B H	 NICE Guideline Recommendations: Use restrictive red blood cell transfusion thresholds for patients who need red blood cell transfusions and who do not: have major haemorrhage or have acute coronary syndrome or need regular blood transfusions for chronic anaemia. When using a restrictive red blood cell transfusion threshold, consider a threshold of 70 g/litre and a haemoglobin concentration target of 70–90 g/litre after transfusion. Consider setting individual thresholds and haemoglobin concentration targets for each patient who needs regular blood transfusions for chronic anaemia. When using a restrictive red blood cell transfusion threshold, consider a threshold of 70 g/litre and a haemoglobin concentration target of 70–90 g/litre after transfusion. Consider setting individual thresholds and haemoglobin concentration targets for each patient who needs regular blood transfusions for chronic anaemia. Other refs: Bennett S, Baker LK, Martel G, Shorr R, Pawlik TM, Tinmouth A, et al. The impact of perioperative red blood cell transfusions in patients undergoing liver resection: a systemat Billiary Association. 2017. Bagwe S, Chung LK, Lagman C, Voth BL, Barnette NE, Elhajimoussa L, et al. Blood transfusion indications in neurosurgical patients: a neta-analysis of 4. Teng Z, Zhu Y, Liu Y, Wei G, Wang S, Du S, et al. Restrictive blood transfusion strategies and associated infection in orthopedic patients: a meta-analysis of 8 randomized contre 5. Potter LJ, Doleman B, Moopett IK. A systematic review of pre-operative anaemia and blood transfusion in cardiac surgery: a systematic review and meta-analysis. The Lan 7. Fominskiy E, Putzu A, Monaco F, Scandroglio AM, Karaskov A, Galas FR, et al. Liberal transfusion for people undergoing hip fracture surgery. Cochrane Database of Syste 4. Ste
		Transfusion thresholds for post operative patients HDU/ward	н	

rare congenital bleeding disorders. A systematic review on its use in surgical	
compared with penetrating trauma: a systematic review. Jbi Database of	
vith thrombocytopenia due to chronic bone marrow failure: a meta-analysis and	
gical malignancies undergoing intensive chemotherapy or stem cell	
cic review and meta-analysis. Thrombosis and Haemostasis. 2016 Oct	
ssis and Haemostasis. 2015;13((Suppl. 2)):357	
ogica Scandinavica. 2015;59(-4):427-33. atic review. Transfusion Medicine Reviews. 2015;29(-2):127-37. with haemophilia and inhibitors. Cochrane Database of Systematic Reviews. 2015(-	
ant factor VIII products: is there a difference? Blood. 2015;126(-23)289. Ierapy. Thrombosis Research. 2015;135(1):9-19. Patients. Cochrane Database of Systematic Reviews. 2015(-7):CD010555-CD. Sels. 2015;7(1):47-53.	
ane Database of Systematic Reviews. 2016(-1):CD011484-CD. ion. 2016 Nov;56(11):2773-2780. doi: 10.1111/trf.13785 /. Vox Sanguinis. 2015;109((Suppl. 1)):31-2. AA 2015 Annual Scientific Meeting. 2015:196-7.	Ν
	Y
antia anview. Units the Official lawred of the International Uppate Departments	
natic review. Hpb : the Official Journal of the International Hepato Pancreato nd Neurosurgery. 2017;155:83-9. of randomized controlled trials. Anesthesiology. 2016. ntrolled trials. Scientific Reports. 2015;5:13421	
ancet Haematology. 2015;2(-12):e543-53. A meta-analysis of randomised trials. British Journal of Anaesthesia. 2015;115(-	
stematic Reviews. 2015.	

The 50 que	stions included in the interim survey	Original Question received by the survey.	Who generated the question	Previous Related & up-to-date Research
			P = Person who has	
			received a blood	
			transfusion; R =	
			relative or carer of	
			someone who has	
		Red blood cell transfusion for people undergoing hip fracture surgery. Implications for research: Further research would be justified to evaluate	Question not derived from the survey but	
		transfusion thresholds in the immediate perioperative period: both	from another source.	
		preoperatively and including the first 24 hours post operation. In particular, such		
		research would need to consider people who were symptomatic or		
		haemodynamically unstable who were excluded from most of these trials. In		
		clinical practice, this presentation in a frail older person with a hip fracture, often		
		with a degree of cognitive impairment, and frequently with one or more		
		vascular risk factors in addition to age, may pose a clinical dilemma for the surgeon, anaesthetist and physician. The effects of the transfusion itself need to		
		be separated from the possible effects of increased monitoring and medical		
		input, and a description of the wider management protocol and service would		
		be useful in new trials. Future trials should more clearly report on causes of		
		fracture (e.g. fragility or trauma), should consider including a measure for cognitive impairment (e.g. delirium) and should consider standardised		
		assessments of health-related quality of life, adapted for use in an elderly		
		population, or validated for completion by the participant's relative or carer. In		
		addition, new research is needed to manage better anaemia identified		
		preoperatively, including appropriate use of iron as part of the broader		
		initiatives of patient blood management (Goodnough 2014).		
DtTr12c	What is the optimal type and	Is one unit blood transfusion policy appropriate within 24 hours of major postpartum haemorrhage?	н	1. Levy JH, Grottke O, Fries D, Kozek-Langenecker S. Therapeutic plasma transfusion in bleeding patients: a systematic review. Anesthesia and Analgesia. 2017;124(-4):1268-76.
	combination of blood products	When should FFP be given during major obstetric haemorrhage?	н	2. Wikkelso, Aj. The role of fibrinogen and haemostatic assessment in postpartum haemorrhage. Danish Medical Journal. 2015;61(4):pii: B5055-pii: B.
	[red blood cells, platelets, frozen			
	plasma] for obstetric patients			
	with a major haemorrhage that			
	requires [a transfusion of 4 or			
	more units of blood]?			
S4		How frequently should blood levels (i.e., hemoglobin) be checked in patients at high risk of bleeding (or with recent bleeding) (i.e., is the benefit of checking	RH	1. Manning N, Heddle NM, Arnold D, Crowther MA, Siegal D. Interventions to reduce blood loss from laboratory testing in critically ill patients and impact on transfusion: a syste
	count be checked in patients at	blood levels more frequently outweigh the risks)?		3.
	high risk of bleeding or with			
	recent bleeding?			
DtTr10c	At what haemoglobin level	Does ischemic heart disease impact on transfusion trigger?	ВH	1. NICE Guideline Recommendation:
	[blood count] should patients	Do patients with ischemic heart disease need a higher trigger for transfusion	ВН	15. Consider a red blood cell transfusion threshold of 80 g/litre and a haemoglobin concentration target of 80–100 g/litre after transfusion for patients with acute coronary sync
	with heart disease (including	what is the optimal transfusion for patients with unstable coronary artery	н	2. Wang Y, Shi X, Wen M, Chen Y, Zhang Q. Restrictive versus liberal blood transfusion in patients with coronary artery disease: a meta-analysis. Current Medical Research and C
	coronary artery disease, heart	disease		 Wang Y, Sin X, Wen W, Chen Y, Zhang Q. Restrictive versus liberar blood transition in patients with coronary artery disease. a meta-analysis. Current Medical Research and O Ripolles Melchor J, Casans Frances R, Espinosa A, Martinez Hurtado E, Navarro Perez R, Abad Gurumeta A, et al. Restrictive versus liberal transfusion strategy for red blood ce
	attacks or angina) receivce a	What is the optimal transfusion threshold in patients with stable coronary artery	н	syndrome: a systematic review, meta-analysis and trial sequential analysis. Minerva Anestesiologica. 2016;82(-5):582-98.
	blood transfusion?	disease and intercurrent illness		4. Docherty AB, O'Donnell R, Brunskill S, Trivella M, Doree C, Holst L, et al. Effect of restrictive versus liberal transfusion strategies on outcomes in patients with cardiovascular d
		NICE GUIDELINE RESEARCH KEY RECOMMENDATION: Red blood cell transfusion	Question not derived	BMJ. 2016;352:i1351-i.
		& cardiovascular disease: What is the clinical and cost effectiveness of restrictive compared with liberal red blood cell thresholds and targets for patients with	from the survey but from another source.	5. Kwok CS, Sherwood MW, Watson SM, Nasir SB, Sperrin M, NolanJ, et al. Blood transfusion after percutaneous coronary intervention and risk of subsequent adverse outcome:
		chronic cardiovascular disease?	nom another sourcer	2015;8(3):436-46.
				6. Chatterjee S, Wetterslev J, Sharma A, Lichstein E, Mukherjee D. Association of blood transfusion with increased mortality in myocardial infarction: a meta-analysis and diversi
		What is the relation between different Hb target levels and myocardial	н	9.
		performance in patients with heart disease? does the transfusion trigger for those with IHD but no active ischaemia need	BH	
		further clarification	511	
S3	What are the benefits of cold	[What are the] benefits of cold stored platelets for the management of acute	BH	No available SR evidence
	stored platelets versus platelets	bleeding?		
	stored at the standard			
	temperature of 22 degrees			
	celsius for the management of			
	acute bleeding?			
DIT-22		Freeh freezen alegmo for environseular guerra duration for and	Question ret deated	4 NICE Cuideline Decommondations:
DtTr22	Is frozen plasma effective for the	Fresh frozen plasma for cardiovascular surgery. Implications for research: Further adequately powered studies of FFP are required to assess whether	Question not derived from the survey but	1. NICE Guideline Recommendations: Fresh frozen plasma: thresholds and targets
	prevention of bleeding in	larger reductions in prothrombin time translate into clinical benefits, including	from another source.	30. Only consider fresh frozen plasma transfusion for patients with clinically significant bleeding but without major haemorrhage if they have abnormal coagulation test results (
	patients undergoing invasive	mortality reduction. These studies should carefully consider the most		ratio above 1.5).
	procedures or surgery and if so	appropriate schedule and dose for administration of FFP. There is clinical		31. Do not offer fresh frozen plasma transfusions to correct abnormal coagulation in patients who:
	what dose is required?	interest in the role of alternative comparable pro-haemostatic agents (for		 are not bleeding (unless they are having invasive procedures or surgery with a risk of clinically significant bleeding)
		instance, prothrombin complex concentrate), but clinical trials need to be undertaken to evaluate any prophylactic role. There is insufficient evidence to		• need reversal of a vitamin K antagonist.
		inform any positive therapeutic role of FFP, which is an important gap in the		32. Consider prophylactic fresh frozen plasma transfusions for patients with abnormal coagulation who are having invasive procedures or surgery with a risk of clinically significant of the second se
		research agenda (Desborough 2012).		
				Fresh frozen plasma: doses
		Among preterm infants with abnormal coagulation in the first few days	BH	33. Reassess the patient's clinical condition and repeat the coagulation tests after fresh frozen plasma transfusion to ensure that they are getting an adequate dose, and give fur
		following birth (P), does the administration of fresh frozen plasma (or cryoprecipitate) (O), compared with not administering fresh frozen plasma (or		2. Levy JH, Grottke O, Fries D, Kozek-Langenecker S. Therapeutic plasma transfusion in bleeding patients: a systematic review. Anesthesia and Analgesia. 2017;124(-4):1268-76.
1		cryoprecipitate) ©, reduce the risk of intraventricular haemorrhage and poor		 Levy Jn, Glottke O, Fries D, Kozek-Langenetike S. Hierapeutic plasma transitision in pleeding patients. a systematic review. Anesthesia and Analgesia. 2017, 124(-4):1260-76. Marietta M, Franchini M, Bindi ML, Picardi F, Ruggeri M, De Silvestro G. Is solvent/detergent plasma better than standard fresh-frozen plasma? A systematic review and an ex
		neurodevelopmental outcomes (O)?		9.
				4. Hall DP. Estcourt LI. Doree C. Hopewell S. Trivella M. Walsh TS. Plasma transfusions prior to insertion of central lines for people with abnormal coagulation. The Cochrane Dat

3-76.	N
systematic review. Journal of Thrombosis and Haemostasis. 2015;13((Suppl. 2)):974-	N
	Y
y syndrome. and Opinion. 2017:1-17.	
ood cell transfusion in critically ill patients and in patients with acute coronary ular disease in a non-cardiac surgery setting: systematic review and meta-analysis.	
comes: a systematic review and meta-analysis. JACC: Cardiovascular Interventions.	
liversity-adjusted study sequential analysis. JAMA Internal Medicine. 2013;173(2):132-	
	N
	Y
sults (for example, prothrombin time ratio or activated partial thromboplastin time	
gnificant bleeding.	
ive further doses if needed.	
3-76. an expert consensus document. Blood Transfusion [Trasfusione Del Sangue] 2016:1-	
e Database of Svstematic Reviews. 2016(-9):CD011756-CD.	

The 50 cure	stions included in the interim survey	Original Question received by the survey.	Who generated the	Previous Related & up-to-date Research
			question P = Person who has received a blood transfusion; R = relative or carer of someone who has	
		KEY NICE GUIDELINE RESEARCH RECOMMENDATION: FFP: What dose of fresh frozen plasma is most clinically effective at preventing bleeding in patients with abnormal haemostasis who are having invasive procedures or surgery?	Question not derived from the survey but from another source.	 Chai-Adisaksopha C, Hillis C, Siegal DM, Movilla R, Heddle N, Iorio A, et al. Prothrombin complex concentrates versus fresh frozen plasma for warfarin reversal. A systematic in 6. Shah A, Stanworth SJ, McKechnie S. Evidence and triggers for the transfusion of blood and blood products. Anaesthesia. 2015;70(Suppl 1):10-9, e3. Desborough M, Sandu R, Brunskill SJ, Doree C, Trivella M, Montedori A, et al. Fresh frozen plasma for cardiovascular surgery. Cochrane Database of Systematic Reviews. 2015;70(Suppl 1):10-9, e3.
		Plasma transfusions prior to insertion of central lines for people with abnormal coagulation. Implications for research: It is common for people who are critically ill to become coagulopathic, and many of these will require insertion of a central venous catheter (CVC). The question of whether prophylactic plasma transfusion is indicated remains unanswered. An adequately-powered trial which is able to recruit sufficient number of participants to address this is required. The ongoing trials that are due to be completed by February 2018 will be unable to answer the primary questions of this review because the studies are too small. To detect a doubling in the number of participants with major bleeding from 1% to 2% would require a two-arm study with over 4600 participants; the three ongoing studies are only planning to recruit 355 participants in total.	Question not derived from the survey but from another source.	 Wikkelso A, Wetterslev J, Moller AM, Afshari A. Thromboelastography (TEG) or rotational thromboelastometry (ROTEM) to monitor haemostatic treatment in bleeding patie Anaesthesia. 2017. Fahrendorff M, Oliveri RS, Johansson PI. The use of viscoelastic haemostatic assays in goal-directing treatment with allogeneic blood products - a systematic review and meta Medicine. 2017;25(-1):39 Wikkelso A, Wetterslev J, Moller AM, Afshari A. Thromboelastography (TEG) or thromboelastometry (ROTEM) to monitor haemostatic treatment versus usual care in adults of 8):CD007871-CD. Veigas PV, Callum J, Rizoli S, Nascimento B, da Luz LT. A systematic review on the rotational thrombelastometry (ROTEM(R)) values for the diagnosis of coagulopathy, predict patients. Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine. 2016;24(-1):114 Jensen NH, Stensballe J, Afshari A. Comparing efficacy and safety of fibrinogen concentrate to cryoprecipitate in bleeding patients: a systematic review. Acta Anaesthesiologi 6. Whiting P, Al M, Westwood M, Ramos IC, Ryder S, Armstrong N, et al. Viscoelastic point-of-care testing to assist with the diagnosis, management and monitoring of haemost Assessment (Winchester, England). 2015;19(-58):1-228. Hunt H, Stanworth S, Curry N, Woolley T, Cooper C, UkoumunneO, et al. Thromboelastography (TEG) and rotational thromboelastometry (ROTEM) for trauma-induced coagu
		What is the best treatment for coagulopathy - FFP or PCC? Could transfusion of plasma be minimised by using a more appropriate testing algorithm in the laboratory?	н	Systematic Reviews. 2015(2):CD010438-CD. 8. Balvers K, Wirtz MR, van Dieren S, Goslings JC, Juffermans NP. Risk factors for trauma-induced coagulopathy and transfusion-associated multiple organ failure in severely inju
DtTr10d	At what haemoglobin level [blood count] should a patient who has experienced an acute neurological event (e.g. a stroke or brain injury) receivce a blood transfusion?	Transfusion thresholds for patients with acute brain injury	н	
D17	Is it safe for anaemic pateints (people with a lower haemoglobin) to donate blood?	Is the donor Hb cut off of 12.5g/dl excluding perfectly healthy donors unnecessarily? Why are you prohibited from blood donation for a year if your iron levels are too low? Can we develop a personalised measure of a safe haemoglobin level at which to take blood donations (rather than current standard cut-off points)?	R B H B H B	 Fisher SA; Allen D; Doree C; Naylor J; Angelantonio ED; Roberts DJ. Interventions to reduce vasovagal reactions in blood donors: a systematic review and meta-analysis. Van Remoortel H; De Buck E; Compernolle V; Deldicque L; Vandekerckhove P. The effect of a standard whole blood donation on oxygen uptake and exercise capacity: a s Pasricha S; Speedy J; Low M. What do systematic reviews of iron supplementation in women tell us about the functional consequences of donor iron deficiency?. Vox Sa Hoogerwerf MD; Veldhuizen IJ; De Kort WL; Frings-Dresen MH; Sluiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a s
DtTr10	How do you decide at what haemoglobin level	How do you decide at what level (Hb) a patient needs a blood transfusion?	PRH	 NICE Guideline Recommendations: 13. Use restrictive red blood cell transfusion thresholds for patients who need red blood cell transfusions and who do not:
	[trigger/threshold] a patient	How low can the haemoglobin be before transfusion needed?	н	have major haemorrhage or
	requires a blood transfusion?	How low can the haemoglobin be in an iron deficient patient before a	ВН	have acute coronary syndrome or
		transfusion is needed? Is the ideal haemoglobin target known for individual blood transfusion indications?	н	 need regular blood transfusions for chronic anaemia. 14. When using a restrictive red blood cell transfusion threshold, consider a threshold of 70 16. Consider setting individual thresholds and haemoglobin concentration targets for each patient who needs regular blood transfusions for chronic anaemia.
		The threshold for transfusing a patient has been lowered to 70gm/dl. Why is that?	ВН	
		Transfusion triggers?	н	2. Desborough MJ, Colman KS, Prick BW, Duvekot JJ, Sweeney C, Odutayo A, et al. Effect of restrictive versus liberal red cell transfusion strategies on haemostasis: systematic re
		What is considered to be the lowest HB to determine the need for transfusion?	BH	3. Van Remoortel H, De Buck E, Dieltjens T, Pauwels NS, Compernolle V, Vandekerckhove P. Methodologic quality assessment of red blood cell transfusion guidelines and the ev 2):472-80.
		What is the ideal transfusion trigger?	BH	4. Carson JL, Stanworth SJ, Roubinian N, Fergusson DA, Triulzi D, Doree C, et al. Transfusion thresholds and other strategies for guiding allogeneic red blood cell transfusion. The
		What is the lowest acceptable haemoglobin level at which transfusion is not beneficial to recovery?	RBH	5. Shah A, Stanworth SJ, McKechnie S. Evidence and triggers for the transfusion of blood and blood products. Anaesthesia. 2015;70(Suppl 1):10-9, e3. 6. Kumar A, Mhaskar R, Grossman BJ, Kaufman RM, Tobian AA, Kleinman S, et al. Platelet transfusion: a systematic review of the clinical evidence. Transfusion. 2015;55(-5):1116
		What is the lowest transfusion threshold that is safe in stable patients?	н	7. Holst LB, Petersen MW, Haase N, Perner A, Wetterslev J. Restrictive versus liberal transfusion strategy for red blood cell transfusion: systematic review of randomised trials v
		What is the optimum threshold for transfusion in various patient groups	ВН	1
		What is the transfusion trigger	н	

c review and meta-analysis. Thrombosis and Haemostasis. 2016;116(-4). 15(-7):CD007614-CD. ients: a systematic review with meta-analysis and trial sequential analysis. eta-analysis. Scandinavian Journal of Trauma, Resuscitation and Emergency s or children with bleeding. The Cochrane Database of Systematic Reviews. 2016(- iction and guidance of blood transfusion and prediction of mortality in trauma gica Scandinavica. 2016. stasis: a systematic review and cost-effectiveness analysis. Health Technology gulopathy in adult trauma patients with bleeding. Cochrane Database of ijured trauma patients. Frontiers in Medicine. 2015.	
. Transfusion Medicine (Oxford, England). 2016;26(-1):15-33. systematic review and meta-analysis. Transfusion. 2016. ianguinis. 2015;109((Suppl. 1)):58. Abstract No. 4C-S25-03.	N
a systematic review of the literature. Blood Transfusion 2015 ;13(-3):354-62.	

The 50 questions included in the interim survey	Original Question received by the survey.	Who generated the	Previous Related & up-to-date Research
		question	
		P = Person who has	
		received a blood	
		transfusion; R =	
		relative or carer of	
		someone who has	
	Transfusion thresholds and other strategies for guiding allogeneic red blood cell		
	transfusion. Implications for research: Further randomized trials should not be	from the survey but	
	aimed at addressing the safety of RBC transfusion policies within the range of	from another source.	
	haemoglobin thresholds tested in the trials identified in this review or in		
	unselected groups of patients across broad clinical settings. Rather, additional		
	trials should be targeted to address specific research questions, where the		
	strength of evidence-based recommendations has significant uncertainty, as		
	highlighted in this review. Subsets of patients where there is currently no		
	adequately powered randomized controlled trial data to inform optimal RBC		
	transfusion treatment include those with acute cardiovascular disease,		
	neurological disorders including (traumatic) brain injury, and haematological and		
	other malignancies. Outcomes of importance in trials would be mortality, but also functional and bleeding endpoints, specifically in transfusion-dependent		
	participants with cancer and haemological malignancies. We believe that in		
	these clinical groups, the clinical goals and pathophysiology preclude		
	generalisation from the completed studies included in this review. Trials are also		
	needed to evaluate lower haemoglobin concentrations such as 6.0 g/dL,		
	especially in countries with suboptimal blood safety and inadequate blood		
	supply. Further research is needed to identify methods to measure oxygen		
	delivery to vital organs directly. All trials should be large enough to measure the		
	impact of lower thresholds on clinical outcomes and should apply consistent		
	definitions for all clinical outcomes, such as myocardial infarction and ischaemic		
	heart disease.		
			4
	Compliance with a transfusion trigger	BH	
	Despite a low Hb and experiencing the side effects of this is a blood transfusion	PRH	
	still not given?		
	Does a higher clinical cut off for transfusion improve quality of life during	BH	
	recovery?		4
	What should be the level at which we transfuse blood products has this been	BH	
	researched.		4
	What are the causes of bad effects of transfusion that mean it is better to run	н	
	Hb of 70 than transfuse to normal?	DU	4
	What are the risks/benefits of a restrictive transfusion strategy & what is the optimal target Hb?	BH	
	What level of Haemoglobin should trigger a blood transfusion in the non-major	н	-
	haemorrhage setting?	п	
	What is the optimum Haemoglobin level to transfuse a patient to	BH	1
	When should a patient be prescribed a blood transfusion (i.e., at what	RH	4
	haemoglobin level) when not actively bleeding?	КП	
	Can we explain the question around why giving blood to someone who's haem is	н	-
	above 7 helps reduce the need for inotropic support? should be do it , risks and		
	benefits of each approach		
	Use of blood and other blood products in managing an active GI bleed in ICU, i.e.	н	1
	how much and what ratio to give		
	When should you transfuse in anaemia?	н	1
		н	1
	what are the optimum transfusion goals for the elderly (Co morbidities)	Н	

	Blood Transfusion and B					_
			Original Question received by the survey.	Who generated the question P = Person who has received a	Previous Related & up-to-date Research	
	tive questions in grouped order.			P = Person who has received a		4
D1	What are the adverse effects or		Is there any risk to my health by giving blood?	BH	Short Term:	N
	complications of donating blood,		Have you ever had a complication from giving blood?	н	1. Fisher SA, Allen D, Doree C, Naylor J, Angelantonio ED, Roberts DJ. Interventions to reduce vasovagal reactions in blood donors: a systematic review and meta-analysis. Transfusion Medicine (Oxford, England). 2016;26(1):15-33.	
	whether temporary (e.g. feeling		Is there some loss of personal vitality or weakening to the individual who gives blood?	в	2. Van Remoortel H, De Buck E, Compernolle V, Deldicque L, Vandekerckhove P. The effect of a standard whole blood donation on oxygen uptake and exercise capacity: a systematic review and meta-analysis. Transfusion. 2016;57(2):451-62.	
	faint or tired) or longer term		How common is the development of anaemia after giving blood?	в	3. Hoogerwerf MD, Veldhuizen II, De Kort WL, Frings-Dresen MH, Sluiter IK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion. 2015;13(3):354-62.	
	(e.g. anaemia)?		Is there any way to help the tiredness that lasts a few days after donating	В		
			Is there any known detriment to the donor?	B H	Longer Term: 4. Pasicha 5, Speedy J, Low M. What do systematic reviews of iron supplementation in women tell us about the functional consequences of donor iron deficiency? Vox Sanguinis. 2015;109((Suppl. 1)):58. Abstract No. 4C-525-03.	
	-	634	When giving blood what happens if you take too much?	NK	4. Pasticina 5, speedy J, Low M. what do Systematic reviews of iron supplementation in women tell us adout the functional consequences of donor iron dericency? Vox Sanguinis. 2015;109((Suppl. 1)):58. Adstract No. 4C-525-03.	
		102	Why do some people feel no different when they give a pint of blood?	в		
D2	Why aren't previous recipients	83	Why, if it's deemed as safe, to receive blood products can you no longer be a blood donor once you have	PBH	No up-to-date evidence.	N
	of a blood product transfusion		been transfused?			
	allowed to be blood donors?	85	Why are people not allowed to donate blood when they have had a transfusion even if it is many years ago?	BH		
	unowed to be blood donots?					1
		99	Why am I unable to donate after having a transfusion, surely the blood is checked before transfusing and is	в		1
		1.24	sate?? is it safe for someone who has previously had a transfusion to donate blood subsequently	PBRH		
1		261	is it sare for someone who has previously had a transfusion to donate blood subsequently Can you never ever give blood if you've had a transfusion?	PBRH		
			I can no longer give blood in you ve had a transfusion?	РВН		
1		313	How should we tell blood donors that they can never give blood again after receiving a blood transfusion	PBH		
1						
			Why cannot patients who have received a transfusion then go on to donate?	BRH		
1			Why can't people who have received a blood donation give blood?	RH		
			Why did I have to stop being a blood donor after having blood transfusions?	PB		
		503	I received a transfusion in 1997 and since then have been told I cannot give blood having been a recipient of a transfusion (I was informed this was standard practice). Is this likely to change in the future? What is the	PB		
			a transfusion (I was informed this was standard practice). Is this likely to change in the future? What is the cause of this refusal?			
	1	555	why can't I donate blood after receiving it	в		
	1		Why can't I donate blood after receiving a transfusion?	PH		
	l i i i i i i i i i i i i i i i i i i i	576	When will you relax the restriction on people who have had blood transfusions from giving blood	BR		
		625	Why does having anti bodies following transfusion prevent any future blood donation?	RH		
			Why can individuals who have received blood prior to a certain date not donate?	P		
		442	Do we really still need to worry about CJD? This is preventing many possible donors from being able to	н		
		(**	donate when they have had blood themselves. Isn't it all theoretical now? Why can't people who have had IVF donate?	RBH		
	-		why can't people who have had ivi- donate? Is vCID really a legitimate concern for plasma donation in the UK?	квн		
D3	What medical conditions make it		Are the donor exclusion criteria truly evidence based?	RB	1 Pasicha 5, Speedy J, Low M. What do systematic reviews of iron supplementation in women tell us about the functional consequences of donor iron deficiency? Yox Sanguinis. 2015;109((Suppl. 1)):58-	
03	unsafe for a person to be a blood		When is safe to donate blood after contacting hepatitis A?	PB	L Parine 3, peedy J, Low M. what ou systematic reviews or intro supplementation in women ten us about the functional consequences or other into enciency? Vox Sanguins. 2015;105(Supp). 1]:0-8- 2. Hoogeneet M. Dy Voldhuizen LJ, De Kort WL, Fringe-Dersen ML, Suiter IK: Rators associated with hysikological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion. 2015;13(3):354-62.	N
	donor?		Why do I need to wait after traveling abroad if I have not been unwell or vaccinated?	вн	Statuart J, baland R, hopewell S, Trivella M, Doree C, Stanworth SJ, Murphy MF. Pathogen-reduced platelets for the prevention of bleeding. Cochrane Database of Systematic Reviews 2017, ISBN P. Art. No.: C0009072. DOI: 10.1002/J4551858.CD009072.pub3.	
	donor?		Can a person with HIV be able to donate blood?	PH	4. Chasse M, Michtyre L, English SM, Timouth A, Knoll G, Wolfe D, et al. Effect of bloog donor characteristics on transfusion outcomes: a systematic review and meta-analysis. Transfusion Medicine Reviews. 2016.	
	1		Why can't people with diabetes give blood - are there real evidence based reasons for the ban?	в	5. Chasse M. Tinmouth AT. English SW. McIntvre L. Knoll G. Wolfe D. et al. Effect of blood donor characteristics on transfusion outcomes: a systematic review and meta-analysis. Transfusion. 2015;55(Suppl. 3):123A-A.	
				-	6. De Buck E, Dieltjens T, Compernolle V, Vandekerckhove P. Is having sex with other men a risk factor for transfusion-transmissible infections in male blood donors in Western countries? A systematic review. PLoS ONE [Electronic Resource]. 2015;10(4):e0122523-e.	
			Is it always necessary to turn blood donors away for various reasons	P B	7. Webster J, Bell-Syer SE, Foxlee R. Skin preparation with alcohol versus alcohol followed by any antiseptic for preventing bacteraemia or contamination of blood for transfusion. Cochrane Database of Systematic Reviews. 2015(2):CD007948-CD.	
			Why can't I give blood anymore as I'm on anti-hypertensive drugs?	R B H		
			Can I donate blood if I have asthma?	н		
			What are the criteria for being able to donate blood?	RH		
			Donor Selection	RBH		
		28	Can I give blood after having had meningococcal septicaemia?	B		
1		167	It is not clear on the blood donation that first time donors of 17 or 18 years old need to have eaten within the 4 hours prior to donation. It just states eaten and drunk that day. Does it really matter if they have not	вн		
1			the 4 hours prior to donation. It just states eaten and drunk that day. Does it really matter if they have not eaten within 4 hours - not everyone eats that regularly			
1		323	How to insure donors and their health	RBH		
		289	I have ALL, therefore I have been told I can't give blood any more. I suspect I had blood cancer for a while	PB		1
			before I was told by my GP. Does the service test donations for blood cancer before giving blood to a			
		201	recipient? I have a blood cancer, how would it be picked up if I tried to donate blood?	RB		
			I have a blood cancer, how would it be picked up if I tried to donate blood? Can a person who suffers with Chronic Lymphatic leukaemia donate blood if that patients HB is high	R B NK		
		295	can a person who suffers with chronic Lymphatic leukaemia donate blood if that patients HB is nign enough?	THE .		
		349	I assume that now I am diagnosed with a blood cancer I would not be able to give blood!!	в		
1		527	Is the blood drop iron level test a good indicator of ability to donate?	в		
1		386	Can any use be made of blood components (other than abnormal cells) if donated by MPN patients	Р		
1						
		615	For someone who has not participated in the donation of blood, is there any qualitative aspect to the pre-	NK		1
		6677	screening questions? How are donors screened?	NK		
			Why is it getting harder to meet the criteria to give blood, as it seems to change every time I go?	в		1
			,	-		
	l l	672	What if someone lies on their medical form?	RBH		
1		409	Why are patients having had illegal (? Should this be illeal) conduit surgery that did not receive a transfusion	в		
			during surgery unable to ever give blood in the future?			1
			What precautions should be taken and the blood tests to be carried out?	RH		1
		504	Why exclude ALL females from plasma donation regardless of history of previous (possible) pregnancies?	RBH		1
		500	Assumption that HLA/HPA antibodies present in all females. I'm asthmatic, so if there is a connection to blood donation and asthma I'd be interested.	в		1
			What medications stop you from donating blood = make a single question	н		
1		513	What medications stop you from donating blood – make a single question What can be done to safely relax existing rules around donation, for people who want to donate but are	PH		
		513	exempt i.e. with individual consultant permission , or further screening?			
1		571	After a critical illness, can I safely donate again?	PB		
		616	Does the general fitness of the donor have any impact on the quality of blood donated? If so, would	NK		1
			it/should it be part of the collection strategy to target sections of society who maintain a healthier life-style			
			e.g. Health-centres and gymnasiums etc? Is it good enough to rely on people's honesty about their health?	RB		
	Can donating blood be beneficial		is it good enough to rely on people's nonesty about their nearth? Is repeated donation of blood protective against cardiovascular disease?	n D	No SR evidence available	

to the health of the donor?	398 Are there any benefits to the donor of giving blood.	в		1
the first of the donor :	,			
	16 Manuara la successi facebra la sub balancia la sub de la sub de la sub de la sub de la sub			
How can donation sessions be organised to make them easier	146 Many people express frustration at not being able to get an appointment to donate blood, there seems to be very limited donor sessions	н	1. Bagot KL, Murray AL, Masser BM. How can we improve retention of the first-time donor? A systematic review of the current evidence. Transfusion Medicine Reviews. 2016;30(2):81-91. 2. Frider SA. Hillen D. Doree C. Navio, J. Anelantonice D. Roberts DI. Interventions to reduce suscasar fractions in blood donors: a systematic review and meta-analysis. Transfusion Medicine (Oxford: England). 2016;26(1):15-33.	N
and more convenient for blood	420 Why can you not provide enough slots for donors.	BH	Interpretending of the second se	
donors?	479 Could you have more flexibility for donation sessions	н		
	27 Why do donors fall off the active list and how can we look after them better? 496 Sometimes donor sessions are restricted to specific time slots. Can there be more scope to turn up without	BH RBH		
	an appointment?			
	539 I am finding it increasingly difficult to donate as often as I would like, why is that.	R B		
	541 There seems to be less sessions at my donation centre, why? 611 Why does donating blood affect people differently? (Some faint, some feel no effect etc)	RB		
	101 Why does donating blood arrect people dimensity? (Some rand, some reet to effect etc.)	в		
	648 Why can't local health services be supplemented to take blood donations?	в		
	100 How can the decisions around limiting donor pool for platelets and plasma be best communicated to the	в		
	public? 557 Why does it sometimes seem difficult to arrange my next donation as soon as I would be eligible, especially	вн		
	as we have two donation evenues in this city? At the one venue there are no future schedules available and the staff are unable to provide information about other local venues.			
	579 Would happily donate as often as possible but sessions at the location only twice a year	R		
	674 Why are some Donation Places so busy that it is hard to get an appointment?	в		
	166 Why do you not weigh patients who do not know their weight prior to blood donor sessions - instead of	BH		
	turning them away to come back another day 296 Why aren't there more places to donate platelets?	Р		
	358 Why isn't there more open drop in sessions for blood donors	BH		
	377 From a donor point of view: when my letter comes through the door with my next appointment the session	BH		
	is already fully booked when I ring up to confirm, this puts me off organising an alternative date.			
	481 Why do you not put on donation sessions at hospitals?	н		
	505 Last donor session booking slot is early evening and gives little time to get back from work to attend - whilst	BRPH		
	understanding the need for packing up time after - can there be later donor slots/evening donor sessions?			
	507 Why don't NHSBT have blood donor sessions in hospitals? This would increase the number of donors hugely	BRPH		
	526 Why is there such variation in opportunities or places to donate between different areas of England?	в		
	sace why is once as a variation in opportunities or places to donate between unrerent areas of England?	D		
	528 Why not have more fixed places where donations can take place e.g. at hospitals?	в		
	530 Why aren't there more donation centres?	BH		
	542 Why is the donation service hours so short and everyone stops at lunch and breaks 544 Why don't you get donation points at gap surgeries	B		
	675 Is the waiting time at donor sessions acceptable?	в		
	549 I would like to be a platelet donor but the location is not very accessible. Could there be more invested in	в		
	this to have more venues? 564 Could a mobile facility be made available? Obviously cost is at the heart of that question.			
	564 Could a mobile facility be made available? Obviously cost is at the heart of that question. 647 Why are there so few platelet donation venues if it is so important?	в		
	663 Why do you not work Saturdays and Sundays? people who work - would be easier to donate	в		
	27 Why do donors fall off the active list and how can we look after them better?	BH		
	322 What is the donors experience when doing this specifically to donate to an individual.	н		
	376 How can blood donors best be thanked and rewarded ? 390 How can the experience for blood donors be improved	н		
	390 How can the experience for blood donors be improved 397 Why do donors get upset if they cannot donate for any reason.	BH		
	404 How can we improve the feedback on the fate of blood post transfusion	PBH		
	422 Have you considered thank you test to donors?	BH		
	548 What can we do to improve your experience? 540 Why don't you use rich analyzer's prior to donation at I feel this may present donation	R B R B H		
	560 Why don't you use skin analgesia prior to donation as I feel this may prevent donation 565 Why does a service which relies on public goodwill fail perform so poorly in basic customer service at point	в		
	of delivery?	-		
	598 is it possible to inform the donor when there blood has been used?	RB		
	607 Why does it seem that by donating blood you are doing me a favour? 636 Could donors be given information while waiting on other forms of donation?	B		
	657 Why are blood donors so undervalued?	RB		
	381 Why do people not donate?	PB		
	191 Can the process of blood donation be made more efficient?	BH		
	195 How can we make blood donation easier for donors 545 is there a way of cutting down waiting times especially when attendees are getting cold/dehydrated?	BH PRBH		
	586 Process of donating blood, how to streamline service	BH		
	635 How can the appointment system be refined to ensure prompt donations?	BH		
	675 Is the waiting time at donor sessions acceptable? 543 Why do you make so many hurdles to people who want to give blood	в		
	546 How uncomfortable is it to donate and does this put people off coming again?	PBRH		
	524 Would home self-testing of haemoglobin before attending blood donation sessions be acceptable, feasible,	в		
	accurate, and save time and money? 480 How well rolled out is the text message service notifying donors of usage?	н		
	430 How wentimes out is the text message service notifying donors of usage? 515 What would the impact of paying donor expenses be?	PH		
	597 Is there a way to make the donation process simper/more efficient?	R B		
What are the most effective	417 Need to raise awareness of what blood donations are used for	Р	1. Bagot KL, Murray AL, Masser BM. How can we improve retention of the first-time donor? A systematic review of the current evidence. Transfusion Medicine Reviews. 2016;30(2):81-91.	N
ways to educate the general	490 How can we improve the understanding of the general public for transfusion 493 To persuade new donors, why not illustrate, say by video maybe speeded up, the immediate improvements	P B H R B	 Memon A, Moite B, Why are we losing our precisions blood donors? A systematic review from Pakkitan. Haematologica. 2015;101((1):1):P27-3.83TRACT NO.P82222 Applaib BA, Batela BA, Clutural context and red or dommunication in providenta and adequate blood donation in sub-Sahara Africa: a systematic interpreture review. Vox Sanguinis. 2015;109((5):p2),11):p128. Abstract P-142 	
public about the process and	493 To persuade new donors, why not illustrate, say by video maybe speeded up, the immediate improvements transfusions bring	n D	2. Appendix on Sector on Source on Source on Source of Common Registration in promoting aveguate onois unitation in sourcealere in Artica, a systematic interfature review. Vox Sanguinis. 2015;103(Suppl. 1);1):126. Abstract + 142	
purpose of blood donation?	529 How can social media improve the knowledge of transfusion and numbers for donation	н		
	554 If it doesn't already feature; could blood transfusion and collection be added to the national curriculum and feature in the PSHE course?	NK		
	feature in the PSHE course? 578 Why do you not go into schools explaining the importance of blood donation	RB		
	585 Why is the public not educated more about giving blood.	PBH		
	587 Do the general public know about the process of blood transfusion from donation to a patient receiving	BH		
	blood 618 Donor Recruitment - Is there potential for there to be a national campaign (including all four devolved	вн		
	countries) to recruit more donors?	5		
	603 How long it takes?	в		
	670 How do I give bloodd transfusion 558 Minu doer it appear that you meet rejunction to reward these doport of large numbers of dopations	B B H		
	558 Why does it appear that you seem reluctant to reward those donors of large numbers of donations	вн		
	nowadays? Cutbacks?			
	nowadsys? Cutbacks? 478 Why is the profile of donation days in an area not better flagged ? 433 Do you think being a blood donor could be mandated for all 20-40 year olds	вн		

1		644 Should blood donation be made compulsory for healthy adults?	н		1
1		624 Do you approach businesses asking them to send a donation registration pack with their recruitment	RB		
1		process?			
		642 Why don't you raise the profile of blood donation? National campaign; blood donor day; blood donation featuring in a scoap	в		
		655 Why isn't there any school/college visits about why giving blood is so important?	в		
		664 More info on donating plasma, platelets etc	RB		
D11	What would encourage more	61 How can we encourage people to donate	н		N
	people (especially black and	24 How can the rest of the population (especially minorities) be encouraged to become regular donors ?	н		
	ethnic minority groups or people				
	with rare blood type) to donate	144 How do we encourage more donors?	н		
	blood?	149 It should be mandatory to donate/ or be paid to do it 163 people should be encouraged to donate more by better campaigning	B		
		176 What would encourage people to donate blood?	н		
		202 What can we do to encourage more people to become blood donors?	PRBH		
		213 How can we make giving blood more appealing to the public?	PRBH		
		214 How can we make donating blood more appealing to the public?	PRBH		
		309 How is recruitment for more blood donors being developed.	PRB		
		312 How can we encourage more ethnic minorities to give blood?	RBH		
		366 How can the public be made aware of the need to be donors?	RH		
		380 How do you plan getting more people to donate? 407 How important is blood type and does marketing for new donors target rare types?	PB		
		407 How important is blood type and does markening for new donots target rare types? 419 Should be patients friends & family be asked to join campaign to get more donors as they've seen firsthand	P		
		how it helpsthis happened with me			
		427 I have a major concern in our declining stock of blood. What is preventing the general public from	н		
		donating? Is it lack of knowledge? Are they concerned about the safety of receiving another's blood?			
		452 Encouraging people to become donors, but without putting too much pressure on those already signed up	RBH		
		522 How do we increase number of people donating?	BH		
		553 How can more people be encouraged to become donors?	NK		
		610 How can more people from minority ethnic backgrounds be encouraged to think about donating?	в		
		630 How can I help promote the blood donation process?	в		
		414 When you give blood it is quite an old fashioned type of service, it needs updating to get younger donors	в		
1		interested and involved			
1		467 The most effective ways and time to give blood and blood products	RH		
		620 Would sending information about where/how donations have been received increase the popularity of donating blood?	в		
D12a	If the blood taken from a donor	152 What would the donor centre do if a test came back with "bad news"	PRPH	No available SR evidence	N
0120	shows a result that might impact		RB	no stunios, an enterne	
	their future health, how should	631 Can a blood Donor have a full health check of their blood. E.G. Vitamins, Minerals, Hormone Levels and	в		
	this best be communicated to	health of the blood.			
	the donor?				
D12b	What is the impact of iron	162 Research elsewhere suggests women would need iron supplements to prevent anaemia if donating more	BH	1. Pasricha S, Speedy J, Low M. What do systematic reviews of iron supplementation in women tell us about the functional consequences of donor iron deficiency? Vox Sanguinis. 2015;109((Suppl. 1)):58. Abstract No. 4C-S25-03.	N
	deficiency on blood donors and	than twice a year, should this be included in recommendations?			
1	how may its impact be				1
	prevented?				
D17		257 Is the donor Hb cut off of 12.5g/dl excluding perfectly healthy donors unnecessarily?	RBH	1. Fisher Sk: Allen D: Doree C: Navlor J: Aneelantonio ED: Roberts DJ. Interventions to reduce vasovatal reactions in blood donors: a systematic review and meta-analysis. Transfusion Medicine IOxford. Environment 2016;76:11/15-23	N
D17	Is it safe for anaemic pateints	257 Is the donor HB cut off of 12.5g/dl excluding perfectly healthy donors unnecessarily? 276 Why are you prohibited from blood donation for a year if your iron levels are too low?	RBH	 Figher Sky, Allen D; Doree C; Naylor J; Angelantonio ED; Roberts DJ. Interventions to reduce vascovgal reactions in blood donors: a systematic review and meta-analysis. Transfusion Medicine (Dxford, England). 2016;26(-1):15-33. Van Remoortel H; De Buck E; Comperinolle V; Deblique L; Vandeerckhove P; The effect of a standard whole blood donation on oxygen uptake and exercise capacity: a systematic review and meta-analysis. Transfusion. 2016. 	N
D17		276 Why are you prohibited from blood donation for a year if your iron levels are too low? 525 Can we develop a personalised measure of a safe haemoglobin level at which to take blood donations		2. Van Remoortel h; De luxk E; compervale V; bedicque L; vandeterabove P. The effect of a standard whede bload donation on oxygen update and service capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Pasirich S; Seely J; Low M. What Dis optimatic review of iron supplementation in woment et lar about the functional consequences of donar iron orderinory. Not Simplemin. 2015; JOI(Space), 1916. Matter M. et c. 253-03.	N
D17	Is it safe for anaemic pateints (people with a lower	276 Why are you prohibited from blood donation for a year if your iron levels are too low?	BH	2. Van Remoortel H; De Buck E; Compernolle V; Deldicque L; Vandekerckhove P. The effect of a standard whole blood donation on oxygen uptake and exercise capacity: a systematic review and meta-analysis. Transfusion. 2016.	N
D17	Is it safe for anaemic pateints (people with a lower	276 Why are you prohibited from blood donation for a year if your iron levels are too low? 525 Can we develop a personalised measure of a safe haemoglobin level at which to take blood donations	BH	2. Van Remoortel h; De luxk E; compervale V; bedicque L; vandeterabove P. The effect of a standard whede bload donation on oxygen update and service capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Pasirich S; Seely J; Low M. What Dis optimatic review of iron supplementation in woment et lar about the functional consequences of donar iron orderinory. Not Simplemin. 2015; JOI(Space), 1916. Matter M. et c. 253-03.	N
D17	Is it safe for anaemic pateints (people with a lower	276 Why are you prohibited from blood donation for a year if your iron levels are too low? 525 Can we develop a personalised measure of a safe haemoglobin level at which to take blood donations	вн	2. Van Remoortel h; De luxk E; compervale V; bedicque L; vandeterabove P. The effect of a standard whede bload donation on oxygen update and service capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Pasirich S; Seely J; Low M. What Dis optimatic review of iron supplementation in woment et lar about the functional consequences of donar iron orderinory. Not Simplemin. 2015; JOI(Space), 1916. Matter M. et c. 253-03.	N
D17	Is it safe for anaemic pateints (people with a lower	276 Why are you prohibited from blood donation for a year if your iron levels are too low? 525 Can we develop a personalised measure of a safe haemoglobin level at which to take blood donations	вн	2. Van Remoortel h; De luxk E; compervale V; bedicque L; vandeterabove P. The effect of a standard whede bload donation on oxygen update and service capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Pasirich S; Speedy J; Low M, What D do systematic review of iron supplementation in woment et lar about the functional consequences of donar iron orderinory. Your Samplemin: 2015;201(Spat);158. Abstract NA et 255:03.	N
D17	Is it safe for anaemic pateints (people with a lower	276 Why are you prohibited from blood donation for a year if your iron levels are too low? 525 Can we develop a personalised measure of a safe haemoglobin level at which to take blood donations	вн	2. Van Remoortel h; De luxk E; compervale V; bedicque L; vandeterabove P. The effect of a standard whede bload donation on oxygen update and service capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Pasirich S; Speedy J; Low M, What D do systematic review of iron supplementation in woment et lar about the functional consequences of donar iron orderinory. Your Samplemin: 2015;201(Spat);158. Abstract NA et 255:03.	N
D17	Is it safe for anaemic pateints (people with a lower	276 Why are you prohibited from blood donation for a year if your iron levels are too low? 525 Can we develop a personalised measure of a safe haemoglobin level at which to take blood donations	вн	2. Van Remoortel h; De luxk E; compervale V; bedicque L; vandeterabove P. The effect of a standard whede bload donation on oxygen update and service capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Pasirich S; Speedy J; Low M, What D do systematic review of iron supplementation in woment et lar about the functional consequences of donar iron orderinory. Your Samplemin: 2015;201(Spat);158. Abstract NA et 255:03.	N
D17	Is it safe for anaemic pateints (people with a lower	276 Why are you prohibited from blood donation for a year if your iron levels are too low? 525 Can we develop a personalised measure of a safe haemoglobin level at which to take blood donations	вн	2. Van Remoortel h; De luxk E; compervale V; bedicque L; vandeterabove P. The effect of a standard whede bload donation on oxygen update and service capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Pasirich S; Speedy J; Low M, What D do systematic review of iron supplementation in woment et lar about the functional consequences of donar iron orderinory. Your Samplemin: 2015;201(Spat);158. Abstract NA et 255:03.	N
D17	Is it safe for anaemic pateints (people with a lower	276 Why are you prohibited from blood donation for a year if your iron levels are too low? 525 Can we develop a personalised measure of a safe haemoglobin level at which to take blood donations	вн	2. Van Remoortel h; De luxk E; compervale V; bedicque L; vandeterabove P. The effect of a standard whede bload donation on oxygen update and service capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Pasirich S; Speedy J; Low M, What D do systematic review of iron supplementation in woment et lar about the functional consequences of donar iron orderinory. Your Samplemin: 2015;201(Spat);158. Abstract NA et 255:03.	N
D17	Is it safe for anaemic pateints (people with a lower	276 Why are you prohibited from blood donation for a year if your iron levels are too low? 525 Can we develop a personalised measure of a safe haemoglobin level at which to take blood donations	вн	2. Van Remoortel h; De luxk E; compervale V; bedicque L; vandeterabove P. The effect of a standard whede bload donation on oxygen update and service capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Pasirich S; Speedy J; Low M, What D do systematic review of iron supplementation in woment et lar about the functional consequences of donar iron orderinory. Your Samplemin: 2015;201(Spat);158. Abstract NA et 255:03.	N
	is it safe for anaemic pateints (people with a lower haemoglobin) to donate blood?	276 Why we you prohibited from blood docation for a year if your iron levels are too low? 252 Can we develop a personalised measure of a safe harmoglobin level at which to take blood docations (rather than current standard cut-off points)?	вн	 Van Remoorteli I; De Buck E; Compernole V; Delicque L; Vandekerdhove P; The effect of a standard whole block donaution on oxygen upticate and service capacity: a systematic review and meta-analysis. Transfusion. 2016. Parich S; Speedy I; Low M. With a systematic review of on supplementation in woment et us about the functional oxygen uptication. 2015. 2015;19(5)(5)(1)(1): 8. Abstract No. 4: 62:55:03. Hoogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Suiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015; 13(-3):35:4-62. 	N N
	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood?	278 Why are you prohibited from blood docation for a year if your iron levels are too low? 520 Care we develop a personible measure of a side harmoglobin level at which to take blood docations (rather than current standard cut-off points)? 160 Why aren't gay people allowed to docate blood?	вн	2. Van Remoortel h; De luxk E; compervale V; bedicque L; vandeterabove P. The effect of a standard whede bload donation on oxygen update and service capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Pasirich S; Speedy J; Low M, What D do systematic review of iron supplementation in woment et lar about the functional consequences of donar iron orderinory. Your Samplemin: 2015;201(Spat);158. Abstract NA et 255:03.	N N
	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on	 12% Why we you prohibited from blood douation for a year if your iron levels are too low? 12% Carw as develop a personiales measure of a safe harmoglobin level at which to take blood douations (rather than current standard cut-off points)? 14% Why we'n' gay people allowed to douate blood? 14% Why are '' gay people allowed to douate blood? 	8M 8 8	 Van Remoorteli I; De Buck E; Compernole V; Delicque L; Vandekerdhove P; The effect of a standard whole block donaution on oxygen upticate and service capacity: a systematic review and meta-analysis. Transfusion. 2016. Parich S; Speedy I; Low M. With a systematic review of on supplementation in woment et us about the functional oxygen uptication. 2015. 2015;19(5)(5)(1)(1): 8. Abstract No. 4: 62:55:03. Hoogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Suiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015; 13(-3):35:4-62. 	N N
	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood?	276 Why we you purblished from blood doubtion for a year if your iron levels are too low? 250 Care we develop a personished measure of a user hamoglobin level at which to take blood doubtion (rather than current standard cut-off points)? 250 Why wen't gay people allowed to donate blood? 246 Why aren't gay people allowed to donate blood? 256 Why can at monogenous homosenul make not give blood? 256 Why can at monogenous homosenul make not give blood? 250 Why can at monogenous homosenul make not give blood? 250 Why can at monogenous homosenul make not give blood? 250 Why can at monogenous homosenul make not give blood? 250 Why can at monogenous homosenul make not give blood? 250 Why can at monogenous homosenul make not give blood? 250 Why can at monogenous homosenul make not give blood? 250 Why can at monogenous homosenul make not give blood?	ВМ В В ВМ ВМ	 Van Remoorteli I; De Buck E; Compernole V; Delicque L; Vandekerdhove P; The effect of a standard whole block donaution on oxygen upticate and service capacity: a systematic review and meta-analysis. Transfusion. 2016. Parich S; Speedy I; Low M. With a systematic review of on supplementation in woment et us about the functional oxygen uptication. 2015. 2015;19(5)(5)(1)(1): 8. Abstract No. 4: 62:55:03. Hoogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Suiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015; 13(-3):35:4-62. 	N N
	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on	27k Why are you prohibited from blood donation for a year if your iron levels are too low? 52 Care we develop a pernonisive measure of a self-teamoglobin level at which to take blood donations (rather than current standard cut-off points)? 12k Why aren't gay people allowed to donate blood? 14k Why aren't gay people allowed to donate blood? 19k Why aren't gay people allowed to donate blood? 19k Why aren't gay people allowed to donate blood? 19k Why aren year people allowed to donate blood? 19k Why aren year people allowed to donate blood? 19k Why aren year people allowed to donate blood? 19k Why are year people allowed to donate blood? 19k Why aren year people allowed to donate blood? 19k Why are year people allowed to donate blood? 19k Why are year year people allowed to donate blood? 19k Why are year year people allowed to donation (stapid 12-month rules not the safety of blood transfusion?	ВМ В ВМ ВМ	 Van Remoorteli I; De Buck E; Compernole V; Delicque L; Vandekerdhove P; The effect of a standard whole block donaution on oxygen upticate and service capacity: a systematic review and meta-analysis. Transfusion. 2016. Parich S; Speedy I; Low M. With a systematic review of on supplementation in woment et us about the functional oxygen uptication. 2015. 2015;19(5)(5)(1)(1): 8. Abstract No. 4: 62:55:03. Hoogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Suiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015; 13(-3):35:4-62. 	N N
	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on	276 Why we you purblished from blood docution for a year if your iron levels are too low? 252 Care we develop a personished measure of a safe harmoglobin level at which to take blood docutions (rather than current standard cut-off points)? 252 Care we develop a personished measure of a safe harmoglobin level at which to take blood docutions (rather than current standard cut-off points)? 264 Why aren't gay people allowed to docute blood? 265 Why are stronged and the safety of blood? 266 Why are at monogenous horonocuum mate not give bloo?? 270 Why are horonocuum docute from blood docution (tapid 12-month rules not whe safety of blood transfulcation?) 269 Why are gay men barred from blood docution (tapid 12-month rules notwhitatanding)? 270 Why are horonocuum dante blood?	ВМ В ВМ ВМ ВМ	 Van Remoortel I; De Buck E; Compernole V; Delicque L; Vandekerdhove P; The effect of a standard whele block donation on oxygen upticate and service capacity: a systematic review and meta-analysis. Transfusion. 2016. Parich S; Speedy I; Low M. With a systematic review of on supplementation in woment et us about the functional oxygen uptication. 2015. 2015;19(5)(5)(1)(1): Starbarts 10.4: C25:503. Hoogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Suiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015;13(-3):354-62. 	N N
	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on	 12% Why are you prohibited from blood doubtion for a year if your iron levels are too low? 25 Carw as devoke a personalised measure of a sufe harmoglobin level at which to take blood doubtions (rather than current standard cut-off points)? 16% Why aren't gay people allowed to doubte blood? 16% Why aren't gay people allowed to doubte blood? 16% Why are rifet you and anongomous homoseum anais not give blood? 16% Why are rifet you all allowed to doubte blood? 16% Why are rifet you all allowed to doubte blood? 17% Why can homoseum downize blood? 	ВМ В ВМ ВМ	 Van Remoortel I; De Buck E; Compernole V; Delicque L; Vandekerdhove P; The effect of a standard whele block donation on oxygen upticate and service capacity: a systematic review and meta-analysis. Transfusion. 2016. Parich S; Speedy I; Low M. With a systematic review of on supplementation in woment et us about the functional oxygen uptication. 2015. 2015;19(5)(5)(1)(1): Starbarts 10.4: C25:503. Hoogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Suiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015;13(-3):354-62. 	N N
	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on	276 Why we you purblished from blood docution for a year if your iron levels are too low? 252 Care we develop a personished measure of a safe harmoglobin level at which to take blood docutions (rather than current standard cut-off points)? 252 Care we develop a personished measure of a safe harmoglobin level at which to take blood docutions (rather than current standard cut-off points)? 264 Why aren't gay people allowed to docute blood? 265 Why are stronged and the safety of blood? 266 Why are at monogenous horonocuum mate not give bloo?? 270 Why are horonocuum docute from blood docution (tapid 12-month rules not whe safety of blood transfulcation?) 269 Why are gay men barred from blood docution (tapid 12-month rules notwhitatanding)? 270 Why are horonocuum dante blood?	8M 8 834 834 834 834 834 8 8 8 8 8 8 8 8 8	 Van Remoortel I; De Buck E; Compernole V; Delicque L; Vandekerdhove P; The effect of a standard whele block donation on oxygen upticate and service capacity: a systematic review and meta-analysis. Transfusion. 2016. Parich S; Speedy I; Low M. With a systematic review of on supplementation in woment et us about the functional oxygen uptication. 2015. 2015;19(5)(5)(1)(1): Starbarts 10.4: C25:503. Hoogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Suiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015;13(-3):354-62. 	N N
	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on	276 Why are you prohibited from blood donation for a year if your iron levels are too low? 252 Care we develop a personitaline measure of a safe harmoglobin level at which to take blood donation (rather than current standard cut-off points)? 256 Why aren't gay people allowed to donate blood? 256 Why aren't gay people allowed to donate blood? 256 Why are n't gay people allowed to donate blood? 256 Why are a monogenous homoreand make not give blood? 256 Why are gay men hared from blood donation from new who have sex with men have on the safety of blood 257 Why are gay men hared from blood donation from new who have sex with men have on the safety of blood? 258 Why are gay men hared from blood donation blood? 259 Why are gay men hared from blood donation blood? 250 Why there a have no meas who have sex with nen have on the safety of blood? 250 Why there a have no gay me donating blood if they particus are sar? 252 Why we donations from homoseauld new? donate bloo? 252 Why we donations from home done ent hough they gat tested for STbs and HV at least 3 times a year? 260 Why are dy docation from home area area? 260 Why day dy docation from home area?	ВМ В В В В В В В В В В В В В В В В В В	 Van Remoortel I; De Buck E; Compernole V; Delicque L; Vandekerdhove P; The effect of a standard whele block donation on oxygen upticate and service capacity: a systematic review and meta-analysis. Transfusion. 2016. Parich S; Speedy I; Low M. With a systematic review of on supplementation in woment et us about the functional oxygen uptication. 2015. 2015;19(5)(5)(1)(1): Starbarts 10.4: C25:503. Hoogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Suiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015;13(-3):354-62. 	N N
	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on	 127. Why we you purblished from blood douation for a year if your iron levels are too low? 126. Drw we develop a personalised measure of a uset hasmoglobin level at which to take blood douations (rather than current standard cut-off points)? 140. Why aren't gay people allowed to donate blood? 140. Why aren't gay people allowed to donate blood? 140. Why aren't gay people allowed to donate blood? 141. Why are flect would allowing donations from men who have set with men have on the safety of blood transformed to the safety of blood? 140. Why are flect would allowing donations from men who have set with men have on the safety of blood transformed to the safety of blood? 140. Why are flect would allowing donations from men have set with men have on the safety of blood transformed to have the blood? 140. Why are flect would allowing donations from men have set with men have on the safety of blood transformed to have the blood? 140. Why are flect would allowing donations from men have set with men have on the safety of blood transformed to have the blood? 141. Why are flect would allowing donations from men have set with men have on the safety of blood transformed to have the blood? 142. Why are have as no apprint distant blood? 143. Why are as no apprint distant blood? 144. Why are have as no apprint distant blood? 144. Why are have as no apprint distant blood? 145. Why are as no apprint distant blood? 146. Why are have as no apprint distant blood? 147. Why are as no apprint distant blood? 148. Why are have as no apprint distant blood? 149. Why are have as not distant blood? 149. Why are have as not distant blood? 140. Why are ha	8M 8 834 834 834 834 834 8 8 8 8 8 8 8 8 8	 Van Remoortel I; De Buck E; Compernole V; Delicque L; Vandekerdhove P; The effect of a standard whele block donation on oxygen upticate and service capacity: a systematic review and meta-analysis. Transfusion. 2016. Parich S; Speedy I; Low M. With a systematic review of on supplementation in woment et us about the functional oxygen uptication. 2015. 2015;19(5)(5)(1)(1): Starbarts 10.4: C25:503. Hoogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Suiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015;13(-3):354-62. 	N N
	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on	276 Why we you purblieted from blood doutlin for a year of "your iron levels are too low? 252 Care we develop a personalised measure of a vale hanongobion level at which to take blood doutlons (rather than current standard cut-off points)? 268 Why start's gay people allowed to doutet blood? 156 Why start's gay people allowed to doutet blood? 156 Why start's gay people allowed to doutet blood? 156 Why can at monogramous homozenal make not give blood? 156 Why can start could be doutet blood? 157 Why tart's managements homozenal make not give blood? 158 Why year means the start blood of could starte blood? 159 Why year means the start blood of could valuet at make not the safety of blood theread starte blood? 159 Why we gay means there from blood douted (tupid 21 zmoth rules notwethstanding)? 150 Why we have an on gay mean douting (tupid 21 zmoth rules notwethstanding)? 150 Why we are as on gay mean douting (tupid at the start starts and starts blood erectid 21 zmoth rules notwethstarts and with at least a time a start 150 Why we are as on gay mean douting tool of they practice safe san? 151 Load to gain blood rules thood at make not at least at least 3 time a start 152 Load to gain blood tot recently, as i was bon abroad, i have found 1 am having	ВМ В ВМ ВМ ВМ В В В В В В В В В В В В В	 Van Remoortel I; De Buck E; Compernole V; Delicque L; Vandekerdhove P; The effect of a standard whele block donation on oxygen upticate and service capacity: a systematic review and meta-analysis. Transfusion. 2016. Parich S; Speedy I; Low M. With a systematic review of on supplementation in woment et us about the functional oxygen uptication. 2015. 2015;19(5)(5)(1)(1): Starbarts 10.4: C25:503. Hoogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Suiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015;13(-3):354-62. 	N N
	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on	276 Why we you purblished from blood doubtion for a year if 'your iron level ar too low? 252 Care we develop a personalised measure of a year hamogobion level at which to take blood douations (rather than current standard cut-off points)? 216. Why wern't gay people allowed to douate blood? 168. Why aren't gay people allowed to douate blood? 169. Why on an amongamous homoreauil make not give blood? 169. Why can a monogamous homoreauil make not give blood? 179. Why dren't gay people allowed to douate blood? 180. Why can a monogamous homoreauil make not give blood? 181. Why warn't gay people allowed to douate blood? 182. Why dren't doual allowing douation (stinus) 2 strong homoreauil make not the safety of blood? 183. Why user has bain of give mid douate blood? 184. Why user has bain of give mid douate blood? 185. Why user has bain of give mid donate blood? 197. Why there also may mean donating blood if they granteris ells en antipuled. 198. Why user has bain of give mid donate blood? 199. Why there douations from homoseauil man? I stress there and the stress of the safety of blood. 199. Why there douations from homoseauil man? I stress there for STDs and HW at least 3 times a year?	ВМ В В В В В В В В В В В В В В В В В В	 Van Remoortel I; De Buck E; Compernole V; Delicque L; Vandekerdhove P; The effect of a standard whele block donation on oxygen upticate and service capacity: a systematic review and meta-analysis. Transfusion. 2016. Parich S; Speedy I; Low M. With a systematic review of on supplementation in woment et us about the functional oxygen uptication. 2015. 2015;19(5)(5)(1)(1): Starbarts 10.4: C25:503. Hoogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Suiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015;13(-3):354-62. 	N N
	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on	276 Why are you prohibited from blood docution for a year if your irren levels are too low? 252 Care we develop a personisited measure of a sufe hamoglobin level at which to take blood docutions (rather than current standard cut-off points)? 252 Care we develop a personisited measure of a sufe hamoglobin level at which to take blood docutions (rather than current standard cut-off points)? 264 Why aren't gay people allowed to docute blood? 265 Why are an amongamous homosenul make not give bloot? 276 Why are an amongamous homosenul make not give bloot? 278 Why are an amongamous homosenul make not give bloot? 278 Why are an amongamous homosenul make not give bloot? 278 Why are an amongamous homosenul make blood? 279 Why there as bas on pay mee docating blood? 279 Why there as bas on pay mee docating blood? 279 Why there also on pay mee docating blood? 270 Why there also on pay mee docating blood? 271 Vhy are docations from homosenul anneh blood? 272 Why docations from homosenul anneh blood? 273 Why docations from homosenul anneh blood? 274 New oneh homosenul anneh blood? 275 New oneh homosenul anneh blood? 276	ВМ В ВМ ВМ ВМ В В В В В В В В В В В В В	 Van Remoortel I; De Buck E; Compernole V; Delicque L; Vandekerdhove P; The effect of a standard whele block donation on oxygen upticate and service capacity: a systematic review and meta-analysis. Transfusion. 2016. Parich S; Speedy I; Low M. With a systematic review of on supplementation in woment et us about the functional oxygen uptication. 2015. 2015;19(5)(5)(1)(1): Starbarts 10.4: C25:503. Hoogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Suiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015;13(-3):354-62. 	N N
D20	bit stafe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on the safety of their blood?	278 Why we you purblieted from blood docution for a year if "your iron level are too low? 250 are developed a personalised measure of a user hamogobion level at which to take blood docutions (rather than current standard cut-off points)? 140 Why aren't gay people allowed to docute blood? 140 Why aren't gay people allowed to docute blood? 140 Why aren't gay people allowed to docute blood? 140 Why aren't gay people allowed to docute blood? 120 Why draw a moregamous homosexual mak not give blood? 121 Why aren't gay people allowed to docute blood? 120 Why tark effect would allowing docutions from men who have sex with men have on the safety of blood transformed blood blood transformed blood transformed blood transformed blood transformed blood transformed blood blood transformed blood transformed blood transformed blood transformed blood transformed blood blood transformed blood blood transformed blood transformed blood blood transformed blood transf	ВМ В В В В В В В В В В В В В В В В В В	Van Remorteli I; De Buck E; Compernolei V; Delitque L; Vandekerdshove P. The effect of a standard whole blocd donation on oxygen update and service capacity: a systematic review and meta-analysis. Transfusion. 2016. Parkick S; Speek J; Low M, What So systematic review of one supplementation women tell as adapted to humor the data adapted standard service capacity. Plan A, Wata S, Speek JS, Buck X, BM, S, Shat S, Shat S, C. S. C. S.	N N
D20	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on the safety of their blood? Does blood transfusion increase	276 Wey are you prohibited from blood docution for a year if your irrel neeks are too low? 252 Care we develop a personisited measure of a safe hamoglobin level at which to take blood docutions (rather than current standard cut-off points)? 252 Care we develop a personisited measure of a safe hamoglobin level at which to take blood docutions (rather than current standard cut-off points)? 156 Wey aren't gay people allowed to docute blood? 156 Wey are at comparison biomoconsul multi-not give bloo?? 201 We affect stopid allowed to docute blood? 202 We affect stopid allowed to docute blood? 203 We affect stopid allowed to docute blood? 204 Why are stopid allowed to docute blood? 205 Why are parent harm of from blood docution (tappid 2-month rules notwithstanding)? 206 Why developed to the stopid of the practice safe sar? 207 Why there as have name mediating blood? 208 Wey developed to the stopid weight state docute that they first safe sar? 209 Why developed to the stopid weight state docutes and they first safe safe safe safe safe safe safe safe	ВМ В В В В В В В В В В В В В В В В В В	2. Van Remorteli I; De Buck E, Compernolle V; Delitque L; Vandekerdshove P. The effect of a standard whole blood donation on oxygen updates and service capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Paircha S, Seeler J; Low M, Walk and Systematic review of the literature. Blood Transfusion 2015. (3):354-62. 4. Hogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Sluiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015. (3):354-62. 5. De Buck E, Diehljens T, Compernolle V, Vandekerdshove P. Is having sex with other men a risk factor for transfusion-transmissible infections in male blood donos in Western countries? A systematic review. Ruds ONE [Electronic Resource]. 2015;10(6):e0122522 e. 5. De Buck E, Diehljens T, Compernolle V, Vandekerdshove P. Is having sex with other men a risk factor for transfusion-transmissible infections in male blood donos in Western countries? A systematic review. Ruds ONE [Electronic Resource]. 2015;10(6):e0122522 e. 5. De Buck E, Diehljens T, Compernolle V, Vandekerdshove P. Is having sex with other men a risk factor for transfusion-transmissible infections in male blood donos in Western countries? A systematic review. Ruds ONE [Electronic Resource]. 2015;10(6):e0122522 e. 5. De Ker AK, Wilkinson D, Andersen C, Stark MJ, Washed versus unwashed red blood cells for transfusion of morbidity and mortality in preterm inflats. Ecchrane Database of Systematic Reviews. 2016;1]:C0011484-CD.	N N
D20	is it safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on the safety of their blood? Does blood transfusion increase the incidence of necrotising	276 Why we you prohibited from blood docution for a year if your iron level are too low? 252 Care we develop a personaled measure of a safe harmoglobin level at which to take blood docutions (rather than current standard cut-off points)? 164 Why aren's gay people allowed to docute blood? 169 Why care a monogeneous temporate the blood? 170 Why care horneous docute blood? 170 Why care horneous docute blood? 170 Why care horneous docute blood docution from men who have see with men have on the safety of blood tends to give a pay men harder form blood docution (stage to the care of the blood? 170 Why care horneous docute blood of the portices are tar? 172 Why care horneous docute blood of the portices are tar? 172 Why care horneous docute blood docution stage to the care of the care blood docution was reflected for card on are from the care of t	ВМ В В В В В В В В В В В В В В В В В В	2. Van Remorteli I; De Buck E, Compernole V, Delicque L; Vandekershhove P. The effect of a standard whole block douation on oxygen update and service capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Parkint SS, Seever J; Low M, Wahe SS, Sharkan KA, ed. CS-SD. 4. Hogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Sluiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015; 13(-3):354-62. 4. Hogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Sluiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015; 13(-3):354-62. 5. De Buck E, Diehjens T, Compernolle V, Vandekershhove P. Is having sex with other men a risk factor for transfusion-transmissible infections in male blood donors in Western countries? A systematic review. PLoS DNE [Electronic Resource]. 2015;10(4):e0122523-e. 5. De Buck E, Diehjens T, Compernolle V, Vandekershhove P. Is having sex with other men a risk factor for transfusion-transmissible infections in male blood donors in Western countries? A systematic review. PLoS DNE [Electronic Resource]. 2015;10(4):e0122523-e. 5. De Buck E, Diehjens T, Compernolle V, Vandekershhove P. Is having sex with other men a risk factor for transfusion-transmissible infections in male blood donors in Western countries? A systematic review. PLoS DNE [Electronic Resource]. 2015;10(4):e0122523-e. 5. De Buck E, Diehjens T, Compernolle V, Wandekershhove P. Is having sex with other men a risk factor for transfusion-framemissible infections in male blood donors in Western countries? A systematic review. PLoS DNE [Electronic Resource]. 2015;10(4):e0122523-e. 5. De Buck E, Diehjens D, Andersen C, Stark ML, Wahed versa unwashed red blood cells for transfusion for the prevention of morbidity and mortality in preterm infants. Cochrane Database of Systematic Reviews. 2016;1;10011484-CD.	N N
D20	What is the impact of an individual's sexual practice on the safety of their blood?	278 Why are you prohibited from blood docution for a year if your iron level as too low? 252 Care we develop a personiside measure of a safe hamoglobin level at which to take blood docution (rather than current standard cut-off points)? 252 Care we develop a personiside measure of a safe hamoglobin level at which to take blood docution (rather than current standard cut-off points)? 146 Why aren't gary people allowed to docute blood? 146 Why aren't gary people allowed to docute blood? 147 Why are as monogeneous homoseural make nor give blood? 148 Why are and from blood docution from men who have sex with men have on the safety of blood transfull storage docutions from men who have sex with men have on the safety of blood transfull storage docutions from men who have sex with men have on the safety of blood transfull storage docutions from men who have sex with men have on the safety of blood transfull storage docutions (blood?) 159 Why are an homoseural docutable blood? 22 219 Word on homoseural docutable blood? 22 220 Word on homoseural docutable blood? 23 231 Word on homoseural docutable blood? 24 24 Lowed to give blood, but recently, as i was born abroad, i have found at an abroqueted. 34 251 Have esto induckabut with my griftered hat transfere there with why dog	ВМ В ВМ ВМ ВМ ВМ В В В В В В В В В В В	2. Van Remorteli I; De Buck E, Compernolle V; Delitque L; Vandekerdshove P. The effect of a standard whole blood donation on oxygen updates and service capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Paircha S, Seeler J; Low M, Walk and Systematic review of the literature. Blood Transfusion 2015. (3):354-62. 4. Hogerwerf MD; Velshuizen II; De Kort WL; Frings-Dresen MH; Sluiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the literature. Blood Transfusion 2015. (3):354-62. 5. De Buck E, Diehljens T, Compernolle V, Vandekerdshove P. Is having sex with other men a risk factor for transfusion-transmissible infections in male blood donos in Western countries? A systematic review. Ruds ONE [Electronic Resource]. 2015;10(6):e0122522 e. 5. De Buck E, Diehljens T, Compernolle V, Vandekerdshove P. Is having sex with other men a risk factor for transfusion-transmissible infections in male blood donos in Western countries? A systematic review. Ruds ONE [Electronic Resource]. 2015;10(6):e0122522 e. 5. De Buck E, Diehljens T, Compernolle V, Vandekerdshove P. Is having sex with other men a risk factor for transfusion-transmissible infections in male blood donos in Western countries? A systematic review. Ruds ONE [Electronic Resource]. 2015;10(6):e0122522 e. 5. De Ker AK, Wilkinson D, Andersen C, Stark MJ, Washed versus unwashed red blood cells for transfusion of morbidity and mortality in preterm inflats. Ecchrane Database of Systematic Reviews. 2016;1]:C0011484-CD.	N N
D20	Is it safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on the safety of their blood? Does blood transfusion increase the incidence of necrotising entercolitis"in preterm infants and how can we prevent this?	276 Why are you prohibited from blood doutlin for a year if "your iron level are too low? 252 Care we develop a personalised measure of a user harrongable level at which to take blood doutlons (rather than current standard cut-off points)? 264 Why aren't gay people allowed to doutlet blood? 264 Why aren't gay people allowed to doutlet blood? 264 Why aren't gay people allowed to doutlet blood? 265 Why aren't gay people allowed to doutlet blood? 266 Why aren't gay people allowed to doutlet blood? 267 Why are name more game blood doutlet blood? 268 Why are name haren from blood doutlet blood? 269 Why are marker from blood doutlet blood? 270 Why there makered from blood doutlet blood? 270 Why there makered from blood doutlet blood? 272 Why there are haren from blood doutlet blood? 273 Why are marker from blood doutlet blood? 274 Why there are haren from blood doutlet blood? 275 Why there are haren from blood doutlet blood? 276 Why there doutlets from doutlet blood? 276 Why there doutlets from doutlet blood? 276 Why there doutlets blood are doutlet blood? 276 Why there doutlets blood doutlet blood? 277 Why there doutlets blood doutlet blood? 278 Why there doutlets blood doutlet blood? 279 Why there doutlets blood doutlet blood? 271 Level to globe, but recettly, as we from allow the mark gatestate allows and "271 Level to globe. In the recetting and why it text at a text 31 meas a wear? 284 Hear ago my effer of blobe, but recetting, as who make mark antiquited. 402 Blobe, but recetting, as who make mark antiquited. 414 Hear ago my effer of blobe, but recetting, as darker in there with why do you need to incove tha? 42 Blobe, blobe, but recetting, as darker in the granters able? 42 Blobe, blobe, but recetting, as darker in the granters able? 42 Blobe, blobe doutles in personal wear and and have an antiquited. 42 Blobe, blo	ВМ В В В В В В В В В В В В В В В В В В	2. Van Remorteli I; De Bluck E, Compernolei V, Delitique L; Vandekerdhove P. The effect of a standard while block donation on oxygen updates and service capacity: a systematic review and meta-analysis. Transfusion. 2015. 3. Parkind S, Speek J; Low M, Mitha S, Bostmani K, Polivo G, Shor NW, Sinter JK, A. C. Scholl, M. Standaro, M. C. Standaro, M. C. Standaro, M. Standaro, M. Standaro, M. C. Standaro, M. Standaro, M	N N
D20	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on the safety of their blood? Does blood transfusion increase the incidence of necrotising entercolitis' in preterm infants and how can we prevent this? "Necrotising enterolitis is a	276 Why we you prohibited from blood docution for a year if your iron levels we too low? 252 Care we develop a personiside measure of a cafe hamoglobin level at which to take blood docutions (rather than current standard cut-off points)? 264 Why servir gay people allowed to docute blood? 279 Why an a monogamous homoseual make not give blood? 279 Why an a monogamous homoseual make not give blood? 270 Why are first would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are given and thanks blood? 270 Why arch homoseusal docute blood? 272 Why have a bas on gay men docuting blood 272 Why there a bas on gay men docuting blood 272 Why there a bas on gay men docuting blood 274 Why there a bas on gay men docuting blood 275 Why carthomoseusal docute blood 276 Why there a bas on gay men docuting blood 278 Why carthomoseusal docute blood 279 Why carthomoseusal docute blood 279 Why carthomoseusal docute blood 270 Why carthomoseusal docute blo	ВМ В ВМ ВМ ВМ ВМ В В В В В В В В В В В	2. Van Remorteli I; De Bluck E, Compernolei V, Delitique L; Vandekerdhove P. The effect of a standard while block donation on oxygen updates and service capacity: a systematic review and meta-analysis. Transfusion. 2015. 3. Parkind S, Speek J; Low M, Mitha S, Bostmani K, Polivo G, Shor NW, Sinter JK, A. C. Scholl, M. Standaro, M. C. Standaro, M. C. Standaro, M. Standaro, M. Standaro, M. C. Standaro, M. Standaro, M	N N
D20	Is it safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on the safety of their blood? Does blood transfusion increase the incidence of necrotising entercolitis"in preterm infants and how can we prevent this? "Necrotising entercolitis is a serious illness in which tissues in which tissues in	276 Why are you prohibited from blood doutlin for a year if "your iron level are too low? 252 Care we develop a personalised measure of a user harrongable level at which to take blood doutlons (rather than current standard cut-off points)? 264 Why aren't gay people allowed to doutlet blood? 264 Why aren't gay people allowed to doutlet blood? 264 Why aren't gay people allowed to doutlet blood? 265 Why aren't gay people allowed to doutlet blood? 266 Why aren't gay people allowed to doutlet blood? 267 Why are name more game blood doutlet blood? 268 Why are name haren from blood doutlet blood? 269 Why are marker from blood doutlet blood? 270 Why there makered from blood doutlet blood? 270 Why there makered from blood doutlet blood? 272 Why there are haren from blood doutlet blood? 273 Why are marker from blood doutlet blood? 274 Why there are haren from blood doutlet blood? 275 Why there are haren from blood doutlet blood? 276 Why there doutlets from doutlet blood? 276 Why there doutlets from doutlet blood? 276 Why there doutlets blood are doutlet blood? 276 Why there doutlets blood doutlet blood? 277 Why there doutlets blood doutlet blood? 278 Why there doutlets blood doutlet blood? 279 Why there doutlets blood doutlet blood? 271 Level to globe, but recettly, as we from allow the mark gatestate allows and "271 Level to globe. In the recetting and why it text at a text 31 meas a wear? 284 Hear ago my effer of blobe, but recetting, as who make mark antiquited. 402 Blobe, but recetting, as who make mark antiquited. 414 Hear ago my effer of blobe, but recetting, as darker in there with why do you need to incove tha? 42 Blobe, blobe, but recetting, as darker in the granters able? 42 Blobe, blobe, but recetting, as darker in the granters able? 42 Blobe, blobe doutles in personal wear and and have an antiquited. 42 Blobe, blo	ВМ В В В В В В В В В В В В В В В В В В	2. Van Remorteli I; De Bluck E, Compernolei V, Delitique L; Vandekerdhove P. The effect of a standard while block donation on oxygen updates and service capacity: a systematic review and meta-analysis. Transfusion. 2015. 3. Parkind S, Speek J; Low M, Mitha S, Bostmani K, Polivo G, Shor NW, Sinter JK, A. C. Scholl, M. Standaro, M. C. Standaro, M. C. Standaro, M. Standaro, M. Standaro, M. C. Standaro, M. Standaro, M	N N
D20	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on the safety of their blood? Does blood transfusion increase the inclidence of necrotising entercolitis' in preterm infants and how can we prevent this? "Alecrotising entercolitis is serious illness in which tissues in the intestine (gut) become	276 Why we you prohibited from blood docution for a year if your iron levels we too low? 252 Care we develop a personiside measure of a cafe hamoglobin level at which to take blood docutions (rather than current standard cut-off points)? 264 Why servir gay people allowed to docute blood? 279 Why an a monogamous homoseual make not give blood? 279 Why an a monogamous homoseual make not give blood? 270 Why are first would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are given and thanks blood? 270 Why arch homoseusal docute blood? 272 Why have a bas on gay men docuting blood 272 Why there a bas on gay men docuting blood 272 Why there a bas on gay men docuting blood 274 Why there a bas on gay men docuting blood 275 Why carthomoseusal docute blood 276 Why there a bas on gay men docuting blood 276 Why there a bas on gay men docuting blood 277 Why carthomoseusal docute blood 278 Why carthomoseusal docute blood 278 Why carthomoseusal docute blood 279 Why carthomoseusal docute blood 270 Why carthomoseusal docute blood 279 Why carthomoseusal docute blood 270 Why carthomoseusal docute 270 Why carthomoseusal docute	ВМ В В В В В В В В В В В В В В В В В В	2. Van Remorteli I; De Bluck E, Compernolei V, Delitique L; Vandekerdhove P. The effect of a standard while block donation on oxygen updates and service capacity: a systematic review and meta-analysis. Transfusion. 2015. 3. Parkind S, Speek J; Low M, Mitha S, Bostmani K, Polivo G, Shor NW, Sinter JK, A. C. Scholl, M. Standaro, M. C. Standaro, M. C. Standaro, M. Standaro, M. Standaro, M. C. Standaro, M. Standaro, M	N N
D20	Is it safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on the safety of their blood? Does blood transfusion increase the incidence of necrotising entercolities 'in preterm infants and how can we prevent this? *Necrotising entercolitis is a serious illness which tissues in the intestine (gut) become infande and att to die. This	276 Why we you prohibited from blood docution for a year if your iron levels we too low? 252 Care we develop a personiside measure of a cafe hamoglobin level at which to take blood docutions (rather than current standard cut-off points)? 264 Why servir gay people allowed to docute blood? 279 Why an a monogamous homoseual make not give blood? 279 Why an a monogamous homoseual make not give blood? 270 Why are first would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are given and thanks blood? 270 Why arch homoseusal docute blood? 272 Why have a bas on gay men docuting blood 272 Why there a bas on gay men docuting blood 272 Why there a bas on gay men docuting blood 274 Why there a bas on gay men docuting blood 275 Why carthomoseusal docute blood 276 Why there a bas on gay men docuting blood 276 Why there a bas on gay men docuting blood 277 Why carthomoseusal docute blood 278 Why carthomoseusal docute blood 278 Why carthomoseusal docute blood 279 Why carthomoseusal docute blood 270 Why carthomoseusal docute blood 279 Why carthomoseusal docute blood 270 Why carthomoseusal docute 270 Why carthomoseusal docute	ВМ В В В В В В В В В В В В В В В В В В	2. Van Remorteli I; De Bluck E, Compernolei V, Delitique L; Vandekerdhove P. The effect of a standard while block donation on oxygen updates and service capacity: a systematic review and meta-analysis. Transfusion. 2015. 3. Parkind S, Speek J; Low M, Mitha S, Bostmani K, Polivo G, Shor NW, Sinter JK, A. C. Scholl, M. Standaro, M. C. Standaro, M. C. Standaro, M. Standaro, M. Standaro, M. C. Standaro, M. Standaro, M	N N
D20	bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on the safety of their blood? Does blood transfusion increase the inclidence of necrotising entercolitis' in preterm infants and how can we prevent this? "Alecrotising entercolitis is serious illness in which tissues in the intestine (gut) become	276 Why we you prohibited from blood docution for a year if your iron levels we too low? 252 Care we develop a personiside measure of a cafe hamoglobin level at which to take blood docutions (rather than current standard cut-off points)? 264 Why servir gay people allowed to docute blood? 279 Why an a monogamous homoseual make not give blood? 279 Why an a monogamous homoseual make not give blood? 270 Why are first would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are given and thanks blood? 270 Why arch homoseusal docute blood? 272 Why have a bas on gay men docuting blood 272 Why there a bas on gay men docuting blood 272 Why there a bas on gay men docuting blood 274 Why there a bas on gay men docuting blood 275 Why carthomoseusal docute blood 276 Why there a bas on gay men docuting blood 276 Why there a bas on gay men docuting blood 277 Why carthomoseusal docute blood 278 Why carthomoseusal docute blood 278 Why carthomoseusal docute blood 279 Why carthomoseusal docute blood 270 Why carthomoseusal docute blood 279 Why carthomoseusal docute blood 270 Why carthomoseusal docute 270 Why carthomoseusal docute	ВМ В В В В В В В В В В В В В В В В В В	2. Van Remorteli I; De Bluck E, Compernolei V, Delitique L; Vandekerdhove P. The effect of a standard while block donation on oxygen updates and service capacity: a systematic review and meta-analysis. Transfusion. 2015. 3. Parkind S, Speek J; Low M, Mitha S, Bostmani K, Polivo G, Shor NW, Sinter JK, A. C. Scholl, M. Standaro, M. C. Standaro, M. C. Standaro, M. Standaro, M. Standaro, M. C. Standaro, M. Standaro, M	N N
D20	What is the impact of an individual's sexual practice on the second seco	276 Why we you prohibited from blood docution for a year if your iron levels we too low? 252 Care we develop a personiside measure of a cafe hamoglobin level at which to take blood docutions (rather than current standard cut-off points)? 264 Why servir gay people allowed to docute blood? 279 Why an a monogamous homoseual make not give blood? 279 Why an a monogamous homoseual make not give blood? 270 Why are first would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are first, would allowing docutions from mene who have say with een have on the safety of blood thanks are given and thanks blood? 270 Why arch homoseusal docute blood? 272 Why have a bas on gay men docuting blood 272 Why there a bas on gay men docuting blood 272 Why there a bas on gay men docuting blood 274 Why there a bas on gay men docuting blood 275 Why carthomoseusal docute blood 276 Why there a bas on gay men docuting blood 276 Why there a bas on gay men docuting blood 277 Why carthomoseusal docute blood 278 Why carthomoseusal docute blood 278 Why carthomoseusal docute blood 279 Why carthomoseusal docute blood 270 Why carthomoseusal docute blood 279 Why carthomoseusal docute blood 270 Why carthomoseusal docute 270 Why carthomoseusal docute	ВМ В В В В В В В В В В В В В В В В В В	2. Van Remorteli I; De Bluck E, Compernolei V, Delitique L; Vandekerdhove P. The effect of a standard while block donation on oxygen updates and service capacity: a systematic review and meta-analysis. Transfusion. 2015. 3. Parkind S, Speek J; Low M, Mitha S, Bostmani K, Polivo G, Shor NW, Sinter JK, A. C. Scholl, M. Standaro, M. C. Standaro, M. C. Standaro, M. Standaro, M. Standaro, M. C. Standaro, M. Standaro, M	N N
D20 88.01	Bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on the safety of their blood? Does blood transfusion increase the incidence of necrotising entercolitis"in preterm infants and how can we prevent this? *Necrotising entercolitis is a serious illness in which tissues in the intestine (gut) become inflamed and start to die. This can lead to a very dangerous infection.	27 Why we you prohibited from blood docution for a year if your iron levels we too low? 25 Care we develop a personales measure of a safe hamogobio level at which to take blood docutions (rather than current standard cut-off points)? 26 Why aren't gay people allowed to docute blood? 27 Why are harmonic transmission from men who have saw with men have on the safety of blood transmission transmission from men who have saw with men have on the safety of blood transmission transmission to the safety of blood 27 Why takes a blood go show the safety of blood transmission 27 Why are harmed from blood docution from men who have saw with men have on the safety of blood transmission 27 Why takes a blood on the blood of histing takes at the safety of blood transmission 27 Why takes a blood on the blood of histing takes at the safety of blood transmission 27 Why takes a blood on the blood of histing takes 27 Why takes a blood on the blood of histing takes 27 Why takes a blood on the blood of histing takes 27 Why takes at blood on the blood of histing takes 27 Why takes at blood, but recently, as it was too mark work thread from that that the safety 27 Have takes at the maximum at current docute takes thread to the takes 27 Have takes at the maximum at the takes takes mark mark takes 27 Have takes at the maximum at the safety and takes 27 Have takes 27 Have takes at the maximum at the safety and takes 27 Have takes 27 Have takes at the maximum at the safety and takes 27 Have takes 27 H	ВМ В В В В В В В В В В В В В В В В В В	2. Var Remoterie I; De Buck E; Comperindle Y; Deldicupe L; undekerchove P: The effect of a transfur whole blood donation on oxygen updake and exercise capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Pairch S; Speek J; Law M. With Event S, Suptematic Terevier S, Suptematic T	N N
B&C1	Sit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on the safety of their blood? Does blood transfusion increase the incidence of necroting entercolitis'in preferm infants and how can we prevent this? "Necrotising entercolitis is serious illness in which tissues in the instaine (gut) become inflamed and start to die. This can lead to a very dangerous infection. How can the immediate side	27 Why are you purbleted from blood douation for a year if 'your iron levels are too low? 25 Carw are developed a personalised measure of a sufe hamoglobin level at which to take blood douations (rather than current standard cut-off points)? 26 Why aren't gay people allowed to douate blood? 27 Why are the management of the standard cut-off points)? 28 Why are n't gay people allowed to douate blood? 29 Why are the standard cut-off points)? 29 Why are management benotosianal main ong yee blood? 20 Why are the standard cut-off points)? 20 Why are the standard cut-off points)? 210 Why are the standard cut-off points are standard cut-off points and the standard cut-off points? 210 Why are the standard cut-off points are standard cut-off tarandard cut-off points are standard	ВМ В В В В В В В В В В В В В В В В В В	2. Van Remoterie It; De Buck E, Comperindle Y, Unindekerchove P. The effect of a transford whole blood donation on oxygen update and exercise capacity: a systematic review and meta-analysis. Transfordium. 2016. 3. Parkind S, Speek J, Low M, With E, Sharter MA, E Stotter JK, Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the Iterature. Blood Transfordium 2015; 131(3):354-62. 4. Hoogenwerf MD; Vedhulzen II; De Kort WL; Frings-Dresen MH; Suiter JK. Factors associated with psychological and physiological stress reactions to blood donation: a systematic review of the Iterature. Blood Transfusion 2015; 131(3):354-62. 5. De Buck E, Dietijens T, Comperind EV, Vandekerdshove P. Is having sex with other men a mix factor for transfusion-transmissible infections in male blood donors in Western countries? A systematic review. PLoS ONE [Electronic Resource], 2015;10(4):e0122523-e. 5. De Buck E, Dietijens T, Comperind EV, Vandekerdshove P. Is having sex with other men a mix factor for transfusion-transmissible infections in male blood donors in Western countries? A systematic review. PLoS ONE [Electronic Resource], 2015;10(4):e0122523-e. 5. Kee AX, Willinson D, Addexen G, Stork MJ, Woohed versus unsubside for Hood dation for the prevention of morbidity and mortality in preterm infinits. Cochrane Database of Systematic Review. PLoS ONE [Electronic Resource], 2015;10(4):e0122523-e. 5. Kee AX, Willinson D, Addexen G, Stork MJ, Woohed versus unsubside for Hood dation for the prevention of morbidity and mortality in preterm infinits. Cochrane Database of Systematic Review. 2016;11:(2011):B4-CO. 5. Kee AX, Pai S, Trivella M, Laberman L, Callum J, Sheheta R, et al. Adverse effects of REC transfusions in neonates: a systematic review and meta-analysis. 2015;41:(2011):B4-CO. 5. Kee AX, Pai S, Trivella M, Laberman L, Callum J, Sheheta R, et al. Adverse effects of REC transfusions in neonates: a systematic review and meta-analysis. 2015;61(3):2011:B4-CO. 5. Kee AX, Pai	N N
88.C1	Bit safe for anaemic pateints (people with a lower haemoglobin) to donate blood? What is the impact of an individual's sexual practice on the safety of their blood? Does blood transfusion increase the incidence of necrotising entercolitis"in preterm infants and how can we prevent this? *Necrotising entercolitis is a serious illness in which tissues in the intestine (gut) become inflamed and start to die. This can lead to a very dangerous infection.	27 Why we you prohibited from blood docution for a year if your iron levels we too low? 25 Care we develop a personales measure of a safe hamogobio level at which to take blood docutions (rather than current standard cut-off points)? 26 Why aren't gay people allowed to docute blood? 27 Why are harmonic transmission from men who have saw with men have on the safety of blood transmission transmission from men who have saw with men have on the safety of blood transmission transmission to the safety of blood 27 Why takes a blood go show the safety of blood transmission 27 Why are harmed from blood docution from men who have saw with men have on the safety of blood transmission 27 Why takes a blood on the blood of histing takes at the safety of blood transmission 27 Why takes a blood on the blood of histing takes at the safety of blood transmission 27 Why takes a blood on the blood of histing takes 27 Why takes a blood on the blood of histing takes 27 Why takes a blood on the blood of histing takes 27 Why takes at blood on the blood of histing takes 27 Why takes at blood, but recently, as it was too mark work thread from that that the safety 27 Have takes at the maximum at current docute takes thread to the takes 27 Have takes at the maximum at the takes takes mark mark takes 27 Have takes at the maximum at the safety and takes 27 Have takes 27 Have takes at the maximum at the safety and takes 27 Have takes 27 Have takes at the maximum at the safety and takes 27 Have takes 27 H	ВМ В В В В В В В В В В В В В В В В В В	2. Var Remoterie I; De Buck E; Comperindle Y; Deldicupe L; undekerchove P: The effect of a transfur whole blood donation on oxygen updake and exercise capacity: a systematic review and meta-analysis. Transfusion. 2016. 3. Pairch S; Speek J; Law M. With Event S, Suptematic Terevier S, Suptematic T	N N N N N N N N N N N N N N N N N N N

	transfusion be reduced?	20 11 63	21 Shorperantino with debole versus alcohol followed by any anticipat is dry preventing backpromot of commensation of backfor is samplinion, includance for sensitivity any back mer microly at the benance couple-parties, and many of these will require tearrison of a control weaps of them (SAC), the prevention of whether any of these will require tearrison of a control weaps and executed prevention of whether all back to execute the sensitivity of a control weap of the any operation of the review forcease the studies are too smalls. To detect a doubling in the number of participant with any backeting from (SL) to Saco of dequare to any back to a wave the of participants of the review forcease the studies are too smalls. To detect a doubling in the number of participant with major beforeign from SL Saco of dequare to any study control wave 4600 participants; the three outping that the detect studies are too smalls. To detect a doubling in the number of participant with major too the outping too the studies are too smalls. To detect a doubling in the studies are the three outping that the function of the studies are too smalls. To detect a doubling in the number of participant with major teaching major blood translution. 27 What is the most all to detect and the studies are outping Weak is the true with the functional teaching of an edd of translution. 28 When undergoing a translution what risks can occut? 29 What is the two relative of blood translution for recipients?	Question net derived from the survey but from another source. H H NK H	 Thengprayon C, Cheungpasitgom W, Gillagie EA, Gressen KL, Kahani KB. Association of blood transfusion transmitted (young allowins infection: a systematic review and meta-analysis. Transfusion: 2016.) Mano M, Alihda T, Tokan A, Ao K, Mohamme K, Mura MM, et al. Reducing the risk of transfusion transmitted (young allowins infection: a systematic review and meta-analysis. Transfusion: 2016.) Mano M, Alihda T, Tokan A, Ao K, Mohamme K, Mura MM, et al. Reducing the risk of transfusion transmitted (young allowins infection: a systematic review and meta-analysis. Transfusion: 2016;41:011184-02. Mark A, Wilkes MM, Wang K, Kansen M, Kansen MJ, Kansen M, Ka	
B&C4	How can any negative long term effects of blood transfusion be		9 What future harm does a transfusion cause 85 Harm caused by blood transfusion	P B H R B H		N
	prevented?		50 What proportion of frequent platelet recipients develop HLA or specific antibodies?	н		
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ВН		
		60	26 What are the long-term consequences of blood product transfusion? 26 Long term risks	B H B		
		53	S3 What are the long term risks of receiving a blood transfusion? Are any patients at particular risk of long-term complications when receiving blood transfusion?	B H B H		
			2 What is the long term effect on health of blood transfusion	ВН		
			48 What is the relationship between blood transfusion and poorer outcome in the era of leukocyte-depleted blood?	н		
		-	3 Are there any dangers associated with Blood Transfusion? 35 With multiple transfusions how do the risks of complications increase with each additional unit transfused	P		
			9 Is there any long term follow up for patients who have received the wrong unit of blood?	PBRH		
		26	60 what are the long term problems after blood transfusion 24 Can we produce more evidence regarding risks and benefits of blood transfusion in different clinical	н		
		20	scenarios. 38 Risk of transfusion	н		
		23	30 what are the risks of blood transfusions 37 How does a blood transfusion impact on the recipient's future health. Are there any negative outcomes that	н РВ		
		33	we know of? 21 What about as yet unknown risks?	R B H		
		53	0 What can be done to decrease the number of reactions in multitransfused patients? 92 Are all transfusions safe to have?	PR RBH		
		42	25 Benefits and risks from treatment with blood transfusion	н		
			 What is the effect of blood product transfusion on immunity? Are breast cancer surgeons aware of the potential immunosuppressive effects of blood transfusion (or 	RBH		
B&C 8	What is the psychological impact		tissue trauma) 40 Transfusion recipients feelings about the transfusion and its effect on them	PRBH	1. Brunskill SJ, Millette SJ, Shokobi A, Pulford EC, Doree C, Murphy MF, et al. Red blood cell transfusion for people undergoing hip fracture surgery. Cochrane Database of Systematic Reviews. 2015.	N
1	of blood transfusion on the patient?	70	Implications for research: There is a need for RCTs looking at the effect of long-term transfusion therapy on	Question not derived from the survey but from another source.		
1			pulmonary hypertension and chronic sickle lung disease. The most likely starting point for any series of trials will be the effect of transfusion on existing pulmonary hypertension. The effect of transfusion on disease			
1			incidence and mortality would require trials with longer-term follow-on, making them more costly and conceptually more difficult. The definition of chronic sickle lung disease include is not agreed by consensus			
1			and this is a stumbling block for further studies in this area. New trials could consider using a combination of objective and subjective outcome measures. Effectiveness could be measured objectively, for example,			
			through echocardiogram or pulmonary function testing, or subjectively by measuring symptoms such as chest pain on a standardised scale. Such trials might provide useful information on the rate of deterioration			
1			In chronic chest complications. Given the chronic nature of the condition, trials could consider measuring pre-intervention 'severity' using an extended baseline 'steady state' period. It should be remembered that transfusions may reduce symptoms such as breathlessness by increasing the haemoglobin level rather than			
			cansussons may reduce symptoms such as oreachinessoness or increasing chief harmogloom even rather than having any beneficial effect per se on the chronic chest complication. Future RCTs in this area should have clear protocols for the aims of transfusion (such as a target harmoglobin level, or target sickle harmoglobin			
			tere protocos no me anis or nanistono parti sa a larger naemogioan rever, on narger sacte naemogioan percentage) and how the long-term transfusion programme is to be carried out, for example, by simple or exchange transfusion. Possible transfusion complications are a key concern, and it would be important to			
1			collect information on the complications arising from long-term transfusion therapy in trial participants			
1						
1		74	47 Blood transfusions for treating acute chest syndrome in people with sickle cell disease.Implications for	Question not derived from the		
			research: We found only one very small randomised conclusion in people with takin is not enough to make any reliable conclusion to support the use of blood transfusion. This review highlights the need of further high quality	survey but from another source.		
1			research to provide reliable evidence for the effectiveness of these interventions for the relief of the symptoms of ACS in people with sickle cell disease.			
1			55 What is the psychological impact on a patient, of a blood transfusion?	RBH		
1			Are the improvements in blood pressure after tandfusion related to simple inchanges in blood volumen or the nitric oxide scavenging effects of hamoglobin in stored blood increasing resting vascular tone and	н		
1			improving blood pressure by this mechanism? i.e. increasing after load as well as pre-load?			
			Does transfusion reduce length of stay after hip & knee replacement surgery? Did you feel better after your transfusion for anaemia? If so how quickly?	BH		
			I/ Lid you teel better after your transfusion for anaemiar if so how quicky? What are the early symptomatic benefits of blood transfusion after hip fracture?	RBH		

		194 Does receipt of a whole blood transfusion confer any cell mediated immunity on the recipient?	н		
		363 Does the body attempt a rejection process after transfusion?	Jehovah's Witness		
		462 What is the patient's perception on going through blood transfusion?	RH		
B&C 9	What characteristics identify	247 What is the benefit of blood transfusion in patients with evidence of poor oxygen delivery/ organ dysfunction?	н	1. Hurt H. Stansorth S. Curry N. Woolley T, Cooper C, UlioumumeO, Zheley Z, Hyde C. Thromboelastography (TEG) and rotational thromboelastometry (ROTEM) for trauma-induced coagulopathy in adult trauma patients with bleeding. Cochrane Database of Systematic Reviews. 2015;12):001048	N
	patients who would benefit from a blood transfusion?	394 How well does donated blood carry oxygen in particular for patients with respiratory disease?	R B H	2015;[4]:0100438	
		340 what is the reason for blood transfusion?	RH		
		521 What should be the criteria for transfusion?	BH		
		382 Will it benefit my patient in the best possible way	R B H		
		343 blood products given to a lot of patients who should possibly not be given one-need robust data to decide	RBH		
		430 Does transfusion improve patient's outcome?	BH		
		534 What clinical markers should we use to show that patients have benefited from blood transfusion (particularly in preterm neonates)?	RH		
DtTr1	How can health professionals be	143 Explore the level of knowledge and understanding of prescribing and administrating blood transfusions by	н	1. Hibbs SP, Nielsen ND, Brunskill S, Doree C, Yazer MH, Kaufman RM, et al. The impact of electronic decision support on transfusion practice: a systematic review. Transfusion Medicine Reviews. 2015;29(1):14-23.	N
	discouraged from using blood	healthcare professionals. 252 What systems can we put in place to limit unnecessary use of blood and blood products on the ICU?	вн		
	inapproriately?				
		210 How can we improve knowledge of and reduce incidence of TRALI 123 What can be done to make it easier to give blood in the bleeding patient (i.e. not 1:1:1) [ratio question]	RBH		
			н		
		686 NICE GUIDELINE RESEARCH KEY RECOMMENDATION: Electronic decision support: [Guideline Dev Gp fully assessed all evidence to Jan 2015 = "inconclusive and of very low quality"]. What is the clinical and cost	Question not derived from the survey but from another source.		
		effectiveness of an electronic decision support system compared with current practice in reducing	survey but from another source.		
		inappropriate blood transfusions, overall rates of blood transfusion and mortality?			
		59 Red cell transfusion: dose, frequency, end points, outcome, home vs. hospital, efficacy in patients with	н		
		chronic malignant haematologic diseases 15 Transfusion is a quick fix, but is it always the best fix?			
		757 A bigger push on hospitals etc on " Why use 2 when 1 will do". Lets get out profesiso	н		
		451 Ensuring that all hospital staff realise that blood transfusion is akin to transplantation and not be blase	RBH		
		about administering it 365 How can Hospitals reduce the requirements for Blood Transfusions	RBH		
		293 How can the risks and complications associated with blood transfusions be more clearly understood by the under model community?	NK		
		wider medical community? 47 How can we improve the hospitals clinicians that blood is a limited resource, I feel they should be	вн		
		encouraged to be donors.			
		62 How do we encourage staff to use blood only when necessary 439 How do we unify blood transfusion practices across disciplines (.e.g. cardiac surgery vs. general ICU)?	RBH		
		264 Should blood and blood product transfusion in trauma be better applied in NHS hospitals? Is current guidance actually being followed?	н		
		484 To save time and resources (for both patients and health care professionals) is it possible to reduce the	BH		
		amount of blood products that are prescribed? 531 What measures could prevent blood transfusions?	н		
		8 Why do clinical staff seemingly ignore SOPs and improvise a procedure and end up getting it wrong - move	В		
		to A7? 538 Who should decide that a patient should receive a blood transfusion?	RBH		
		186 How decision to transfuse is made	R B H		
		280 How can health care professionals in general be better informed about alternatives to blood transfusion?	NK		
		223 How can we ensure that evidence based best practice regarding optimising pre-op haemoglobin is	н		
		implemented 182 What factors are the most important to ward clinical staff (consultants & junior doctors) in deciding when to	н		
		initiate blood transfusion			
		246 How do we promote transfusion triggers and make doctors keep to it! 70 Should doctors have mandatory updates on blood transfusion, no matter what their seniority?	R B H B H		
		243 What factors influence the usage demand for donated blood products & can waste be reduced?	В		
		221 What should determine the need to transfuse?	н		
		583 When is blood transfusion absolutely indicated and when can it be avoided 273 When should I transfuse patients?	RBH		
		142 Would it be beneficial to transfuse blood based on an ideal body weight rather than everyone receiving a	н		
DtTr3	How can patients, relatives and	similar amount? 21 Could alternatives be further explained to patients prior to transfusion route?	ВН	I. NLCE Guideline Recommendations:	~
Derra	relatives and carers be empowered to have	424 How can the world of medicine become more open minded with patients who do no desire a blood	н	L NRL Guideline Recommendations.	Ť
	greater say about their choices	transfusion as treatment 277 Should membe shout to underno transfurion be councelled shout their future shilltu to donate blood?	РВН	43. Provide verbal and written information to patients who may have or who have had a transfusion, and their family members or carers (as appropriate), explaining:	
	in relation to blood transfusion	277 Should people about to undergo transfusion be counselled about their future ability to donate blood?		• the reason for the transflusion • • • the reason for the transflusion • • • the reason for the transflusion • • • the reason and the methods	
	and it's alternatives?	331 How do we improve public perception that having a blood transfusion is not the "answer to everything"	н	the transfusion process	
		599 How could we empower patients to improve anaemia?	RH	• any transfusion needs specific to them • any attensitives, and how they might reduce their need for a transfusion	
		469 Once a decision is made, why are Jehovah's Witnesses put under pressure to change their minds?	NK	- any arc insures use, are available, allow we pringer touce then need to a crasticulation + that they are no longer eligible to donate blood	
		290 Why are there so many different blood products. How do I know which is right for me?	R B H	 that they are encouraged to ask questions. 	
		476 Why was I put under pressure by hospital staff to change my decision to avoid blood and its derivatives?	NK	44. Document discussions in the patient's notes. 55. Provide the patient's notes.	
		569 Where blood products are refused are there still clinicians who consider this an affront to their superior	NK	the details of any transfusions they had	
		knowledge?	NK	the reasons for the transmission and the second sec	
		568 is it automatically assumed that the traditional use of blood products is the only option, or is it standard practise to advise patients of alternatives?		• any adverse events • that they are no longer eligible to donate blood.	
		758 Transfusion Avoidance 291 Do I really need a transfusion?	R B H R B H	46. For guidance on communication and patient-centred care for adults, see the NICE guideline on patient experience in adult NHS services	
		291 Do I really need a transfusion? 468 How can I be sure that my wishes regarding the avoidance of blood transfusion will be respected?	R B H NK		
		22 How can patients be empowered to ensure they get only appropriate transfusion? 460 How much information is given to patients so that they can make an individual choice whether to have	H		
		blood or alternatives?	в		
		305 To avoid a blood transfusion how can I build up my red blood cell count 600 How could we empower patients to avoid unnecessary transfusion?	BRH		
		428 We need more of an awareness of the alternatives to blood transfusion. It should not always be the first	н		
		thing thought of when a patient presents with a low Hb. Lets think about optimising with oral iron/V iron/ Health Promotion on diet and be strict on a cut off point if the patient is asymptomatic. Are all patients			
		being told that they cannot be a blood donor once they have become a receiver? Perhaps this may give			
		cause for the patient to think further about receiving in cases where they are asymptomatic and other forms are optimisation may be as effective for them?			
					1
		354 What information is available to tell people if the alternatives to a blood transfusion?	RBH		

DtTr6	How can patients with anaemia be identified and treated in a timely manner so that the need for transfusion ius avoided?	 A parkinith biding screened and tracked for assemila before surgery to prevent the need for blood transference. We we promote early indertification of patients have an axemice who are going to need a transfusion and treat it as owned them needing a transfusion have an axemice who are going to need a transfusion and treat it as owned them needing a transfusion. Boe es a transfusion to correct axemitia lead to the true cause of the axeemitia leading hinsed? Here we disclose the sometic during transfusion have the true cause of the axeemitia leading hinsed? Here we disclose the sometic during transgence, what are the class consequences. Now should oral into the source of the source during transgence, what are the class consequences. Now should oral into the 130 New should maxemit a horizon balance sources to train the disclose classification. Here we disk the more engaged in the properative process to must the bloot counts are optimical before admission to hospital and dP surgeries understand to few facts about donor blood and the trustment of axemita? 	М К В И В Я В Я Р В Я И М К В И К В И	I. Potter Li, Doleman B, Moppett K. A systematic review of pre-operative anaemia and blood transfusion in patients with fractured hips. Anaesthesia. 2015;70(4):483-500. Z hg O, Neeler RD, Muira A, Simpson A, Neal K, Brockes MJ, et al. from therapy for pre-operative anaemia. Cochrine Dasbase of Systematic Review. 2015;12(12011):884-02. A constructive stand promotion for the stand provide standard	N
DtTr8	Do patients and their relatives	306 Are patients given enough information about the potential side effects ?	РВН	NICE Guideline Recommendations:	Y
	and/or carers receive enough information to help them	4 Are there any requirements or preparations I need to do before receiving a blood transfusion?	Р	Patient information 4.3. Provide versial and written information to patients who may have or who have had a transfusion, and their family members or carers (as appropriate), explaining:	
	understand about blood	91 Did you understand the information provided to you before you were given a Blood Transfusion?	н	• the result for the transfusion	
	transfusion?	456 do patients receive enough information about blood transfusion 297 How can I be sure the transfusion is safe.	BH	the transfusion process	
		133 How can we reassure the public that the transfusion is virus free	н	- any transfusion needs specific to them - any alternatives that are available, and how they might reduce their need for a transfusion	
		327 How certain are you that patients understand the risks of blood transfusions? 328 How certain are you that patients understand the risks of blood transfusions?	R B H R B H	that they are no longer digible to donate blood that they are not congered to all outcome to	
		383 How do I explain side effects	RBH	mat mey are encouraged to ask questions. 44. Document discussions in the patient's notes.	
		302 How do I know that my transfusion blood is free from any health conditions that could be detrimental to me	R B	ds. Provide the patient and their GP with copies of the discharge summary or other written communication that explains: the details of any transductions they had	
		97 How do we best inform/consent patients for blood transfusion	н	the reasons for the transfusion	
		52 How effective is the consent process for patients? Do recipients of blood products really understand the risks and benefits?	RBH	- any adverse events - that they are not longer eligible to donate blood.	
		25 How much chance is there of getting illness through transfused blood 42 How well are the risks associated with blood transfusion conveyed to potential recipients?	P	 use user are in using or engouse to donate about. do for guidance and organization and patient-centred care for adults, see the NICE guideline on patient experience in adult NHS services 	
		393 How well recipient of transfusion know the adverse reactions?	РВН		
		458 if I have a blood transfusion am I likely to stay in hospital longer 148 if I needed an operation how much blood would I need?	BH		
		4857 If I have a blood transfusion is my cancer more likely to reoccur	вн		
		 If I have a blood transfusion, can I be sure that I won't catch any viruses from it? In non urgent transfusions is it possible to discuss with the recipient if requested the moral/ethical/religious 	в		
		implications of accepting someone else's blood into their body?	۲		
		2 is it possible that my body will reject or react badly to blood from a transfusion? 193 is receipt of a blood transfusion protective against alieraic disorders?	в		
		303 What are the dangers from a blood transfusion	в		
		418 What are the implications of receiving bloodlike a leaflet to read 320 What are the known risks?	P RBH		
		169 How do I know I have had a blood transfusion?	в		
		266 I don't think anyone is actually informed about what they received, how much and why. 595 Why do we not give relatives a simple comprehensive information leaflet when their relative is having a	RBH		
		transfusion	PBH		
DtTr10	How do you decide at what haemoglobin level	164 How do you decide at what level (Hb) a patient needs a blood transfusion? 334 How low can the haemoglobin be before transfusion needed?	н	1. NCE Guideline Recommendations: 13. Use extrictive ed bod cell transfusion thresholds for patients who need red biodo cell transfusions and who do not:	Ŷ
1	[trigger/threshold] a patient	104 How low can the haemoglobin be in an iron deficient patient before a transfusion is needed?	вн	 have major haemonthage or have austic consult variants vandimme or 	
	requires a blood transfusion?	132 Is the ideal haemoglobin target known for individual blood transfusion indications? 392 The threshold for transfusing a patient has been lowered to 70gm/dl. Why is that?	вн	• nave source contrary symtome or • need regular blood transfusions for chronic anaemia.	
		258 Transfusion triggers?	н	14. When using a restrictive red blood cell transfusion threshold, consider a threshold of 70	
		368 What is considered to be the lowest HB to determine the need for transfusion? 200 What is the ideal transfusion trigger?	вн вн	15. Consider setting individual thresholds and haemoglobin concentration targets for each patient who needs regular blood transfusions for dhronic anaemia.	
1		14 What is the lowest acceptable haemoglobin level at which transfusion is not beneficial to recovery?	RBH	2 Debtorogh MJ, Colman KS, Prick BW, Dueksku LJ, Sweeney C, Odktapo A, et al. Effect of retrictive versus liberal red cell transfusion trategies on haemotasis: systematic review and meta-analysis. Thromobis and Haemotasis. 2017. 3 Van Renotoret HV, De buck X, Dellefen, T, Paweis MS, Compensive J, Walthow P. Methodogica guality assussment of red block cell transfusion strategies in demotasis: systematic review and meta-analysis. Thromobis and Haemotasis. 2017.	
		329 What is the lowest transfusion threshold that is safe in stable patients?	н	4. Carson JL, Stanworth SJ, Roubinian N, Fergusson DA, Triulzi D, Doree C, et al. Transfusion thresholds and other strategies for guiding allogeneic red blood cell transfusion. The Cochrane Database of Systematic Reviews. 2016(-10):CD002042-CD.	
		475 What is the optimum threshold for transfusion in various patient groups 96 What is the transfusion trigger	вн	5. Shah A Stanworth 5J, McKechnie S. Fuidence and triggers for the transfusion of blood products. Anaesthesia. 2015;70(Suppl): 11:09. e3. 6. Kumar A. Mhasafar G. Grossma BI, Kudman RM. Toblan A. Kleminan S: e4. Bralteri transfusion: a systemistic review of the clinical evidence. Transfusion. 2015;555(5):1116-27.	
		219 Is there a "correct" universal trigger for transfusion?	н	7. Holst LB, Petersen MW, Haase N, Perner A, Wetterslev J. Restrictive versus liberal transfusion strategy for red blood cell transfusion: systematic review of randomised trials with meta-analysis and trial sequential analysis. BMJ. 2015;350:h1354-h.	
		749 Transfusion thresholds and other strategies for guiding allogeneic red blood cell transfusion. Implications for research: Further randomized trials should not be aimed at addressing the safety of RBC transfusion policies	Question not derived from the survey but from another source.		
		within the range of haemoglobin thresholds tested in the trials identified in this review or in unselected groups of patients across broad clinical settings. Rather, additional trials should be targeted to address			
		specific research questions, where the strength of evidence-based recommendations has significant			
		uncertainty, as highlighted in this review. Subsets of patients where there is currently no adequately powered randomized controlled trial data to inform optimal RBC transfusion treatment include those with			
		acute cardiovascular disease, neurological disorders including (traumatic) brain injury, and haematological			
1		and other malignancies. Outcomes of importance in trials would be mortality, but also functional and bleeding endpoints, specifically in transfusion-dependent participants with cancer and haemological			
		malignancies. We believe that in these clinical groups, the clinical goals and pathophysiology preclude generalisation from the completed studies included in this review. Trials are also needed to evaluate lower			
		a baemoglobin concentrations such as 6.0 g/dL, especially in countries with suboptimal blood safety and inadequate blood supply. Further research is needed to identify methods to measure oxygen delivery to			
		vital organs directly. All trials should be large enough to measure the impact of lower thresholds on clinical			
		outcomes and should apply consistent definitions for all clinical outcomes, such as myocardial infarction and ischaemic heart disease.			
1					
1		234 Compliance with a transfusion trigger 165 Despite a low Hb and experiencing the side effects of this is a blood transfusion still not given?	BH		
		and an another a real control of the state o		1	

Ditrilos	At what haemoglobin level [blood count] should patients in a perioperative* setting receivce a blood transfusion? Perioperative means occuring or performed at or around the time of a transfusion.	Sc0 is deal in order to make recommendation for the optimal use of this through, there are significant challenges in conducting medioandine tails in people with strengolitopathes. In the level world is, and of SL2 papels accessed only 70 were recruited with reasons for exclusion brain globacombina the level world is, and of SL2 papels accessed of SL2 papels accessed only 70 were recruited with reasons for exclusion brain globacombina the level streng of the level streng of the strenge of the level streng of the level streng of the strenge of the level strenge of the lev	H H H Guestion not derived from the survey but from another source. H H B H R B H R B H H Guestion not derived from the survey but from another source.	I. NCC Guideline Recommendations: I. NCC Guideline Recommendations: I. Nucl Guideline Recommendations: I. Sub-restrictive red blood cell transfusions and who do not: + use major thermology of the short transfusion transfusion transfusions and who do not: + use major transfusions: I. Sub-restrictive red blood cell transfusions threshold for guidents. Sub-restrictive red blood cell transfusions: I. Sub-restrictive red blood cell transfusions threshold in the steering and blood cell transfusions for dranks. Sub-restrictive red blood cell transfusions threshold in the integration transformation transformation transformation transformation transformation transformation transformation threshold of the International Hegeto Paceretab Bilary Association. Sub-restrictive red blood cell transfusions threshold and transformations in patients with moders qualitable blood transformations. Sub-restrictive red blood cell transfusions threshold and transformations in patients with nonextrapplate blood cell transfusions. Sub-restrictive red blood profile transformations in patients with nonextrapplate blood cell transfusions. Sub-restrictive red blood profile transformations in patients with nonextrapplate blace resection of a comparison of the international Hegeto Paceretab Bilary Association. 2017. Sub-restrictive red blood profile and a labod transformation indications in patients with frammational score and transformation control efficiant. Sub-restrictive red blood profile and in additional indications in patients with frammational score and transformation control efficiant. Sub-restrictive red blood profile and in additional indication structure lips. Anotennatics on 2017;0(1):1153-91. Tentor J, Dennes J, Du Y, Vu Y, Ve G, Weg G, X, A red T, Restrictive blood frammational in patients with frammational control efficiant. Sub-restrictive red blood profile and instructive lips. Anotenatin additional transformation in patinge with frammational control	Y
		appropriate use of iron as part of the broader initiatives of patient blood management (Goodnough 2014).			
DtTr10b	At what haemoglobin level [blood count] should a non-	263 At what haemoglobin level should blood transfusion be considered for critical care patients. 443 At what Hb threshold should post-partum women be transfused to improve maternal recovery?	R B H B H	1. NEC Guideline Recommendations: 13. Usc erstrictive even bold cell transfusion thresholds for patients who need red blood cell transfusion thresholds for patients who need red blood cell transfusions and who do not:	Y
	surgical, general medical patient receivce a blood transfusion?	384 Transfusion threshold in different situations and context. e.g. TRICC/other trials guide us but for what	вн	* have mig/or hemorrhage or * have active constraints y notified to a final state of the state o	
	receivce a biobu transrusion?	length of duration in ICU stay does these trials apply? Surely situation at day 20 is very different that day 2.		• need regular blood transfusions for chronic namenia. IA: When using a regritarion end blood of transfusions.	
		134 Transfusion thresholds for general intensive care patients with and without acute coronary syndromes	н	14 meet nong at estimative to unduit des transitions international attraction of a grant and a meeting	
		336 Restrictive policies for medical patients for both blood and platelets 233 transfusion trigger in the critically III	н	Other refs:	
		487 what is the correct Hb to transfuse in the postnatal period given that maternal physiology is so different	н	1. Oddstyo A. Desborough MJ, Trivella M, Stanley AJ, Doree C, Collins GS, et al. Restrictive versus liberal blood transfusion for gastrointestinal bleeding: a systematic review and meta-analysis of randomised controlled trials. The Lancet Gastroenterology & Hepatology. 2017;2(-5):334-60.	
		from standard adults 126 What is the optimal blood transfusion threshold for patients at different stages in the evolution of critical	RBH	2. Estcourt LJ, Malouf R, Trivella M, Fergusson DA, Hopewell S, Murphy MF. Restrictive versus liberal red blood cell transfusion strategies for people with haematological malignancies treated with intensive chemotherapy or radiotherapy, or both, with or without haematopoietic	
		illness? 250 What is the best threshold for blood transfusion on the ICU?	вн	stem cell support. The Cochrane Database of Systematic Reviews. 2017-(1):20011305-CD. 3) Dupuis C. Somerine H. Adrie C. Grox J. Jahrom M. Boadman, Let al. Impact for Introdusion patients with sepsis admitted in intensive care unit: a systematic review and meta-analysis. Annals of Intensive Care. 2017;17:13-5.	

		224 What is the optimum level ((hb)) to transfuse red cells in the severely III patient	н	 4. VegaPy Cullim J, Bittel S, Nascimetto B, dis La T. A. psystematic review on the rotational thrombelastometry (ROTEM(R)) values for the diagnosis of coagulopathy, prediction and guidance of blood transfusion and prediction of mortality in trauma patients. Scandinavian Journal of Trauma, Rescultation and Emergency Medicine. 2016;4):114. 4. Search J, Bittel S, Kascimetto B, dis La T. A. psystematic review on the rotational thrombelastometry (ROTEM(R)) values for the diagnosis of coagulopathy, prediction and guidance of blood transfusion strategies in oncology. Cancer Treatment Reviews. 2016;46:1-8. K. Ker A, Pi S, Tor K, Kascimetto B, diskup C, Lawor M, Bardon D, Cancer Treatment Reviews. 2016;46:1-8. K. Ker A, Pi S, Tor K, Bitter M, Samonoth S, Libe of patient transfusion protor to humbar punctures or equical anasthesis for the automatican in concents: a systematic review and meta-analysis. Transfusion: 2016. E. Koczu L, Ingran C, Doree C, Trivella M, Samonoth S, Libe of patient transfusion protor to humbar punctures or equical interviews. 2016;40:101980-CD. B. Oriston J, Orgeney S, Sorre T, Timouto M, Steinberg F, Manore L, et al. Optimit renation protor to humbar punctures or equical interviews and meta-analysis. Transfusion and metadone Reviews. 2017; D. Orizton J, Orgeney S, Vega N, Domorison J, Marcia M, W. Wood FM. Orgenmit and Bioder Ponduct in Massathesis for the automatic pontrol test and the congenital bione marrow failure disorders. Contrane Database of Systematic Reviews. 2017; D. Orizton J, Danose J, Konzev K, Morrison R, Richter M, Wood FM. Orgenmit and Bioder Ponduct in Massathesis and the congenital bone marrow failure disorders. Cochrane Database of Systematic Reviews. 2015; D. Orizton J, Danose C, Hopewell S, Vess P. Comparison of a restrictive versus Bateri and cell transfusion patients with myelodysplasis, aplastic anaemia, and other congenital bone marrow failure disorders.	
				16. Orgino GL, Eticourt LJ, Wood EM, Trivella M, Dore C, Stanworth S. A thrappeutic-only versus prophylactic platelet transfusion strategy for preventing bleeding in patients with haematological disorders after myelosuppressive chemotherapy or stem cell transplantation. Cochrane Database of Systematic Review, 2015(s):DCD001801800. 17. Ohan AW, de Gara CJ. An evidence-based approach to red blood cell transfusions in asymptomatically anaemic patients. Annals of the Royal College of Surgeons of England. 2015;97(4):556-62.	
DETF10c	At what haemoglobin level [blood count] hould patients with heart disease (including coronary artery disease, heart attacks or angina) receivce a blood transfusion?	220 Does incheme heart disease impact on transfusion trigger for transfusion 136 Department with chemic heart disease meals a higher tingger for transfusion 136 Department with chemic heart disease meals a higher tingger for transfusion 131 What is the optimal transfusion free patients with number coronary attern disease 133 What is the optimal transfusion free patients with number coronary attern disease and intercurrent listings 134 What is the clinical and core offectiveness of relativity: compared with liberal red blood cell transfusion & cardiovancular disease. 134 What is the clinical and core offectiveness of relativity: compared with liberal red blood cell transfusion & cardiovancular disease. 154 What is the clinical and core offectiveness of relativity: compared with liberal red blood cell transfusion & cardiovancular disease. 154 What is the clinical meters with theart disease. 1554 What is the transfusion trigger for those with IHO but no active incluentia need further clarification 1560 Gene the transfusion trigger for those with IHO but no active incluentia need further clarification	B H B H H Councilon not derived from the survey but from another source. H B H	1. NCC diadeline Recommendation: 1. NCC diadeline Recommendation: 1. NCC diadeline Recommendation: 1. Sconder and the doce delt transfusion threshold of 80 glitter and a haemoglobin concentration target of 80–100 glitter after transfusion for patients with acute coronary syndrome. 2. Vang Y, Sh X, Wen M, Chen Y, Zhang Q, Restrictive versus liberal blood transfusion in patients with coronary artery disease: a meta-analysis. Current Medical Research and Opinion. 2017;1-17. 3. Ripolite Meditor J, Casan F, Tancei R, Espinosa A, Martines F, Mazha Guummeta A, et al. Restrictive versus liberal transfusion in critically III patients and in patients with acute coronary syndrome: a systematic review, meta-analysis. Minera Antel:Bolico 2015;24:5135:25-85. 4. Docherty AB, O'Donnell R, Fundal B, Trivella N, Dorse C, Hois L, et al. Effect of restrictive versus liberal transfusion strategies on octonese in patients with acute acutosus and systematic review and meta-analysis. BMJ 2016;35:211351-1. Kovek CS, Benever AM, Witchow SM, Waita SB, Aperina M, Aniel, et al. Ibod transfusion coronary interview and meta-analysis. BMJ 2016;35:211351-1. Kovek CS, Benever AM, Witchow SM, Waita SB, Aperina M, Aniel, et al. Ibod transfusion coronary interview and meta-analysis and diversity-adjusted study sequential analysis. JMAR Internal Medicine. 2013;1712():112-9. Chatterjee S, Wetterslev J, Sharma A, Lichstein E, Mukherjee D. Association of blood transfusion with increased mortality in mpicandial infanction: a meta-analysis and diversity-adjusted study sequential analysis. JMAR Internal Medicine. 2013;1712():112-9.	Y
DtTr10d	At what haemoglobin level [blood count] should a patient who has experienced an acute neurological event (e.g. a stroke or brain injury) receivce a blood transfusion?	336 Transfusion thresholds for patients with acute brain injury	н		
DtTr10e	At what haemoglobin level [blood count] should a patient who has experienced major trauma (e.g. a car accident) receivce a blood transfusion?	There was no individual survey quantion generated on this topic.			
DtTr10f	At what haemoglobin level [blood count] should a patient with cancer receivce a blood transfusion?	There was no individual survey question generated on this topic.			
DtTr10g	At what haemoglobin level [blood count] should a patient who has experienced a haematological (blood or bone marrow) disorder receivce a blood transfusion?	731 Comparison of a restrictive versus likeral red cell transfusion policy for partnerst with myelodypolias against nareamia and other comparits baro marrow lahur disorders, minipications for research. As the incidence of MSD rises with an ageing population, many of whom are unable to tolerate curative therapy, further clinical traits with housin methodology are now required to develop the optimal transfusion strategy for such people.	survey but from another source.		
		Platers with carecy/hammological malgracic/elvkamia/MCS, and production failure, what are the optimal red of iterafusion transformations and the second	BH BH H RBH		
DtTr12a	What is the optimal type and combination of blood products [red blood cells, platelets, frozen plasma] for adult patients* with a maine beamerchane that		H BH H BH	1 Vu F, Zhong T, Wu G. [Efficacy of high versus low plasma: red blood cell ratio resuscitation in patients with severe trauma requiring massive blood transfusion: a meta-analysis]. Nan Fang Yi Ke Da Xue Xue Bao = Journal of Southern Medical University. 2017;37(1):119-23. 2. Wikketo A, Wettersker J, Moller AM, Alshari A. Thromboelastgraphy (TG) or rotational thromboelastometry (ROTEM) to monitor haemostacic treatment in bleeding patients: a systematic review with meta-analysis and trait sequential analysis. Anaesthesia. 2017. Apr;72(1):119-23. 3. doi:10.1111/junesi37055 3. Cannon JW, Rhan MA, Raja AS, Cahen MJ, Como JJ, Cotton BA, et al. Danage control resuscitation in patients with severe traumatic hemorrhage: a practice management guideline from the Eastern Association for the Surgery of Trauma. The Journal of Trauma and Acute Care Surgery. 2017;87:15:056-17.	N

	a maps meansartings two requires a transition of 4 or more units of blood)? * Aged over 16 years old.	453 988 458 56 115 121 205 3319 373 373 459 465 118 463	Work in kooked block flip platekters ando during major hamonrhage Le, ratio of block FIP platektes. What is the local block flip platekters ando during major hamonrhage in the operange there will be block and block platekters and the market hamonrhage. What we here local ratios of a nagion hamonrhage policy a pliCFIP-platektes cryo. Which strategies & thorizen test here here and the strategies of the strategies of the strategies and plate platekters have block and the strategies of the strategies and strategies of the strategies of the strategies of the strategies of the alternative strategies of the strategies of the strategies of the strategies of the strategies of the strategies of the strategies of the strategies of the alternative strategies of the st	Р R B H В H H H M R M R M K M K M K M K M K M K M K M K	 A Interestorff M, Oliveri RS, Johanson PR. The use of viscoelastic haemotatic assays in goal-directing treatment with allogenic today and provide the analysis. Scandinavian Journal of Trauma, Resuccitation and Emergency Medicine. 2017;25(-1):39. Depe AG, Weber C, Zimmerman J, Kuhn EW, Statusch L, Liakapoulos DJ, et al. Point of-care thromobelastometry bard couplacito management in cedies sugary a meta-analysis. Gandinavian Journal of Trauma, Resuccitation and Emergency Medicine. 2017;25(-1):39. Weber CJ, Weber C
DtTr12b	What is the optimal type and combination of blood products [red blood cells, platelets, frozen plasma] for paediatric patients*		RBC & FFP or RBC & Hoplas or fibringem concentrate/ cryo? What ratio should we transfuse children in trauma, massive haemorrhage?	н	No available SR evidence X
	with a major haemorhage that requires a transfusion of 4 or more units of blood]? * Aged less than 16 years old.				
DtTr12c	What is the optimal type and combination of blood products	108	Is one unit blood transfusion policy appropriate within 24 hours of major postpartum haemorrhage?	н	1 key H (dottke C) friel D. Konki Langmender S. Therapeutic glasma Translation in Beefing patients: a systematic review. Amethica and Anaptaliza 2017;24:41:268-76. N
	[red blood cells, platelets, frozen plasma] for obstetric patients with a major haemorrhage that requires [a transfusion of 4 or more units of blood]?	107	When should FFP be given during major obsterric haemonthage?	н	
DtTr13	What is the optimal blood transfusion dose [number of		Is it better to give a little blood, i.e. 1 unit at a time to top a patient up in the BMT process rather than say a 3 unit transfusion to last a longer time.	BH	1.NLC Guideline Recommendations: V 1. Condex single-wine red block of the second secon
	units] [in any situation] for maximum patient benefit?	310	Why do blood transfusions always include two units and not just one? How much blood can one transfuse in an acute setting?	P H	18. After each single-unit red blood cell transfusion (or equivalent volumes calculated based on body weight (ar children or adults with low body weight), clinically reasess and check haenoglobin levels, and give further transfusions if needed. 1. Torres ME, Rodriguez JN, Ramos JL, Gomez FA. Transfusion in palliative cancer patients: a review of the literature. Journal of Palliative Medicine. 2014;17(1):88-104
DtTr14	When and how should prophylactic ⁺ platelets be given	119	Now can platelets be used efficiently to prevent peri-procedural bleeding in patients with thrombocytopenia	RBH	1. NCC Guideline Recommendations: Platelet: Thresholds and Targets
DtTr14	When and how should prophylactic* platelets be given to reduce procedural bleeding complications in patients with low platelets ?* prophylactic platelets are given to prevent bleeding.	714	Here an glatistics be used efficiently to prevent periprocedural bleeding in patients with thematocritopring. Different does of prophysics glatelit transfusion for preventing bireding in people with bat inglications for mean's Assessment of bleeding in future trais. One of the diffuture with the "result was the variability between studies in assessing and grading bleeding. The WHO classification of bleeding, although dively used, has mere there was listed, and therefore the sampling that all WHO gade 2 bleeding is chickly significant has been brought into question. For future studies, an agreed international consensus and the wavel and the bare been brought into question. For future studies, an agreed international consensus both a medical perspective and with regard to their quality of life. The Biomedical Levelines for slate maching distributorities in the scalar bit megate bleeding bas uson the glatent from both a medical perspective and with regard to their quality of life. The Biomedical Levelines for slate maching baseding that biolithorative is currently megate bleeding based meta Biomedica accessible bleeding assess to abuse the bind period bleeding based one based belowing sample students with the student based based belowing as taxandarding bleeding based meta Biomedica accessible bleeding based based to a bit marks the student based based based and based based meta based based based based to a bit meta the student based based as the meta- stacknowledge that biling in platet transfusction. maint displated based and based based metastact based based based to a based based based based based based based based based based b	R 8 H Question not derived from the survey but from another source.	

		720 Comparison of different platest cover there-holds to galde administration of prophysics: platest translucion for prevening blending is people with hematophysical diadorst after previouspressive chemotherapy or stem call transglustration. Conclusions on the non-information of a platest count threahold of 30 ± 0100, compared to 20 ± 0100 or 30 ± 000, the blends on addrogeneest studies kasing to imprecise estimates for the outcomes within this review. In the block 1997 study (255 participant), the power calculations were based on the magnetise of the 000 Gald ± 0.00 block ± 0.00	Question and derived from the survey but from another source.	 22. Only consider giving more than a single dose of platelets in a translusion for patients with severe thrombocytopenia and beeding in a critical site, such as the central nervous system (Induding eye). 23. Reases the patient's clinical condition and next their platelet conditions of protections of give further doses if needed. 24. Escourt Li, Ingram C, Doree C, Trivella M, Sanworth SJ. Use of platelet transflusion prior to lumbar punctures or epidural assesthesia for the prevention of complications in people with thrombocytopenia. The Codriane Database of Systematic Reviews. 2016;43: C0011980 CD. 25. Boeborugh M, Hadjinicolau AY, Chamana A, Trivella M, Yuje P, Doree C, et al. Alternatives, and adjuncts, to prophylactic platelet transflusion for preventing bleeding in people with hormbocytopenia and test of transition. The Codriane Database of Systematic Reviews. 2016;43: C0011980 CD. 25. Stoart LJ, Barnes C, Sanson SJ, Guidan BM, Tobain A, Bleiman S, et al. Platelet transflusion: a pretenting thereing in people with hormbocytopenia and systematic review. The Codriane Database of Systematic Reviews. 2016;10: C001083 CD. 25. Kourst LJ, Sanson SJ, Guidan BM, Tobain A, Bleiman S, et al. Platelet transflusion: a systematic review of the clinical sideescure of the clinical sideescure. Transflusion ACD: SSSS-1116-27. 26. Kourst LJ, Sanson SJ, Boore C, Roweed ST, Freilla M, Mary MF. Comparison of different platelet transflusion for preventing bleeding in people with haematological disorders after myelosuppressive demotherapy or stem cell transplantation. Codriane Database of Systematic Reviews. 2015;110:0210953 CD. 25. Kourst LJ, Sanson SJ, Boore C, Roweed ST, Shella M, Mary MF. Comparison of different platelet transflusion for preventing bleeding in people with haematological disorders after myelosuppressive demotherapy or stem cell transplantation. Codrinane Database of Systematic Reviews. 2015;110:021093 CD.<th></th>	
		74 Use of pitteriest transfusions prior to kumbar punctures or epitiarial anesthesia for the prevention of complications in people with thrombocytopenia implications for research. It is unlikely that any future randomized controllect trains will be preformed with a primary outcome of imply breading because the event is zero. To detect a doubling in the number of participants with major bleeding from 0.31% to 0.2% waid requires at solvely with nore that 2000 participants. A mamary of the beta studied evidence from non-individual studies in required, the last systematic search of the non-randomized literature was performed before 2010.	Question not derived from the survey but from another source.		
		12.6 Alternative agents to prophysicatic platelet transformation for proventing beneficing in people with thromoborphysical data to characterize non-marwor laivars analysis and systematic review. Implications for research: Our search transgy has aldereiting for further traits of TPO minimistic (eltromoboga) with 817 participants, to with an a presently underray for people with those marrow failure a more function of the marrow failure and the section of the sectio	Question not derived from the survey but from another source.		
		706 Alternatives and adjuncts to prophytical patient translusion for people with haemaclogical miligrancies undergoing interview chemotherapy or team elit transplantion. Implications for present: Cur variant transplantion terms in the prophytical patient transplantion of the participant transplantion terms and the prophytical patient transplantion. Implications for transplantion terms are completed but the results have not yet been reported. The problems with reporting outcomes of the traits in this systematic review make at difficult to interpret the walk and additional trait of PM mimetes and without further data, are commendation cannot be made. To detect adversa in the properties of the main terms are trained to the traits in the systematic review make at difficult to interpret the walk and additional trait of PM mimetes and without further data, are commendation cannot be made. To detect adversa in the properties of many terms and traits and traits and traits and traits and the straits and the straits of the traits in the systematic traits and traits at traits and	Question not derived from the survey but from another source.		
		710 Comparison of different platelet translusion thresholds prior to insertion of central lines in patients with thrombsotytopenia. Implications for research. The ongoing trial that compare two different platelet count thereholds and is due to be completed in the counder to answer the primary actions of the low counder counser the transmission of the primary centromory of the counter	Question not derived from the survey but from another source.		
DtTr15	How can the blood transfusion process be delivered more safely	S89 How can we educate healthcare professionals to adopt best practice in RBC transfusion 69 Is the training given to junior doctors on transfusion enough?	B H B H	No available up-to-date evience.	N
	in hospitals?	94 JUNIOR DOCTORS. How consistent is their training in Transfusion Avoidance June 2015 and use of Alternatives?	Jehovah's Witness		
		641 Nursing and medical team to have a better and in depth understanding of the side effects of blood transfusions and be aware of common haematology medical problems which can interfere with blood	BH		
		donation/transfusion. 502 Shouldn't NMS put more money in to researching and training surgeons in blood conservation techniques?	NK		
		477 Why can't medical staff give advice on non-blood products?	NK		
		440 Why is there such a disconnect between knowledge and practice regarding transfusion requirements in clinical medicine? i.e. Are medical students taught the indications and evidence for transfusion?	н		
		49 How do we improve the sharing of knowledge in transfusion science to juniors staff	вн		
		389 Why is blood transfusion training not a nationally required core mandatory training subject 330 How do we safeguard unnecessary transfusion?	н		
		11 Why can't experienced nursing staff prescribe blood?	RBH		
		259 Do you reasses after giving each unit? 416 is ever a 1 or 2 pint transfusion valid since this amount can be donated by an individual?	H NK		
DTtR18	Are drugs a cost effective	10 What alternatives provide the best outcome 450 Minimising the use of donated blood and blood products, without compromising patient safety	PBH	1. NEG calositiene Recommendations 1-5: Alternatives to blood transfusion for patients having suggery. Onai rou, IV iron and enythropaetin 1. Do not offer enythropaetin to reduce the media for blood transfusion in adtestis having suggery. Unai rou, IV iron and enythropaetin 1. Do not offer enythropaetin to reduce the media for blood transfusion in adtestis having suggery. Unai rou, IV iron and enythropaetin	Y
	alternative to blood transfusion for the management of			• the patient has anaemia and meets the criteria for blood transfusion, but declines it because of religious beliefs or other reasons or	
	anaemia?	74 Alternatives to transfusion in children 75 What are the alternatives to receiving a blood transfusion?	R B H R B	the appropriate blood type is not available because of the patient's red cell antibodies. 2. Ofter oral ion before and after surgery to patients with inco-deficiency anamenia.	
		500 Why are alternatives to transfusions not more widely offered. 371 What strategies exist to avoid transfusion in chronic anaemia?	NK B H	3. Consider intravenous iron before or after surgery for patients who:	
		371 What strategies exist to avoid transfusion in chronic anaemia? 403 How can we minimize blood transfusions?	н	Nave incode/ficiency sumenia and cannot tolerate or absorb oral irror, or are unable to adhere to oral irror treatment (see the NECE guideline on medicines adherence) are diagnosed with functional irror diverticiency	

1			Alternatives to blood transfusion	н	 are diagnosed with iron-deficiency anaemia, and the interval between the diagnosis of anaemia and surgery is predicted to be too short for oral iron to be effective.
			what happens when an individual cannot receive transfusion due to reaction When considering transfusion alternatives, how can more money be out into researching these alternatives	P H NK	4. For guidance on managing anaemia in patients with chronic klólevy disease, see the NICE guidellie on anaemia management in chronic klólevy disease. 5. For guidance on managing bold transfusions for people with notace upper gatromisticational before guidence on acute upper gatromisticatione on acute upper gatromisticational before guidence on
		294	when considering transfusion alternatives, now can more money be put into researching these alternatives and sharing the knowledge of these alternatives?	NK	3. You guiuaixe un managing unou u ansusions no people with acute upper gasulum examination acute upper gasulum exama unecumg.
			Alternative strategies	н	NICE Guideline Recommendations 6-9: Alternatives to blood transfusion for patients having surgery: Cell salvage and tranexamic acid
		227	What are the alternatives to blood transfusion What are all the alternatives to transfusion?	R	6. Offer tranexamic acid to adults undergoing surgery who are expected to have at least moderate blood loss (greater than 500 ml)
			What are all the alternatives to transfusion? If an alternative is appropriate, how efficient is this compared to transfusion?	н	7. Consider transcamic acid for children undergoing suggery who are expected to have at least moderate blood loss (greater than 10% blood volume). B. Do not routienty use cell shave at What transcamic acid
			Alternative options for blood products to treat patients needing transfusion	BRH	a. Up in rouning use ten savage without interacting adu. S. Consider inter-operative cell savage with transcensing adu. S. Consider inter-operative cell savage with transcensing adu.
		286	What further can be done to mitigate the need for a transfusion	NK	
		695	The effectiveness and cost-effectiveness of erythropolesis-stimulating agents (epoetin and darbepoetin) for	Question not derived from the	 Li C, Gong Y, Dong L, Xie B, Dai Z. Is prophylactic tranexamic acid administration effective and safe for postpartum hemorrhage prevention? A systematic review and meta-analysis. Medicine. 2017;96(-1):e5653-e.
			treating cancer treatment-induced anaemia: It may also be helpful to explore reasons why improved anaemia may lead to better outcomes; that is, whether ESAs allow better compliance with chemotherapy.	survey but from another source.	3. Ray S, Ray A. Non-surgical interventions for treating heavy menstratual beeding (memorphagia) in women with bleeding disorders: The Cohrane Database of Systematic Reviews. 2016;11):CD010338-C0.
					4. Flugs Q, Dancy JP, Jakasa V, Acalmein A, Mulliamborgh, Euleraphy D reduce interingings on unempty point or accurate in a straight of the
		693	The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents (epoetin and darbepoetin) for treating cancer treatment-induced anaemia: More evidence is needed to assess the impact of Hb	Question not derived from the survey but from another source.	6. Roberts I, Shakur H, Ker K, Coats T, collaborators C-T. Antifibrinolytic drugs for acute traumatic injury. Cochrane Database of Systematic Reviews. 2015;5:CD004896-CD.
			normalisation on utility. If clinical studies of normalisation are conducted it would also be valuable for	survey but from another source.	7. Marti-Carvajal AJ, Sola I. Antifibrinolytic amino acids for upper gastrointestinal bleeding in people with acute or chronic liver disease. Cochrane Database of Systematic Reviews. 2015(-6):CD006007-CD.
			HRQoL outcomes to be measured, preferably using the EQ-5D or another universal HRQoL questionnaire, so		8. Alam A, Choi S. Prophylactic use of tranexamic acid for postpartum bleeding outcomes: a systematic review and meta-analysis of randomized controlled trials. Transfusion Medicine Reviews. 2015;29[-4]:231-41.
			that incremental QALYs resulting from normalising from a higher Hb level can be modelled directly rather than by using the surrogate of Hb level.		
		751	Early versus delayed erythropoietin for the anaemia of end-stage kidney disease. Implications for research: This Cochrane Review has highlighted a need for well-designed, high-quality RCTs to assess the benefits and	Question not derived from the survey but from another source.	
			Inis Contrane Review has highlighted a need for well-designed, high-quality RC1s to assess the benefits and harms of early versus delayed erythropoletin for the anaemia of end-stage kidney disease. The potential	survey but from another source.	
			study should include main clinical outcomes (patients-oriented outcomes) such as all-cause mortality,		
			cardiovascular mortality, quality of life, adverse events and cardiovascular events according to their occurrence during study follow-up. The study should be reported according to the Consolidated standards		
			of reporting trials (CONSORT) statement for improving the quality of reporting of efficacy and to get better		
			reports of harms in clinical research (Ioannidis 2004; Moher 2010; Turner 2012). Future studies should be planned according to the recommendations of Standard Protocol Items: Recommendations for		
			Interventional Trials (SPIRIT) (Chan 2013a; Chan 2013b) and the Foundation of Patient-Centered Outcomes		
			Research (Gabriel 2012; PCORI 2012). Future studies should be conducted by independent researchers and		
			reported according to the Consolidated Standards of Reporting Trials (CONSORT) guidelines (loannidis 2004; Moher 2010) and using the Foundation of Patient-Centered Outcomes Research recommendations (Gabriel		
			2012; PCORI 2012).		
		750	Recombinant human erythropoietin versus placebo or no treatment for the anaemia of chronic kidney	Question not derived from the	
			disease in people not requiring dialysis. Implications for research: A future RCT to look specifically at	survey but from another source.	
			whether rHuEPO can delay or hasten RRT in patients with chronic kidney failure is required. Nephrology is a low volume specialty and multicentre studies are therefore necessary to recruit sufficient numbers to		
			achieve acceptable statistical power. Further RCTs should be designed to be large enough and of long		
			enough duration to address this question adequately. These studies could also examine the proposition that a patient with a higher haemoglobin is in better health and better able to cope with the commencement of		
			dialysis when it is eventually necessary. Hospitalisation duration for initiation of dialysis, hospitalisation		
			rates and mortality for the first three months of RRT should provide further relatively hard end-points.		
			Considering the demonstrable effectiveness of rHuEPO in improving haemoglobin it may be impossible to blind health care providers effectively in such a study.		
		689	The effectiveness and cost-effectiveness of envthropolesis-stimulating agents (epoetin and darbepoetin) for	Question not derived from the	
			treating cancer treatment-induced anaemia: If ESAs are thought to have a major potential for improving	survey but from another source.	
			cancer care, large RCTs meeting current methodological and reporting standards with adequate follow-up are needed to evaluate ESAs as administered in line with current marketing authorisations (including licence		
			criteria for Hb levels)		
		690	The effectiveness and cost-effectiveness of erythropolesis-stimulating agents (epoetin and darbepoetin) for treating cancer treatment-induced anaemia: There is a need for improved estimates of the impact of ESAs	Question not derived from the survey but from another source.	
			on tumour response and mortality; if these estimates are neutral or slightly beneficial it is plausible that	survey but from another source.	
			ESAs could be cost-effective.		
		691	The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents (epoetin and darbepoetin) for treating cancer treatment-induced anaemia: There should be assessment of the frequency of the key	Question not derived from the survey but from another source.	
			potential AEs related to ESA administration.	-	
		692	The effectiveness and cost-effectiveness of erythropoiesis-stimulating agents (epoetin and darbepoetin) for treating cancer treatment-induced anaemia: More data are needed to assess the impact of ESAs on HRQoL.	Question not derived from the survey but from another source.	
			Such studies should include the effect of ESAs on the EQ-SD.		
		604	The effectiveness and cost-effectiveness of ervthropolesis-stimulating agents (epoetin and darbepoetin) for	Question not derived from the	
		094	treating cancer treatment-induced anaemia: In addition to new trials it may be valuable to revisit the	survey but from another source.	
			Cochrane IPD meta-analysis7 and select studies that better fit 'licensed recommendations' with respect to		
		667	Hb criteria and dose administered. What are best regimes for managing immediate peri-operative anaemia in various common conditions e.g.	н	
			emergency laparotomy, hip fracture, distal femur fracture (could include Hb transfusion trigger or other		
		287	agents e.g. tranexamic acid) What cheaper alternatives are their to blood transfusion	NK	
		304	What are alternative options to a transfusion	в	
			What alternatives are there to blood transfusions	н	
DTtR18+	Are drugs an effective		Are we doing enough with patient blood management? IS IT TIME for a risk-adjusted, retrospective trial comparing "bloodless" and transfusion strategies in the UK?	B H NK	1. Ray S. Ray A. Non-survical interventions for treatine heavy menstrual bleeding (menorrhatia) in women with bleeding disorders. The Corbrane Database of Systematic Reviews. 2016/111/CD010338-CD.
510100	alternative to blood transfusion				1. Ray 3, Ray A. Non-subject interventions for treating free/yment/mail. Directly for the second general method in the second general method in the second general method. The second general method is the second general method is the second general method. Second general method is the second general method is the second general method is the second general method. Second general method is the second general method is the second general method is the second general method general method. Second general method is the second general method is the second general method gener
	for the prevention of bleeding in	661	Trials at Johns Hopkins, Baltimore, Englewood,NJ in USA and in Brussels,Belgium indicate that there are similar or better outcomes with equivalent lower costs in the bloodless care group. If this is correct research	NK	2016.
	patients undergoing surgery?		should be undertaken in the UK		3. Debborgh M, Hadjinicolau AV, Chaimani A, Trivella M, Vyas P, Doree C, et al. Alternative agents to prophylactic platelet transfusion for preventing bleeding in people with thrombosytopenia due to chronic bone marrow failure: a meta-analysis and systematic review. The Cachrane Database of Systematic Reviews. 2016/: 101:002035-CD.
		172	Are drugs that are known to reduce blood loss and transfusion such as aprotinin and tranexamic acid being	н	Locariane usuasase or systematic networks. Joint - UNI-CUID-UNI- CUID-UNI-C
		205	used appropriately in all suitable patients Novel haemostatic agents either given topically or intravenously to arrest haemorrhage	вн	of Systematic Reviews. 2016(-8):CD010982-CD.
			Optimisation of surgical patients using alternative techniques to avoid blood transfusion - in particular safe	вн	5. Karanth L, Barua A, Kanagasabai S, Nair S. Desmopressin acetate (DDAVP) for preventing and treating acute bleeds during pregnancy in women with congenital bleeding disorders. Cochrane Database of Systematic Reviews. 2015(-9):CD009824-CD.
			low levels of Hb Can drugs, such as desmopressin or tranexamic acid, be used instead of fresh frozen plasmaor platelets to		1. Hahn D, Esexobor CJ, Elserafy N, Webster AC, Hodson EM. Short-acting erythropoiesis-stimulating agents for anaemia in predialysis patients. The Cochrane Database of Systematic Reviews. 2017(-1):CD011690-CD.
			prevent bleeding for people undergoing invasive procedures?		2. Zhao Y, Jiang C, Peng H, Feng B, Li Y, Weng X. The effectiveness and safety of preoperative use of erythropoietin in patients scheduled for total hip or knee arthroplasty: a systematic review and meta-analysis of randomized controlled trials. Medicine. 2016;95(-27):e4122-e.
		729	Effectiveness of tranexamic acid in reducing blood loss during cytoreductive surgery for advanced ovarian	Question not derived from the	3. Zhang H, Zhang P, Zhang Y, Yan J, Dong P, Wang Y, et al. Effects of erythropoiesis-stimulating agents on heart failure patients with anemia: a meta-analysis. Postepy W Kardiologii Intervencyinej = Advances in Interventional Cardiology. 2016;12(-3):247-53.
			cancer. Implications for research: There is a need for an adequately sized, placebo-controlled trial with a well-defined protocol for blood transfusion and a protocol for evaluating tranexamic acid-related adverse	survey but from another source.	4. Voom VM, van der Hout A, So-Goman C, Viet Vielland TP, Nelssen RG, van den Akker-van Marle ME, et al. Erythropoeitin to reduce adjegeneic red blood cell transfusion in patients undergoing total hip or knee arthropatyt, Vox Singuinis. 2016. 5. ParkS, Fenaux P, Greenberg P, Mehris B, Callabahr F, Kim C, et al. Efficienzy and stely of darbegeourin alpha in patients with myeodoxplastic syndromes: a systematic review and meta-analysis. Birthis Journal of Heamatology. 2016.
			events to shed more light on the effectiveness of tranexamic acid given perioperatively to reduce blood loss		5. Park 3: pressure 9: Menta 4, Calignan 1, Kim 4, et al. ethicacy and safety or darbepedin apina in patients with myelosoppisatic syntromes: a systematic review and meta-analysis. Intrin Journal or Haematology. JULI 6. Missikar 4, Wook M, Miladinold C, Murar A, Dialbegovice. The role of into in the management of chemotherapy-induced anemia in cancer patients receiving enthropolesis: stimuliting agents. The Cohrane Database of Systematic Reviews. 2016;2):CD009524-CD.
			during cytoreductive surgery for advanced ovarian cancer.		7. Kang J, Park J, Lee JM, Park JJ, Choi DJ. The effects of erythropoiesis stimulating therapy for anemia in chronic heart failure: a meta-analysis of randomized clinical trials. International Journal of Cardiology. 2016;218:12-22.
		188	What are the risks and benefits of tranexamic acid when trying to avoid blood transfusion for hip fracture	RBH	8. French CJ, Glassford NJ, Gantrer D, Higgins AM, Cooper DJ, Nichol A, et al. Enthropoeis-stimulating agents in critically ill transma patients: a systematic review and meta-analysis. Annals of Surgery, January 2017, p 554–52.
			surgery?	J	9. Crathere L Huckey N, Haasva M, Snowill T, Jone-Hughes T, Hoyle M, et al. The effectiveness and cost-effectiveness of erythropolesis-stimulating agents (epoetin and darbepoetin) for treating cancer treatment-induced anaemia (including review of technology appraisal no.

		736	Fibrin sealants for the prevention of postoperative pancreatic fistula following pancreatic surgery.	Question not derived from the	142): a systematic review and economic model. Health Lectinology Assessment (Winchester, England). 2U1b;2U[-13]:1-588.
		/10	Implications for research: Further trials with low risk of bias and sufficient sample size are necessary to	survey but from another source.	10. Collister D, Komenda P, Hiebert B, Gunasekara R, Xu Y, Eng F, et al. The effect of erythropoietin-stimulating agents on health-related quality of life in anemia of chronic kidney disease: a systematic review and meta-analysis. Annals of Internal Medicine. 2016; 164(7):472-478. doi:
			assess various fibrin sealants (e.g. glue, patch) for preventing postoperative pancreatic fistula. Future trials		10.7326/M15-1839
			should report the rate and the grade of the postoperative pancreatic fistula according to the definition of		11. Christou G, Iyengar A, Shorr R, Tinmouth A, Saidenberg E, Maze D, et al. Optimal translusion practices after allogeneic hematopoietic cell transplantation: a systematic scoping review of evidence from randomized controlled trials. Transfusion. 2016.
			the International Study Group on Pancreatic Fistula (Bassi 2005). Future randomized trials should use		12. Xin H, Ge YZ, Wu R, Yin Q, Zhou LH, Shen JW, et al. Effect of high-dose erythropoietin on graft function after kidney transplantation: A meta-analysis of randomized controlled trials. Biomedicine & Pharmacotherapy. 2015;69:29-33.
			adequate methods of randomization and allocation concealment. Future trials need to employ blinding of participants and outcome assessors.		13. Wilhelm-Leen ER, Winkelmayer WC. Mortality risk of darbepoetin alfa versus epoetin alfa in patients with CKD: systematic review and meta-analysis. American Journal of Kidney Diseases. 2015;66(-1):69-74.
			participants and outcome assessors.		14. White N, Bayliss S, Moore D. Systematic review of interventions for minimizing perioperative blood transfusion for surgery for craniosynostosis. Journal of Craniofacial Surgery. 2015;26(1):26-36.
					15. Wang H, Zhang L, Jin Y. A meta-analysis of the protective effect of recombinant human erythropoietin (rhtPO) for neurodevelopment in preterm infants. Cell Biochemistry & Biophysics. 2015;71(2):795-802.
					16. Vlachopanos G, Kassimatis TI, Agrafiotis A. Perioperative administration of high-dose recombinant human erythropoietin for delayed graft function prevention in kidney transplantation: a meta-analysis. Transplant International. 2015;28(3):330-40.
					17. Potter LJ,Doleman B, Moppett IK. A systematic review of pre-operative anaemia and blood transfusion in patients with fractured hips. Anaesthesia. 2015;70(4):483-500.
					18. Markova V, Norgaard A, Jorgensen KJ, Langhoff-Roos J. Treatment for women with postpartum iron deficiency anaemia. Cochrane Database of Systematic Reviews. 2015(-8):CD010861-CD.
					19. Lopez E, Beuchee A, Truffert P, Pouvreau N, Patkai J, Baud O, et al. (Recombinant human erythropoietin in neonates: guidelines for clinical practice from the French Society of Neonatology). [French]. Archives de Pediatrie. 2015;22(-10):1092-7.
					20. Lindquist DE, Cruz JL, Brown JN. Use of erythropoiesis-stimulating agents in the treatment of anemia in patients with systolic heart failure. Journal of Cardiovascular Pharmacology & Therapeutics. 2015;20(1):59-65.
					21. Hogan M, Klein AA, Richards T. The impact of anaemia and intravenous iron replacement therapy on outcomes in cardiac surgery. European Journal of Cardio-Thoracic Surgery. 2015;47(2):218-26.
					22. Ferguson T, Xu Y, Gunasekara R, Lemer B, Macdonald K, Rigatto C, et al. The cost effectiveness of erythropoietin-initialiting agents for treating anemia in patients on dialysis: a systematic review. American Journal of Nephrology. 2015;41(2):88-97.
					23. Coronado DJ, Marti-Carojaj AJ, Aria Garcia A, Rodelo Ceballo JJ, Yomayus Gonziete N, Pee-Camo C, et al. Early versus debyse derythropoietin for the anaemia of end-stage kidney disease. Corbrane Database of Systematic Reviews. 2015(-12):CD011122-CD. 24. U.S. Ye Y, Yuan XI. Association boxes analytican analytican and analytican and analytican and analytican and analytican and analytican and analytican
					4. L 3.2, L 1 (1) tell n.n. resolution between angenetic or activation and an analysis in a particular provide studies of the state provide studies and an and a particular provide studies and a particular particular provide studies and a particular provide studies and a particular provide studies and a particular p
		79	The role and optimal use of alternatives like desmopressin/tranexamic acid to cover invasive procedures in	BH	2. rawsam z saume zv. eksigue z ciert i zema z sa uo autologos suod trainsissi species reque angeles unou rainsissi ni ruda inte animpasy: nice angel z zema za nice angel z zema za zema za zema za zema za zema za zema za zema zem
			sick patients		A hore with your with the second
			What is the evidence for systematic targeted preoperative haemoglobin optimisation reducing the rate of	н	Single in the rest of the r
		200	preoperative blood transfusion Effectiveness of various methods of improving Hb preoperatively.		9
			What are the best methods of preventing/ reducing haemorrhage during myomectomy?	BH	. Bajwa MS, Tudur-Smith C, Shaw RJ, Schache AG. Fibrin sealants in soft-tissue surgery of the head and neck: a systematic review and meta-analysis of randomised controlled trials. Clinical Otolaryngology : Official Journal of Ent-Uk ; Official Journal of Netherlands Society for Oto-
				Question not derived from the	Rhino-Laryngology & Cervico-Facial Surgery. 2017.
1		/48	Antifibrinolytic agents for reducing blood loss in scoliosis surgery in children. Implications for research: Evidence demonstrating reduced blood loss and less requirement for transfusion is based on very limited	Question not derived from the survey but from another source.	A memory and the set of the set o
			numbers of participants and is susceptible to publication bias. Therefore, larger studies are required to	survey but non another source.	3. Wang Z, Xiao L, Guo H, Zhao G, Ma J. The efficiency and safety of fibrin sealant for reducing blood loss in primary total hip arthroplasty: a systematic review and meta-analysis. International Journal of Surgery (London, England). 2016;37:50-7.
1			increase the robustness of our findings. Future studies should assess head-to-head comparisons of different		4. U J Li HB, Zhao XC, Qin L, Jiang XQ, Zhang ZH. A systematic review and meta-analysis of the topical administration of fibrin sealant in total hip and knee arthropiasty. International Journal of Surgery (London, England). 2016.
1			antifibrinolytic drugs to identify any differences in effectiveness or safety. Studies should also enrol more		5. Kayaalp C, Ertugrul I, Tolan K, Sumer F. Fibrin sealant use in pilonidal sinus: systematic review. World Journal of Gastrointestinal Surgery. 2016;8(-3):266-73.
1			patients with secondary scoliosis and should report results separately for this population. Optimal dosing		6. Gao F, Ma J, Sun W, Guo W, Li Z, Wang W. Topical fibrin sealant versus intravenous tranexamic acid for reducing blood loss following total knee arthroplasty: a systematic review and meta-analysis. International Journal of Surgery (London, England). 2016.
1			regimens have not been established; studies employing different regimens for the same agent will help to clarify this question. Although challenging, we also recommend that the long-term safety of antifibringlytic		7. Esposito F, Angileri FF, Kruse P, Cavallo LM, Solari D, Esposito V, et al. Fibrin sealants in dura sealing: a systematic literature review. PLoS ONE [Electronic Resource]. 2016;11(-4):e0151533-e.
			clarity this question. Although challenging, we also recommend that the long-term safety of antitibrinolytic drugs in children should be evaluated in view of safety concerns with some antifibrinolytic drugs when used		8. Edwards SJ, Crawford F, van Velthoven MH, Berardi A, Osei-Assibey G, Bacelar M, et al. The use of fibrin sealant during non-emergency surgery: a systematic review of evidence of benefits and harms. Health Technology Assessment (Winchester, England). 2016;20(-94):1-224.
1			arugs in children should be evaluated in view of safety concerns with some antifibrinorytic drugs when used in adults.		9. Cheng Y, Ye M, Xiong X, Peng S, Wu HM, Cheng N, et al. Fibrin sealants for the prevention of postoperative pancreatic fistula following pancreatic surgery. The Cochrane Database of Systematic Reviews. 2016(-2):CD009621-CD.
					10. Yang TQ, Geng XL, Ding MC, Yang MX, Zhang Q. The efficacy of fibrin sealant in knee surgery: A meta-analysis. Orthopaedics & traumatology, surgery & research. 2015;101(-3):331-9.
					11. Li ZJ, Fu X, Tian P, Liu WX, Li YM, Zheng YF, et al. Fibrin sealant before wound closure in total knee arthroplasty reduced blood loss: a meta-analysis. Knee Surgery, Sports Traumatology, Arthroscopy. 2015;23(-7):2019-25.
					12. Lee KT, Mun GH. Fibrin sealants and quilting suture for prevention of seroma formation following latissimus dorsi muscle harvest: a systematic review and meta-analysis. Aesthetic Plastic Surgery. 2015;39(-3):399-409.
					13. Weldrick C, Bashar K, O'Sullivan TA, Gillis E, Clarke Moloney M, Tang TY, et al. A comparison of fibrin sealant versus standard closure in the reduction of postoperative morbidity after groin dissection: A systematic review and meta-analysis. European Journal of Surgical Oncology.
					2014;40(11):1391-8.
					14. Wang H, Shan L, Zeng H, Sun M, Hua Y, Cai Z. Is fibrin sealant effective and safe in total knee arthroplasty? A meta-analysis of randomized trials. Journal of Orthopaedic Surgery. 2014;9(36).
					15. Orci LA, Oldani G, Berney T, Andres A, Mentha G, Morel P, et al. Systematic review and meta-analysis of fibrin sealants for patients undergoing pancreatic resection. [Review]. HPB. 2014;16(1):3-11.
					16. Liu J, Cao JG, Wang L, Ma XL. Effect of fibrin sealant on blood loss following total knee arthroplasty: a systematic review and meta-analysis. International Journal Of Surgery. 2014;12(2):95-102.
					17. Sanjay P, Watt DG, Wigmore SJ. Systematic review and meta-analysis of haemostatic and biliostatic efficacy of fibrin sealants in elective liver surgery. Journal of Gastrointestinal Surgery. 2013;17(4):829-36.
					18. Rousou JA. Use of fibrin sealants in cardiovascular surgery: a systematic review. Journal of Cardiac Surgery. 2013;28(3):238-47.
					19. Ding H, Yuan JQ, Zhou JH, Zheng XY, Ye P, Mao C, et al. Systematic review and meta-analysis of application of fibrin sealant after liver resection. Current Medical Research & Opinion. 2013;29(4):387-94.
					20. Dhillon S. Fibrin sealant (Evicel®, Quixil®/Crosseal): a review of its use as
DTtR18b	What are the best drug	733	Antifibrinolytic amino acids for upper gastrointestinal bleeding in people with acute or chronic liver disease. Implications for research: This updated Cochrane review has identified the need for well-designed,		1. Zhang P, Liang Y, Chen P, Fang Y, He J, Wang J. Combined application versus topical and intravenous application of tranexamic acid following primary total hip arthroplasty: a meta-analysis. Bmc Musculoskeletal Disorders. 2017;18(-1):90
	alternatives to blood transfusion		implications for research: This updated Cochrane review has identified the need for well-designed, adequately powered randomised clinical trials to assess the benefits and harms of antifibrinolytic amino	survey but from another source.	2. Xie J, Hu Q, Huang Q, Ma J, Lei Y, Pei F. Comparison of intravenous versus topical tranexamic acid in primary total hip and knee arthroplasty: an updated meta-analysis. Thrombosis Research. 2017;153:28-36.
1	to reduce the need and prevent		acids in people with upper gastrointestinal bleeding due to acute or chronic liver disease. According to		3. Wu Y, Yang T, Zeng Y, Si H, L C, Shen B. Tranexamic acid reduces blood loss and transfusion requirements in primary simultaneous bilateral total knee arthroplasty: a meta-analysis of randomized controlled trials. Blood Coagulation & Fibrinolysis : an International Journal in Hemmotiskis and Thromboxis. 2017
1	bleeding in no-surgical patients?		Brown 2006, questions such as the following could be answered using randomised clinical trials. What		
1			regimen is most effective: single or combined? When can intravenous antifibrinolytic regimens be switched		4. Watterson C, Beacher N, Preventing periperative bleeding in patients with inherited bleeding disorders. Evidence-Based Dentistry. 2017;18(-1):28-9.
1			to oral administration? The randomised clinical trials should include participant-relevant clinical outcomes		5. Togsone MF, Settines A, Ottesine B, Bergholt T. A systematic review and meta-analysis of the effect of prophylactic tranexamic acid treatment in major benign uterine surgery. International Journal of Gynaecology and Obstetrics: the Official Organ of the International Federation of Conservational Society (2014) 123-23
1			such as mortality, failure to control bleeding, and adverse events. Potential trials should be planned		Gynaecology and Obstetrics. 2017;136(-2):1267-7. 5 - Table 14. And T Lineards T. Explores resolution with transmission in the continuous and the continuous a
1			according to SPIRIT (Standard Protocol Items: Recommendations for Interventional Trials) statement (Chan		6. Takagi H, Ando T, Umemoto T. Seiture associated with tranexamic acid for cardiac surgery: a meta-analysis of andomized and non-andomized studies. The Journal of Cardiovascular Surgery. 2017 Aug;58(4):633-641 7. Mi B, Liu G, Zhou V, H, Liu Y, Zia K, et al. Intra-articular straneamic acid and cardiovascular is under anti-analysis of andomized and non-andomized studies. The Journal of Cardiovascular Surgery. 2017 Aug;58(4):633-641 7. Mi B, Liu G, Zhou V, H, Liu Y, Zia K, et al. Intra-articular straneamic acid and cardiovascular is under anti-analysis of andomized and non-andomized studies. The Journal of Cardiovascular Surgery. 2017 Aug;58(4):633-641 7. Mi B, Liu G, Zhou V, H, Liu Y, Zia K, et al. Intra-articular straneamic acid and cardiovascular st
1			2013a; Chan 2013b). The trials should be reported according to the CONSORT (CONsolidated Standards Of Reporting Trials) statement (Moher 2010), which helps in improving the quality of reporting of benefits and		7. Mi B, Liu G, Zhou W, Liv H, Liu Y, Zha K, et al. Intra-articular versis intravenous transamic acid application in total knee arthropastics a meta-analysis of randomized controlled trials. Archives of Orthopaedic and Trauma Surgery. 2017 Jul;137(1):937-1009. B. Mi B, Liu G, Liv Liu, Y, Zha K, Wu Q, et al. Is combined use of intravenous an intraarticular transamic transrolutar transarticar
1			herms in clinical research (Ioannidis 2004: Moher 2010). Trials should include participant-centred outcomes		8. MI B, Juu G, U M, Lui Z, Jua K, WU Q, et al. Is combined use of intravenous and intraarticular tranexamic acid superior to intravenous or intraarticular tranexamic acid alone in total knee arthropiasty? A meta-analysis of randomized controlled trials. Journal of Urthopaedic Surgery and Research 2017 Ard 18:21161. doi: 10.1186/s103108.017-0559-2.
1			such as mortality, re-bleeding, and serious and non-serious adverse events as recommended by the Patient-		and Meesarch. 2017 Apr 13;12[1]:b1. doi: 10.1189/13.018-017-059-2.9 9. Meena S, Benazo T, Dwived S, Ghiria M. Torgical versus intravenous tranexamic acid in total knee arthroplasty. Journal of Orthopaedic Surgery (Hong Kong). 2017 Jan;25(1):2309499016684300. doi: 10.1177/2309499016684300.
1			Centered Outcomes Research Institute (P-CORI) statement (Selby 2013; Frank 2014; Selby 2014).		9. meters 5, benazor F, owners 5, online av. topical versus intravenous transcenamic administration of transparatic adjust intravenous at a constant adjust intravenous transcenamic adjust interavenous transcenamic adjust interavenous transcenamic adjust interavenous transcenamic adjust
1					10. ULD X, ULD X ULD X,
1					marg x1-9-y-s to the IDENTIFY part of the IDENTIFY and IDENTIFY a
L					11. Lin, Lin, Lin, Zhao Ji, Wai S, Juang T, et al. Commones Lase of immersences and topical version intraventous and topical version intervention interventinterevention interventinterventinterventi
1		732	Tranexamic acid for preventing postpartum haemorrhage. Implications for research: Further research is	Question not derived from the	12. D c ong , long , lo
1			needed to examine the effects of TA on maternal mortality, severe morbidity and thromboembolic events.	survey but from another source.	15. Cient my, allo by, wang my, Qian Co, Qiu Z, et al. Comparison or the electiveness and safety or topical versus intravenous datexanic actum primary tocal kiele at thopiasty. a meteranarysis or randomized controlled unas. Journal or Ortopacity and nesearch. 2071;21(1):1.
1			Studies assessing TA for preventing PPH in high-risk women with placenta praevia, placental abruption, uterine rupture and other conditions causing PPH are important. Comparison of different doses of TA as		2007 J 2017 J 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1			well as prophylactic use of TA without prophylactic uterotonics is necessary, using large, well-designed		Surgery, 2017;82(3):605-17.
1			trials.		Date of the second s
		752	Antifibrinolytic drugs for acute traumatic injury. Implications for research: The knowledge that TXA safely	Question not derived from the	12. Employ (and provide and
1			reduces the risk of death from traumatic bleeding raises the possibility that it might also be effective in		Ty wan Z, Finny F, Buerry F, Barger Manuschart Control (1997) and the second of the se
1			other situations where bleeding can be life threatening or disabling and further research is warranted to		18. Yuan QM, Zhao ZH, Xu BS. Efficacy and safety of tranexamic acid in reducing blood loss in scoliosis surgery: a systematic review and meta-analysis. European Spine Journal. 2016.
1			explore this potential. Randomised trials involving patients with isolated traumatic brain injury (TBI) that		Lat. How Exp. and Sci. Integrity and Sci. Strateging and topical use of transcamic acid in spinal surgery: a systematic review. Global Spine Journal. 2005.
1			assess both mortality and disability outcomes are required before TXA can be recommended for use in these patients. The ongoing NCT01402882 trial with a planned sample size of 10.000 patients with TBI and		20. Weng K, Zhang X, Bi Q, Zhao C. The effectiveness and safety of tranexamic acid in bilateral total knee arthroplasty: A meta-analysis. Medicine. 2016;95(-39):e4960-e.
1			these patients. The ongoing NCT01402882 trial with a planned sample size of 10,000 patients with TBI and the planned trial of prehospital TXA in TBI (NCT01990768), will contribute to resolving the uncertainty about		21. Wang S, Gao X, An Y. Topical versus intravenous tranexamic acid in total knee arthroplasty: a meta-analysis of randomized controlled trials. International Orthopaedics. 2016.
1			the planned trial of prehospital TXA in TBI (NCT01990768), will contribute to resolving the uncertainty about the effects of TXA in this group.		22. Sun X, Dong Q, Zhang YG. Intravenous versus topical tranexamic acid in primary total hip replacement: a systemic review and meta-analysis. International Journal of Surgery (London, England). 2016.
					23. Simonazzi G, Bisulli M, Saccone G, Moro E, Marshall A, Berghella V. Tranexamic acid for preventing postpartum blood loss after cesarean delivery: a systematic review and meta-analysis of randomized controlled trials. Acta Obstetricia et Gynecologica Scandinavica. 2016;95(-

		727 Antifistinolytics (value analogues) for the prevention of Meeding in people with Asematological disorder. Implications for research. The only evidence available is for adults with acute Iralisema receiving in tool to yoo. These studies are receiving adult with the number of Asematological disorders who are thromoscycopies and usually require treatment with platelet transfusions and there are no ongoing studies that include children.	Question not derived from the	12.8-17. 2.5 Sin IS, Non R, Lee HN, Park SH, Lee DH, Intraemous versus topical transmark: acid administration in primary total have athropistry: a meta-analysis. Gree Surgery, Sports Traumatology. Arthroscogy: Official Journal of the Euka. 2016. 25. Sin US, Non R, Lee HN, Park SH, Lee DH, Intraemous versus topical transmark: acid administration in primary total have at hore arthropistry: a meta-analysis of randomized controller trails. International Journal of Surgery (London, England). 2016. 25. Sin US, Non R, Lee HN, Park SH, Lee DH, Hortzemous versus topical transmarks acid in controlling trains. The Contrane Database of Systematic Review. 2016(11):000331-C0. 27. Printsry, Concerg, P, Salaura CA, Accielli R, Antiffichinohytic therapy to reduce havenophysis from any cause. The Contrane Database of Systematic Review. 2016(11):000331-C0. 28. Marphy CG, Baces JL, Ban A, The efficacy and safety of transmatic acid in cranio-maxiliotical and plastic surgery. The Journal of Canindocial Surgery. 2015;27(2):374-9. 20. Marphy CG, Baces JL, Ban A, The efficacy and safety of transmatic acid in cranio-maxiliotical and plastic surgery. The Journal of Canindocial Surgery. 2016;27(2):374-9. 20. Marphy CG, Baces JL, Ban A, The efficacy and safety or transmatic acid in cranio-maxiliotical and plastic surgery. The Journal of Canindocial Surgery. 2016;27(2):374-9. 20. Marphy CG, Baces JL, Ban A, The efficacy and safety or transmatic acid in reactions glaves or transmatic acid alone and control groups for Mold loss controlling after total kee arthropasty: a meta-analysis. European Spine Society, the European Spine Society,	
DtTr19	What is the optimal combination		NK	NICE Guideline Recommendations 1-5: Alternatives to blood transfusion for patients having surgery: Oral iron, IV iron and erythropoietin	Ŷ
	of drug alternatives and clinical	284 Why is bloodless surgery see in a negative light? 501 Would not blood conservation and bloodless surgery be the aim for all surgeons wanting to give their	NK NK	1.Do not offer erythropoietin to reduce the need for blood transfusion in patients having surgery, unless: the patient has an apenna and meets the criteria for blood transfusion. blocket of englips bleifs or other reasons or	
	procedures to enable surgery without the use of allogeneic	patients the best possible outcome?	NK.	 the appropriate blood type is not available because of the patient's red cell antibodies. 	
	blood?	253 Does improving Hb preoperatively improve outcomes? 415 Why use donated blood for pre-arranged elective surgery when safe alternatives are available?	H NK	2. Offer oral iron before and after surgery to patients with iron-deficiency anaemia. 3. Consider introvenous iron before or after surgery for patients who:	
				have iron-deficiency anaemia and cannot tolerate or absorb oral iron, or are unable to adhere to oral iron treatment (see the NICE guideline on medicines adherence)	
DtTr21	Which patients groups would benefit most from artificial	753 Trial of synthetic RBC substitutes vs PRC 447 where is the development of artificial blood and blood products?	RBH	No SR evidence available	N
	blood* products? *Artifical	584 Are there substances that can be used to avoid blood transfusion	RBH		
	blood ois a product made to act	593 Is there research going on into artificial blood replacement? Not just ectoplasm but whole blood or RBC?	BH		
	as a substitute for red blood cells	Is 609 Has there been any successful research in the production of a laboratory manufactured blood replacement	вн		
	wiothj the sole purpose of	2	511		
	transporting oxygen and carbon	533 Can other products replace blood? 511 What is the progress on the current research into manufactured red cells?	H PR		
	dioxide throughout the body.	511 What is the progress on the current research into manufactured red cells? 512 What is the future for factory produced red cells?	вн		
		461 How accessible are blood transfusion alternatives?	NK		
		324 How close are we to 'artificial' blood components so we don't have to rely on donors anymore	R B H		
		473 How can alternatives to blood transfusions be made more freely available? 474 How do we develop artificial blood products?	NK		
		4/4 How do we develop artificial blood products? 491 Are there any synthetic alternatives so that one does not have to donate?	BH PBH		
		431 Do you see any promise of a safe artificial oxygen carrying agent to replace RBC transfusion soon?	Jehovah's Witness		
		432 Is there a likely hood of modified Haemoglobin products come into UK practice in the near future?	NK		
		357 Is there an alternative to human blood products 360 Why are we not investing more in blood substitutes?	RBH		
		285 Are there government funded projects to promote bloodless alternatives?	NK		
		282 Will viable blood substitutes be available in the near future?	NK		
		262 Are non-blood oxygen carrying fluids a viable option?	н		
		231 Can we use synthetic agents to carry oxygen in the blood until the body is able to manufacture its own red cells and therefore avoid the need for interhuman transfusion	н		
		86 Have you considered alternatives to blood ?	NK		
		88 With the advancement of science has there been true research into alternative's) to blood , considering the hidden implications associated with blood?	NK		
		13 What are developments in artificial blood currently?	RBH		
	Is frozen plasma effective for the	Pe 712 Fresh frozen plasma for cardiovascular surgery. Implications for research: Further adequately powered Qu		1. NICE Guideline Recommendations:	Ŷ
	prevention of bleeding in	studies of FFP are required to assess whether larger reductions in prothrombin time translate into clinical sur benefits, including mortality reduction. These studies should carefully consider the most appropriate	urvey but from another source.	Fresh freep plasma: thresholds and targets 30. Only consider free fraces plasma transfusion for patients with clinically significant bleeding but without major haemorrhage if they have abnormal coagulation test results (for example, prothrombin time ratio or activated partial thromboplastin time ratio above 1.5).	
	patients undergoing invasive	schedule and dose for administration of FFP. There is clinical interest in the role of alternative comparable		3. Do not offer fresh fozen plasma transfusions to correct abnormal coggulation in patients who:	
	procedures or surgery and if so what dose is required?	undertaken to evaluate any prophylactic role. There is insufficient evidence to inform any positive		 are not bleeding (unless they are having invasive procedures or surgery with a risk of clinically significant bleeding) 	
		therapeutic role of FFP, which is an important gap in the research agenda (Desborough 2012).		 need reversal of a vitamin K natagonist. 23. Consider prophyticals (resh frace pairs lasm transfusions for patients with abnormal coagulation who are having invasive procedures or surgery with a risk of clinically significant bleeding. 	
		157 Among preterm infants with abnormal coagulation in the first few days following birth (P), does the	вн	na n	
		administration of fresh frozen plasma (or cryoprecipitate) (O), compared with not administering fresh frozen		Fresh freezen plasma: doese	
		plasma (or cryoprecipitate) ©, reduce the risk of intraventricular haemorrhage and poor neurodevelopmental outcomes (O)?		33. Reassess the patient's clinical condition and repeat the coagulation tests after fresh frozen plasma transfusion to ensure that they are getting an adequate dose, and give further doses if needed.	
		688 KEY NICE GUIDELINE RESEARCH RECOMMENDATION: QJ	Question not derived from the	2. Levy JH, Grottke O, Fries D, Kozek-Langenecker S. Therapeutic plasma transfusion in bleeding patients: a systematic review. Anesthesia and Analgesia. 2017;124[-4]:1268-76.	
		FFP: What dose of fresh frozen plasma is most clinically effective at preventing bleeding in patients with abnormal haemostasis who are having invasive procedures or surgery?	urvey but from another source.	3. Marietta M, Franchin M, Bind ML, Picardi F, Ruggeri M, De Silvestro G. Is solvent/detergent plasma better than standard fresh-froen plasma? A systematic review and an espert consensus document. Biood Translusion [Translusion eDel Sangue] 2016:1-9. 4. Hall DP. Escource U, Doree C, Hoegewin E, Streish A, Wahl ST. S Hans Translusions prior to insertion of central lines for people with abnormal coogulation. The Cochran eDatabase of systematic Review. 2016;1:9:001759:COU.35.	
				4. Hall UPL stcourt LL Doree C, hopewels J, inveita M, Walan LS, Hasma transitionis pror to insertion or central lines for people with abnormal coaguation. In Le contraine utabase of systematic Reviews. 2016;91:201115-6-LU. S. Chai-Addisabord, Altillis C, Signal M, Movilla R, Hedde N, Jorio A, et al. Profitmohina complex concentrates versus fresh forcen plasma for variani reversal. A systematic review and meta-analysis. Thrombois and MH Heamotasis. 2016;116(-4).	
			Question not derived from the urvey but from another source.	6. Shah A, Stanworth SJ, McKechnie S. Evidence and triggers for the transfusion of blood and blood products. Anaesthesia. 2015;70[Suppl 1]:10-9, e3.	
		require insertion of a central venous catheter (CVC). The question of whether prophylactic plasma		7. Desborough M, Sandu R, Brunskill SJ, Doree C, Trivella M, Montedori A, et al. Fresh frozen plasma for cardiovascular surgery. Cochrane Database of Systematic Reviews. 2015(-7):CD007614-CD.	
		transfusion is indicated remains unanswered. An adequately-powered trial which is able to recruit sufficient number of participants to address this is required. The ongoing trials that are due to be completed by			
		February 2018 will be unable to answer the primary questions of this review because the studies are too		1. Wikkelso A, Wetterslev J, Moller AM, Afshari A. Thromboelastography (TEG) or rotational thromboelastometry (ROTEM) to monitor haemostatic treatment in bleeding patients: a systematic review with meta-analysis and trial sequential analysis. Anaesthesia. 2017.	
		small. To detect a doubling in the number of participants with major bleeding from 1% to 2% would require a two-arm study with over 4600 participants; the three ongoing studies are only planning to recruit 355		2: Fahrendorft M, Oliveri KS, Johnsson PI. The use of viscolastic haenostatic assays in gala-directing treatment with allogeneic blod products - a systematic review and meta-analysis. Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine. 2017;25(1):39- 3). Widekio A, Wetterievie V, Moler AM, Ahdria A. Tsomobadstorgaber (TGG) thrombodstatometry (FIGTM) on monitoria treatment versus usual care in adults or children with breeding. The Cochrane Database of Systematic Review. 2016;3(5):0007871-CD.	
		participants in total.		4. Veigas PV, Callum J, Rizoli S, Nascimento B, da Luz LT. A systematic review on the rotational thrombelastometry (ROTEM(R)) values for the diagnosis of coagulopathy, prediction and guidance of blood transfusion and prediction of mortality in trauma patients. Scandinavian	
		103 What is the best treatment for coagulopathy - FFP or PCC?	н	Journal of Trauma, Resuscitation and Emergency Medicine. 2016;24(-1):114	
1		and which is the bear or definition for coagolopating " PPP of PCC?		5. Jensen NH, Stensballe J, Afshari A. Comparing efficacy and safety of fibrinogen concentrate to cryoprecipitate in bleeding patients: a systematic review. Acta Anaesthesiologica Scandinavica. 2016.	

			ef Could transfusion of plasma be minimised by using a more appropriate testing algorithm in the laboratory?	и	 K. White, P. A. M. Werkwood, M., Ranco, IC, Ryder, S., Amstrong N, et al. Viscoelastic point-of-care testing to assist with the diagnosis, management and monitoring of haemostasis: a systematic review and cost-effectiveness analysis. Health Technology Assessment (Winchester, Signal 2015;19:238. T. Stamuerth S. Cury N, Woolley T, Cooper C, UkoumuneO, et al. Thromboelastography (TEG) and rotational thromboelastometry (ROTEM) for trauma-induced coagulopathy in adult trauma patients with bleeding. Cochrane Database of Systematic Reviews. 2015;12:001094. Bahers K, Wirtz MR, von Dieren S, Goolings JC, Juffermans NP. Risk factors for trauma-induced coagulopathy and transfusion-associated multiple organ failure in severely injured trauma patients. Frontiers in Medicine. 2015. 	
DTF24	Dees the use of oral or intravenous iron for patients with iron deficiency anaemia reduce the need for some transfusions?	2 77 11 21 24 60	 Be ride of unin it the management of demoltrange violated assemble is carcer patients receiving explorations interacting agents. Implementation are submore, Nonetheless, device tables are explorable interacting agents. Implementation are submore. Nonetheless, detects and is no applementation are submore indexed by the submore intervention and an applementation are submore indexed by the submore intervention and an applementation. Boos use of pre-optice procedure is iron in iron deficient patients, improve clinic outcomes and refuge patients. The submore revents the height of applementation. Boos use of pre-optice procedure is iron in iron deficient patients, improve clinic outcomes and refuge patients and the impact of iron. Boos use of pre-optice procedure is iron in order deficient patients, improve clinic outcomes and refuge patients and the instead of applementation. Boos advantation is not patient and a submore instead of meeting a transfusion in the setting of a normal latents in the applementation to induce defirmal band deficiency and/or assemia in blood donors. De submore interve prime proceedings is a submore outcome? De submore interve prime proceedings in the opticity and applementation patients and the makes are table and applementation in the optical patients and applementation are evaluation and the setting of a normal patient proceeding patients and the patients and applementation are proved outcome? De submore interve prime interve prime interve outcome? De submore interve prime interve outcome? De submore interve prime interve outcome? Devaluate differ any tronghy boundant the certand and applementation interve outcome?<!--</th--><th>H H Guestion not derived from the survey but from another source. B H H H Guestion not derived from the survey but from another source.</th><th>Nex Guideline Recommendations: Alternatives to Diverse and after surgery to patients having surgery. Chai ron, W Yon and erythropoieth 2. Office or all ron before and after surgery to patients with: inon-deficient surgery to patients with: inon-deficient surgery to patients with: inon-deficient surgery to patients with: inon-deficiency = red Gagnood with Inon-deficiency anemia in gateria structure in Inon supplementation for the reatment of Inon deficiency anemia in patients with Ininflammatory bowel disease. Alimentary Charlen A, Byth R. Bedore INI, Signood With Reverse With Indones metaling and Inon supplementation for the treatment of anemia in COD in updated systematic review and meta-analysis. American Journal of Kidney Disease : the Official Journal of the National Kidney Foundation. 2016. 3 Shah, Roy N, Kickerle S, Done C, Toler SJ, Samon KJ. Iron supplementation for tert samement of anemia in COD in updated systematic review and meta-analysis. Replicingl. 2015. 59: 29:2011;306. 4 Gapono C, Venturin S, Mereggala M, Ammifero M, Tarricone R. Efficas and series of deficion systematic review and meta-analysis. Replicing Carlon, VL, 2016. 4 Gapono C, Venturin S, Mereggala M, Ammifero M, Tarricone R. Efficas and engline of demondarysis a systematic review and meta-analysis. Replicingl Carlon, VL, 2016. 5 Gala C, Wei B, Ding W, Wai K, Wai N, Houdowin K, Kumar A, Djuleogue K, Erre of Orin In the management of demondarysis a systematic review and meta-analysis. Carlon Durato deficience analysis. Ca</th><th>v</th>	H H Guestion not derived from the survey but from another source. B H H H Guestion not derived from the survey but from another source.	Nex Guideline Recommendations: Alternatives to Diverse and after surgery to patients having surgery. Chai ron, W Yon and erythropoieth 2. Office or all ron before and after surgery to patients with: inon-deficient surgery to patients with: inon-deficient surgery to patients with: inon-deficient surgery to patients with: inon-deficiency = red Gagnood with Inon-deficiency anemia in gateria structure in Inon supplementation for the reatment of Inon deficiency anemia in patients with Ininflammatory bowel disease. Alimentary Charlen A, Byth R. Bedore INI, Signood With Reverse With Indones metaling and Inon supplementation for the treatment of anemia in COD in updated systematic review and meta-analysis. American Journal of Kidney Disease : the Official Journal of the National Kidney Foundation. 2016. 3 Shah, Roy N, Kickerle S, Done C, Toler SJ, Samon KJ. Iron supplementation for tert samement of anemia in COD in updated systematic review and meta-analysis. Replicingl. 2015. 59: 29:2011;306. 4 Gapono C, Venturin S, Mereggala M, Ammifero M, Tarricone R. Efficas and series of deficion systematic review and meta-analysis. Replicing Carlon, VL, 2016. 4 Gapono C, Venturin S, Mereggala M, Ammifero M, Tarricone R. Efficas and engline of demondarysis a systematic review and meta-analysis. Replicingl Carlon, VL, 2016. 5 Gala C, Wei B, Ding W, Wai K, Wai N, Houdowin K, Kumar A, Djuleogue K, Erre of Orin In the management of demondarysis a systematic review and meta-analysis. Carlon Durato deficience analysis. Ca	v
	In patients with an acquired bieeding disorder what are the best drug alteratives * to blood transfusion to prevent or treat bieeding?	72	Bould are use more into/spot therapy in ICUL rather than transfusions? Del a healty wommer induces to have a blood transfusion percenting and the transfusion of the transfusin the transfusion of the transfusin the transfusion of the	B H B H Question not derived from the survey but from another source.	1. National Guideline Recommendations: Prothomonic complex concentrate: thresholds and targets 3. Cofer immediate prohomonic nomplex concentrate: thresholds and targets 3. Other immediate prohomonic nomplex concentrate transfusions for the emergency reversal of warfarin anticoagulation in patients with either: 4. Secret beginning and the production transmert in prode who have a stroke and a primary intraceebral baemorrhage, see recommendation 1.4.2.8 in the NICE guideline on the initial diagnosis and management of stroke. 4. Consider immediate prohombin complex concentrate transfusions for ensure warfarin anticoagulation in patients having emergency surgery, depending on the level of anticoagulation and the bleeding risk. 4. Monitor the international normalised ratio (INR) to confirm that warfarin anticoagulation has been adequadery reversed, and consider further prothombin complex concentrate transfusions for some and infants with bleeding or risk of bleeding: a systematic review and meh -analysis. European Journal of Pediatrics. 2017.	Y
		13	How may factor concentrates be optimally used to avoid administration of large volumes of FFP when attempting to prevent (or treat) bleeding in patients with a coagulopathy? JA fer factor and fibringen concentrates safer than blood products to treat coagulapathies? How can we use clotting factors to reduce the need for donor blood?	H NK	2. Zeng L. Johanna Y. Zhang L. Un yan J. Theochemics of protoriomati compets concentrate (vsc) in relevance and in mass with beering or not sol beering as you beering and in relevance and in mass and beering or not sol beering as you beering and as a you beering and as you beering and as you beering and as a you beering a	

		736 Porthermöles complex concentrate for revental of tutanis K antagenist tratament in bleeding galaxies. Implications for rescale 2014. Beeding galaxies. Implications for rescale. Further trials arguinty needed, and galaxies exploses and increase power to show differences in patient-relevant clinical outcomes (i.e. montality).	survey but from another source.	 Special Li U, Ayagari R, Durch N, Mass Erriquez M, Xang Q, et al. Matching-adjusted indext comparison of effexacy of BAY 81-8971 or two combinant factor VIII for the prophydicity treatment of sevene hemophilia A. Journal of Biod Medicine 7:2497, 2016. 2016. Shinget-Castelland M, Kavaz-Bonna MT, Lipez-Fernandez MF, Roac CA, Himyé MJ, Imeers-Yuat V, et al. Spanth consinus guidelines on prophysics with hypasing agent for surgery in patients with hemophilia and inhibitor. European Journal of Haematology. 2016;96(- 5):461-74. Jennes MJ, Shenshale J, Afshari A. Comparing efficacy and safety of Ebringen concentrate to cryprecipitate in bleeding patients: a systematic review. Acta Anaesthesiologics Scandinvice. 2016. Forninaby K, Mepomiabchili VA, Lonivorotov W, Monaco F, Wiello C, Zanglilo A, et al. Efficacy and safety of Ebringen concentrate in surgical patients: a meta-analysis of randomized controlled trials. Journal of Cardiotonacic and Vascular Anesthesia. 2016 04:30(5):1196- 40. doi: 10.1053/1196- 30. D Minno NM, Ambrouino P, Myasoedova VA, mato M, Ventre I, Temoli E, et al. Recombinant factor VIII (aptaog aff a activated, Noodbeer (R)) in patients with rare congenital bleeding diorders. A systematic review on its use in surgical procedures. Current Pharmacechical Degrap 2016. Do Minno NM, Ambrouino P, Myasoedova VA, anato M, Ventre I, Temoli E, et al. Recombinant factor VIII (aptaog aff a activated, Noodbeer (R)) in patients with rare congenital bleeding diorders. A systematic review. Jb Database of Systematic Reviews. 2016;41(2):114-38. Do Minno MJ, Ambrouino P, Myasoedova VA, anato M, Ventre I, Temoli E, et al. Recombinant factor VIIIa in patients affection blum force trauma compared with penetrating trauma: a systematic review. Jb Database of Systematic Reviews. 2016;41(2):10202055 CD. Debolong MM, Kotori L, Media M, Moylei R, Heide N, Joro A, et al. Afterothy active servise finder forem prophysiciti (platelet transfus	
DtTr28	How cost effective is cell salvage* for the avoidance of	67 How can we use cell salvage to reduce the need for donor blood? 703 Cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion: What are the	H Question not derived from the	NICE Guideline Recommendations: Alternatives to biodor transfusion for patients having surgery: Cell salvage and transcamic acid	Y
	transfusion of donor blood	wider economic costs and benefits of alternative autologous techniques?	survey but from another source.	8. Do not routinely use cell salvage without tranexamic acid.	
	during major surgery?	76 Are we using Autologous blood systems efficiently?	703	9. Consider intra-operative cell salvage with tranexamic acid for patients who are expected to lose a very high volume of blood (for example in cardiac and complex vascular surgery, major obstetric procedures, and pelvic reconstruction and scoliosis surgery).	
	-	80 Allogeneic blood is a precious and life saving resource, but need to be used wisely and only in situations	н	Other refs:	
		where it is unavoidable. There are many situations where 'cell salvage' can be used to minimise the use of		Liu JM, Fu BQ, Chen WZ, Chen JW, Huang SH, Liu ZL Cell salvage used in scollosis surgery: is it really effective? World Neurosurgery. 2017. May:101:568-576	
		allogeneic blood but is not currently in wide practice. How can we ensure that this 'recycling' of split blood is encouraged.		2. Xie JW, Xu B, Kang PD, Zhou ZK, Shen B, Yang J, et al. [The efficacy and safety of postoperative retransfusion drain following total hip arthroplasty: a meta-analysis]. Zhonghua Wai Ke Za Zhi [Chinese Journal of Surgery]. 2016;54(-2):108-13.	
		177 Is there a risk of disseminating micrometastases when reinfusing cell saved blood	н	 Xie H, Pan JK, Hong KH, Guo D, Fang JL, Yang WY, et al. Postoperative autotransflusion drain after total hip arthroplasty: a meta-analysis of randomized controlled trials. Scientific Reports. 2016 Jul 15:27461. doi: 10.1038/rep27461 A Stone N, Safanda V, Missiana P. Indications and automace of cell saver in addicents outspices are submatrix review. Spins. 2017 Win 15:26(3):E3182:370. doi: 10.1038/rep20180. 	
		190 Can the use of cell salvage be expanded?	н	a. some n, sandara v, misular v. minutations and outcomes or cent sever in addressent scalinos correction suggery: a systematic review. Spine. 2017. With 3;42(b):2305-337.0. doi: 10.1097/jhS00000000017.00.	
	-	209 Why the current cell savers are not efficient enough to avoid blood transfusion 245 How do we promote cell salvage so it is routine	BH RBH	6. Pan JK, Hong KH, Xie H, Luo MH, Guo D, Liu J. The efficacy and safety of autologous blood transfusion drainage in patients undergoing total knee arthroplasty: a meta-analysis of 16 randomized controlled trials. Binc Musculoskeletal Disorders. 2016;17(-1):452	
	-	279 How can cell salvage be better resourced within hospitals? (Money and trained staff)	NK	7. Meybohm P, Choorapoikayii S, Wessels A, Herrmann E, Zacharowski K, Spahn DR. Washed cell salvage in surgical patients: a review and meta-analysis of prospective randomized trials under PRISMA. Medicine. 2016;95(-31):e4490-e.	
		445 How can cell salvage machines be adapted for low income countries? (e.g. simplified, battery back-up,	в	8. Hong RD, Pan JK, Yang WY, Luo MH, Xu SC, Lui J. Comparison between autologous blood transluoin and closed-autoin admanged in total knoe anthroplasty: a meta-analysis. Bmc Musculoskeleal bicorders. 2016;17(-1):142- 9. Barlet J. Cominsky E, Li Dimasso KJ, Major castro LJ, Lundon G. De Lux AH, et al. Auto enconvoluence incluses allogeneir celd biol cell surgery: a systematic review and meta-analysis of anadimized trais. Ameta-Biologue 2017	
	-	works in high temperatures)) 454 How can we make cell salvage better for major haemorrhage situations	вн	3. ballet, promissing on runnassing virginization de cuica my et al. Acute normovolenne nerioduluon reduces angerier, red dood cen transission in cardiae surgery, a systematic revew and meta-analysis or andomized material and surgery. a systematic revew and meta-analysis or andomized material and surgery a systematic revew and meta-analysis or andomized material and surgery. a systematic revew and meta-analysis or andomized material and surgery a systematic revew and meta-analysis or andomized material and surgery a systematic revew and meta-analysis or andomized material and surgery a systematic revew and meta-analysis or andomized material and surgery a systematic revew and meta-analysis or andomized material and surgery and second seco	
	-	454 How can we make cell salvage better for major naemormage situations 687 Post-operative cell salvage: For patients having cardiac surgery with a significant risk of post-operative	B H Question not derived from the	10. Zhou X, Zhang C, Wang Y, Yu L, Yan M. Preoperative acute normovolemic hemodilution for minimizing allogeneic blood transfusion: a meta-analysis. Anesthesia & Analgesia. 2015;121(-6):1443-55.	
		blood loss, is post-operative cell salvage and reinfusion clinically and cost effective in reducing red blood cell	survey but from another source.	11. Xie J, Feng X, Ma J, Kang P, Shen B, Yang J, et al. Is postoperative cell salvage necessary in total hip or knee replacement? A meta-analysis of randomized controlled trials. International bournal Of Surgery. 2015;21:135-44.	
		use and improving clinical outcomes, compared with existing practice		12. White N, Bayliss S, Moore D. Systematic review of interventions for minimizing perioperative blood transitionion for surgery for cranisoponotosis. Journal of Craniofacial Surgery. 2015;26(1):26-36. 13. U. J. Sun S, Tan N, Yan K, U. B. U. L. O classing in emergency trauma surgery. Contrace Databased O Systematic Reviews. 2015(1):2007379:C0.	
	-	700 Cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion: Are	Question not derived from the	Lis Grand Schmann, M. Prignan K. Stoffer Schwarz and Schwarz and Schwarz Schwar Schwarz Schwarz Sch	
		combinations of autologous blood transfusion techniques feasible, effective and cost-effective?	survey but from another source.		
	-	506 Could the volume of blood collected with cell salvage machines be improved so that it would be worth	PRBH		
		using this tool for more operations?			
		514 Can more research be done into cell saver technology as standard rather than relying on donation	РН		
	-	702 Cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion: What are the	Question not derived from the		
		long term effects of transfusion on survival and the long-term effects of the serious hazards of transfusion on survival, health status and health related quality of life?	survey but from another source.		
		on survival, nearth status and nearth related quality or line?			
		612 Cell Saver technique, is it proven method of reducing bank blood transfusions ?	BH		
		696 Cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion: What are the benefits clinically and as regards patient preferences of avoiding allogeneic blood transfusion by giving	Question not derived from the survey but from another source.		
		autologous transfusion instead?			
		697 Cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion: (as addendum to the research recommendation) Do these benefits vary by procedure, timing and technique of	Question not derived from the survey but from another source.		
		cell salvage?			
		698 Cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion:	Question not derived from the survey but from another source.		
		745 Cell salvage in emergency trauma surgery. Implications for research: We identified only one study that met the inclusion criteria for this review. In the future, multicentre, methodologically rigorous trials are needed	Question not derived from the survey but from another source.		
		to assess the relative efficacy, safety and cost-effectiveness of cell salvage in different surgical procedures.	survey but from another source.		
		699 Cell salvage and alternative methods of minimising perioperative allogeneic blood transfusion: Is acute normovolaemic haemodilution more effective and cost-effective than cell salvage?	Question not derived from the survey but from another source.		
DtTr29	How should mpatients who	464 What alternatives can be used to replace blood transfusion in Jehovah's witness patients who have sudden blood loss due to cardiac cath lab complications?	н	1. Han 53, Kim HJ, Kim TK, In Y, Oh KJ, Koh IJ, et al. Computer navigation is effective in reducing blood loss but has no effect on transfusion requirement following primary total knee arthroplasty: a meta-analysis. Knee Surgery, Sports Traumatology, Arthroscopy : Official Journal of the Festa 2016.	N
	refuse blood transfusion be managed?	blood loss due to cardiac cath lab complications? 455 how useful are coagulation factors without blood transfusion for Jehovah's witnesses	вн	ine tssa. zuto.	
	managed ?	87 What alternatives do you offer to people who do not wish to have a blood transfusion?	NK		
		637 Is it now time for retrospective controlled trials to be undertaken in the UK comparing patients who have	Jehovah's Witness		
		refused blood transfusion in comparison with those in matching capacities who were transfused?			
		466 What alternatives to blood transfusion are best to treat sudden blood loss, in Jehovah's Witness patients,	н		
		due to cardiac cath lab complications? 652 What safe alternatives are available for patients who do not want to receive blood transfusions	н		
		654 What safe alternatives exist for patients who do not want, or cannot receive, blood transfusions?	вн		
		756 Benefits from non-blood transfusion-alternative treatment	н		
A1	What is the best administrative	23 How can modern technology e.g. apps for patients/healthcare professionals improve the transfusion	н	1. NICE Guideline Recommendation: Electronic patient identification	Y
	process for hospital blood	process ?		12. Consider using a system that electronically identifies patients to improve the safety and efficiency of the blood transfusion process.	
	transfusion to keep patients safe	434 Why do you have to replicate all the info about blood transfusions on two separate forms that repeat the same information	RBH	Scille Martine Control Charles Control Control of the Annual Martine Control of State (1971)	
	and minimises delay?	232 Can we rationalise the requesting process to reduce delays in urgent situations	н	2. Sellen KM, Jovanović A, Perrier L, Chignell M, Systematic review of electronic remote blood issue. Vox Sanguinis. 2015;109(1):13-24 J. Manning N, Heddell NM, Andol G, Vorahter MA, Segala D. Interventions to revidue blood issue. Vox Sanguinis. 2015;109(1):13-25 J. Manning N, Heddell NM, Andol G, Vorahter MA, Segala D. Interventions to revidue blood issue brank blood issue. Vox Sanguinis. 2015;109(1):13-25	
		332 Is it possible to design a "reminder" for staff regarding component times for transfusion that is easy to access and carry?	н	4. Manning M, Hedde N, Annold D, Crowher MA, Segal DM. Interventions to reduce blood loss from laboratory testing in critically all produces and the second	

		271 How can we be sure there are no errors in blood product delivery?	PBH	6. Coustass of the Decision of	
		How can the experience of blood transfusion for mothers during/after labour be improved? Is there a more efficient way of networking to support optimal use of blood bank supplies than our existing	NK PRBH		
		141 is there a more emicient way or networking to support optimal use or blood bank supplies than our existing methods	РКВН		
	-	240 How to maintain safety for recipients of blood and blood products	вн		
		274 Why do we (West Yorkshire) need a second patient checker when areas in Scotland don't	PRBH		
		351 Is the procedure for prescription through to administration of a transfusion standardised across all NHS	Р		
	-	trusts? 372 How can we reduce lengthy stays in hospital due to transfusion?	вн		
	ł	372 How can we reduce renging stays in hispital due to transitision? 375 How do we ensure patient safety individually and collectively in blood transfusion ?			
	-	379 How do we change patient subcy individually and concerney in bood runningion 1 379 How safe is it for a patient to have a transfusion in their own home rather than travel to the hospital?	вн		
		421 why does each trust have a different transfusion record	BH		
		594 Why is there not a universal procedure when administering prescribed blood products, documentation often differs in other health boards.	н		
	-	orten differs in other nealth boards. 596 How can patients receiving a transfusion experience a higher rate of safety?	RB		
	t i i i i i i i i i i i i i i i i i i i	622 Avoid transfusion errors	PRH		
	t i i i i i i i i i i i i i i i i i i i	645 Do the control measures designed to ensure 'safe blood' have an evidence base or are some based on	R B H		
		assumption of risk?			
	-	256 Are there any strategies to reduce the development of Abs in Tx dependent patients?	RBH		
	-	436 Improving safety of community transfusions (with aim to reduce acute hospital bed use) 489 How can we improve communication between hospitals for patients needing special requirements?	РВН		
		485 How can we improve communication between nospitals for patients needing special requirements?	ren		
		275 Why don't patient ID wristbands have barcodes/ matrix to be scanned instead of second checker	PRBH		
	-	298 What checks are made to ensure a patient receives the right type and amount of blood?	NK		
	-	298 What checks are made to ensure a patient receives the right type and amount or blood? 446 Why can we not have a way of using patient barcodes to link to the computer system, to reduce risk of mis-	RBH		
		labelling?			
		509 Why can't transfusions be given evenings and weekends (in all hospitals) for patients on long term	PR		
		transfusion regimes?			
A2	How can the wastage of donor	254 How can we reduce the lag time between request and availability of blood for transfusion? 64 What is the basis for the 30 minute rule?	вн	No up-to-date SR evidence	N
	blood be minimised?	64 What is the basis for the 30 minute rule? 63 How ethical is it to collect blood that will be destroyed e.g. from AB+ve females	вн		
		65 How ethical is it to collect blood that will be destroyed e.g. from AB+ve remains 222 How can we reduce blood wastage by improving transport / administration whilst ensuring ready access to	н		
		blood when required			1
		649 How much blood donated is "wasted" by disposal?	В		1
		677 How might this percentage (i.e. wastage/redundancy) be reduced?	B		1
		355 Why are giving sets not flushed with 0.9% sodium chloride on completion of transfusion 573 Why is blond throws out in the nixing set2	BH		1
		573 Why is blood thrown out in the giving set? 110 Can I be sure my donation will not be wasted?	вн		1
	-	26 Are too many donations rejected unnecessarily?	вн		
	t i i i i i i i i i i i i i i i i i i i	161 What happens to unused donations?	вн		
		238 What happens to blood that is not used after donation?	PBH		
		325 Percentage of donations that are transfused	ВН		
		352 What percentage, if any, of all blood donated for transfusion gets wasted?	Р		
	-	361 Does all the blood donated at donor sessions get used?	R B H B H		
	-	356 When a child needs blood ,why is a whole bag used .why is there so much wasted. 492 Is all collected blood used usefully or is there wastage?	BH		
	-	452 is all collected blood used userully or is there wastage?	кв		
	ł	676 What percentage of blood donations are found to be unusable because of contamination?	R		
	-	570 how do I know how my blood is being used?	RB		
		581 What percentage of donated blood gets used?	в		
		65 How many units have been wasted due to 30 minute rule violations? If this information is not captured,	ВН		
		why not?	вн		
	-	508 How much blood is wasted by the health services and we're is that most common 556 What percentage of blood is actually used per year?	RB		
	-	550 What percentage of blood is accurry data per year? 591 How many units are 'wasted' in hospitals (e.g. poor storage)?	вн		
	t i i i i i i i i i i i i i i i i i i i	626 How much blood/blood products is wasted by hospitals which have blood on standby for surgical	PH		
		procedures?			
A7	What training is required for the	471 Why is it up to the nurses to give blood transfusions?	BH	1. NICE Guideline Recommendation:	Y
	safe administration of blood	342 Who is to order blood transfusion DR or NURSE and what observation to be checked on the recipient	RH	Monitoring for acute reactions 10. Monitor the statem reactions 10. Monitor the statem reactions 10. Monitor the statem is condition and wital signs before, during and after blood transfusions, to detect acute transfusion reactions that may need immediate investigation and treatment.	
	products?	470 Why can't we have specific blood transfusion specialist, who are there to set up infusions and stay for the	вн	10. Monter patients containing and wita signs before, during and atter blood transitissions, to detect aucter that may need immediate mixed immediate mixed immediate and the state of the state and a blood transitison in excitoring acute reactions and transition in actions and transition and transition acute reactions.	1
		duration?			1
		388 Why are some staff allowed to undertake transfusion practices i.e. collecting blood when they have no	н	2. Kopolovic I, Ostro J, Tsubota H, Lin Y, Cserti-Gazdewich CM, Messner HA, et al. A systematic review of transfusion-associated graft-versus-host disease. Blood. 2015;126(-3):406-14.	1
		proven competency? 408 Do you think it's a waste of a registered nurses working day to pick up the units of blood from the lab as the	вн		1
		wrong unit has been given at bedside in the past?			
		755 Best way to diagnose transfusion reactions - to refute or confirm early so that we can get on with these.	BRH		
		[BT Guideline: 7 Monitoring for Acute BT Reactions - 7.4 Evidence statements. "Clinical: No clinical evidence was identified for this review. Economic: No relevant economic evaluations were identified."]			1
		was demonstrated for this review. Economic, no relevant economic evaluations were identified, "j			1
					1
51	When should whole blood	160 What are the indications for fresh whole blood transfusion	BRH	No available SR evidence	N
	transfusion be given? Whole blood transfusion means that				1
	blood transfusion means that thew blood unit undergoes				1
	minimal processing and all the				1
	components of blood (red cells,				
	white cells, plasma and				
	platelets) are transfused.				
S2	What guidelines should there be	338 Is there any guidelines on when to withdrawal transfusion from palliative patients	PH	1. Torres ME, Rodriguez JN, Ramos JL, Gomez FA. Transfusion in palliative cancer patients: a review of the literature. Journal of Palliative Medicine. 2014;17(1):88-104	N
	on the approriate withdrawal of				1
	transfusion from palliative				1
	patients				
	What are the barefits of a 11	202 Etthest are the been file of cold shared eleterate for the measurement of costs by			
	What are the benefits of cold	207 [What are the] benefits of cold stored platelets for the management of acute bleeding?	BH	No available SR evidence	N
	stored platelets versus platelets stored at the standard				
1	stored at the standard temperature of 22 degrees				
	temperature of 22 degrees				1
	celsius for the management of				
	celsius for the management of acute bleeding?				
	celsius for the management of acute bleeding?				

S4	How frequently should the blood count be checked in patients at high risk of bleeding or with recent bleeding?		Now frequently should blood levels (i.e., hemoglobin) be checked in patients at high risk of bleeding (or with recent bleeding (i.e., is the benefit of checking blood levels more frequently outweigh the risks)?	RH	1. Manning N, Heddle NM, Arnold D, Crowther MA, Siegal D. Interventions to reduce blood loss from laboratory testing in critically ill patients and impact on transfusion: a systematic review. Journal of Thrombosis and Haemostasis. 2015;13[(Suppl. 2)]:974-5.	N
		END				