FULL GUIDANCE FOR ENHANCING FEEDBACK REPORTS FOLLOWING AN AUDIT

July 2015

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What is the purpose of this document?

Blood transfusion Audit and Feedback (A&F): How can we do better?

- The **AFFINITIE programme aims to apply existing evidence as to what makes for more effective A&F** and **behavioural theory** to **systematically inform** the **enhancement** of **current A&F interventions** delivered by the NHS Blood Transplant (NHSBT) National Comparative Audit (NCA) of blood transfusion. [1]

- This document presents the ***five proposed enhancements*** identified through the empirical work conducted as part of the AFFINITIE programme.

- For each enhancement the following information will be provided:

  - ✓ **Evidence- or Theory-based rationale** for the importance of the enhancement
  - ✓ **Relevant findings from AFFINITIE empirical work** (i.e. analysis of existing feedback reports)
  - ✓ **Description** of the proposed enhancement / **Suggestions as to how to apply** the enhancement when producing feedback reports
  - ✓ **Examples** of this enhancement being applied
  - ✓ **Consensus panel rating** for the enhancement
  - ✓ **Quotes from acceptability interviews** with clinical staff demonstrating their thoughts on the enhancement

- Of note, this guidance document is intended to only ***propose*** potential enhancements to existing A&F. The **five proposed enhancements outlined in this document are currently being evaluated** as part of two cluster-randomised controlled trials in the AFFINITIE programme. **Until we have randomised evidence** from these trials, we are in a **state of equipoise as to whether these enhancements will make a measurable difference** to clinical practice and responses to A&F cycles.

- Nonetheless, it is intended that this document may be helpful to use in future A&F cycles, as it provides guidance on how to produce feedback reports that **incorporate the best available existing evidence and theory as to what makes for more effective A&F**.

- Approaching practice change in blood transfusion through more systematic delivery of A&F, and working across disciplines, holds the potential to increase the rate of uptake of

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emerging evidence in clinical practice. This in turn will help realise the **potential to save costs, conserve resources, and more importantly, improve patient outcomes**.

Where do the proposed enhancements come from?

- Gaps between high quality evidence and current clinical practice have been identified across a range of clinical contexts, including transfusion medicine.[2,3]

- The reasons for an evidence-practice gap in transfusion are multifactorial, and do not appear to be based on relevant clinical factors (i.e. patient age, perioperative blood loss, transfusion thresholds).[3]

- A&F has been extensively used as an intervention strategy to improve healthcare, and is widely used in transfusion.[4]

- Yet findings from national audits of transfusion practice conducted annually by NHSBT continue to highlight inappropriate variability in transfusion practice and enduring discrepancies with clinical guidelines; raising in turn questions about the effectiveness of current A&F strategies in the context of blood transfusion.

- Implementation science is an emerging field of research focusing on the investigation of methods for promoting and facilitating the systematic uptake of evidence into routine clinical practice.[5]

- Approaches to changing clinical practice can often be based on intuitive beliefs (i.e. '*hunches'* or '*best guesses'*) as to 'what' influences healthcare professionals' behaviour, or the fact that a particular intervention strategy has been used before and appears feasible, face valid and/or interesting.[6,7]

- Rather than base the design of interventions to optimise transfusion practice (i.e. A&F) on such 'gut instincts,' it has been argued that **theory and emerging evidence about how best to design (and not to design) A&F interventions should be incorporated into the development of future A&F interventions in order to identify how and when A&F works best**. [1]

- The AFFINITIE **programme aims to apply existing evidence and behavioural theory to systematically inform the enhancement of current A&F interventions delivered by the NHSBT National Comparative Audit** (NCA) of blood transfusion.1

- Specifically, the AFFINITIE trial draws on the following three sources to propose **five enhancements** to current A&F practice:

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1. Existing **evidence** as to what makes for more effective A&F (i.e. systematic reviews)

3. Contextualised **Empirical work** (i.e. analysis of existing NCA A&F materials; interviews with clinical staff involved in transfusion decision making).

Proposed enhancements to current A&F practice

Source 1: Existing evidence as to what makes for more effective A&F

- It is generally recognised that systematic reviews are an invaluable source of information from which to obtain a comprehensive and integrated overview of the relevant evidence for the intervention and context of interest.[3]

- The process of optimising A&F in transfusion may therefore be guided **by evidence from systematic reviews in the wider literature regarding the effectiveness of A&F strategies across other healthcare contexts**.[8-10]

- Early Cochrane Reviews of A&F indicate small, albeit worthwhile, effects of **6-16%** on clinical practice and patient outcomes.[10]

- A recently updated Cochrane review of A&F interventions aimed to address the question: *What A&F design characteristics make one A&F intervention more effective than another?*[8]
    - This review identified that **A&F is more effective when**:

- ✓ The feedback recipient's **baseline performance is low**
- ✓ Feedback is provided **over multiple occasions**
- ✓ Feedback is provided **by colleagues or supervisors**
- ✓ Feedback is provided in both **verbal and written formats**
- ✓ Feedback includes **explicit targets and action plans** to change behaviour
- ✓ Feedback includes **achievable benchmarks/comparators** (i.e. top 10% of peers).

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Source 2: Theories and Models of behaviour change

a) Control Theory

- Clinical practice is fundamentally a form of human behaviour that can be examined and understood using behavioural theory.[11]

- Health psychology offers a range of theories and models for understanding what influences behaviour and techniques that can support behaviour change.

- The benefits of designing interventions based on theory, that target the specific causal determinants of behaviour, has been recognised, and there is emerging evidence that theory-based interventions are more effective than those that are not.[6,12]

- Control Theory[13] is a theory about how people regulate their behaviour which posits that individuals manage their behaviour by knowing **what they want to do or achieve** (*i.e.* setting a goal or standard) → **trying to do it** (*i.e.* action) → **monitoring the behaviour** (*i.e.* audit) → **assessing whether they are making progress towards the goal** (*i.e.* feedback, which informs as to the nature and extent of any discrepancy between behaviour and goals) → **and adapting what they do in light of the feedback** (*i.e.* action planning) (Figure 1).

Figure 1. An illustration of Control Theory applied to the target behaviour of 'losing weight'.

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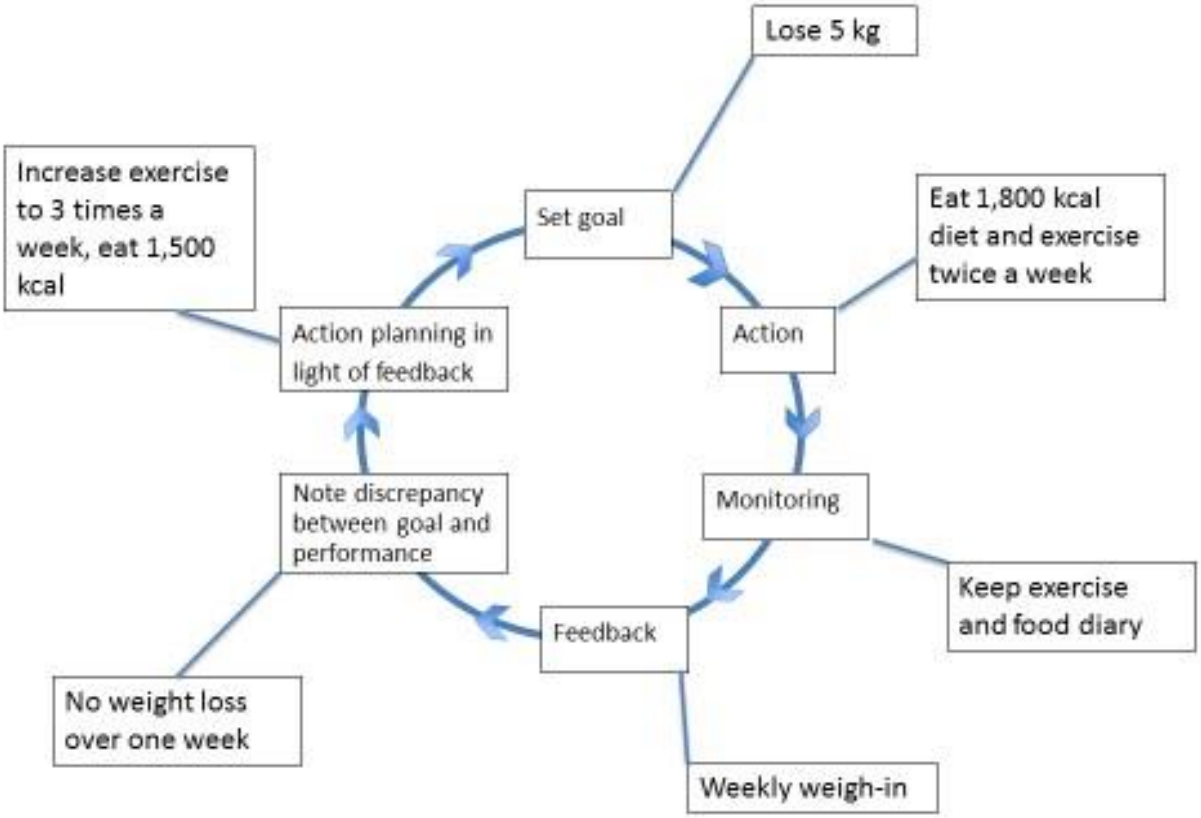

- Control Theory has been used to explain the mechanisms through which A&F interventions may work to change behaviour.[9]

- Control Theory may also be applied to understand how A&F interventions may work at an organisational level to influence the behaviour individuals working within the organisation (i.e. changing transfusion practice of clinical staff within a hospital) (Figure 2).[1]

Figure 2. An illustration of Control Theory applied to blood transfusion A&F

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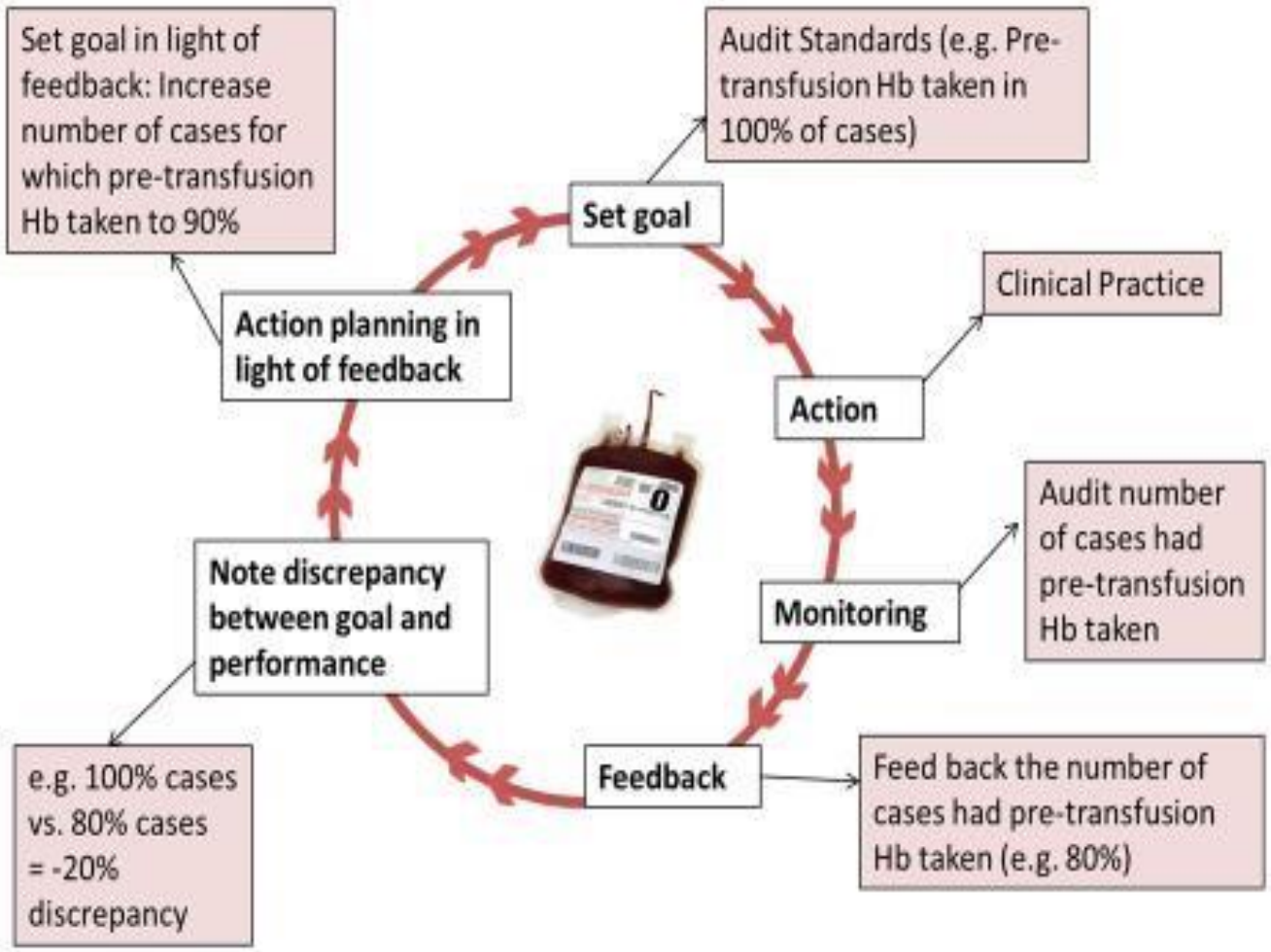

a) Behaviour Change Techniques (BCTs)

- BCTs are defined as the "observable, replicable and irreducible components of an intervention designed to alter or redirect causal processes that regulate behaviour" (*i.e.* the proposed 'active ingredients') (Figure 3).[14]

Figure 3. Examples of BCTs (General)

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- Each component in the Control Theory self-regulation 'loop' represents a set of behaviour change techniques (BCTs) (Figure 4).

Figure 4. BCTs consistent with Control Theory

- In order to fully apply Control Theory in A&F, **BCTs representing each component in the Control Theory loop should be delivered as part of the A&F cycle**.

a) Being specific

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- When trying to change behaviour, the way in which a behavioural instruction is worded can affect the likelihood that it will be followed, by influencing comprehension, recall, and planning.[15]

- There is evidence that using specific, concrete wording can increase the likelihood of information being understood and remembered.[15,16]

- For example, an assessment of 10 national clinical guidelines for general practitioners (GPs), identified that that GPs were much more likely to adhere to guidelines that were worded specifically and concretely, compared to those that were vague or non-specific (67% vs 36% respectively).[16]

- The TACTA framework provides guidance for increasing behavioural specificity.[17,18]

- TACTA stands for: **T**arget, **A**ction, **C**ontext, **T**imeframe, **A**ctor.

- It advocates that, to the extent that is appropriate and feasible, behaviours should be specified in terms of: **Who** (Actor), **Should do what** (Action), **To/for/with whom** (Target), **Where** (Context), and **When** (Timeframe). For example:

- **Who** is responsible for performing the behaviour: *Nurses* ○ **What** action is to be performed: *Checking wristband* ○ To/For/With **Whom** is the behaviour being done: *Patients* ○ **When** is the behaviour to be performed: *Immediately pre-transfusion* ○ **Where** is the behaviour to be performed: *At the bedside*

  The concretely specified behaviour would therefore be:

  'Nurses should check patients' wristbands at the bedside immediately pretransfusion.'(Figure 5)

  Figure 5. Example of nurse checking a patient's wristband

Source 3: Empirical work

- One of the aims of the AFFINITIE programme is to **gather evidence to evaluate potential ways of enhancing the content of existing A&F interventions delivered by the NCA**.[1]

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- To achieve this, all documents from three recent A&F cycles conducted by the NCA (Medical Use of Blood 2011; Platelets 2010; Neonates and Children 2010) were analysed to assess the extent to which:

- Characteristics that have been shown to contribute to more effective A&F interventions (i.e. from Cochrane Review[8]; Source 1), featured in the existing feedback documents.

- Components/BCTs consistent with Control Theory were present in each feedback document (Source 2a/b).

- The extent to which the audit standards, feedback, action plans and recommendations were worded concretely and specifically (i.e. behaviourally specified according to the TACTA framework; Source 2c).
- This analysis **identified discrepancies between the current content of NCA A&F reports and existing evidence and behavioural theory** (Source 3). These discrepancies served as a **basis for proposing enhancements to existing A&F** delivered by the NCA.
- E.g. if no BCTs relating to the 'action planning in light of feedback' component of the Control Theory loop, an enhancement would be to '*ensure an explicit action plan is included in each feedback report.'*
- The five identified enhancements were presented to a **multi-disciplinary consensus panel**, to discuss and agree the extent to which the proposed enhancements are viewed as important.

- Panel members included: haematologists, transfusion practitioners ○ Behavioural scientists/ Health psychologists ○ Consensus was rated for each enhancement on a scale from 1 (*Not important*) to 5 (*Highly important*).
- A small **re-audit of Medical Use of Blood (2011)** was conducted in July-Aug 2014 using the original audit standards and audit tool. '**Enhanced' feedback reports containing the proposed enhancements were prepared and delivered to four pilot hospitals**.

- A range of **clinical staff** involved in transfusion decision making (i.e. Transfusion Practitioners, Lab Managers, Consultant haematologists/gastroenterologists/obstetricians etc.), were **interviewed** in Jan-March 2015 to **assess the extent to which they considered the enhanced reports acceptable.**
- The responses provided by clinical staff during these interviews were used as a basis for **further refining the enhancements and prototype enhanced reports** (Figure 6).

Figure 6. Prototype enhanced feedback reports prepared as part of the Medical Use of Blood re-audit and pilot study

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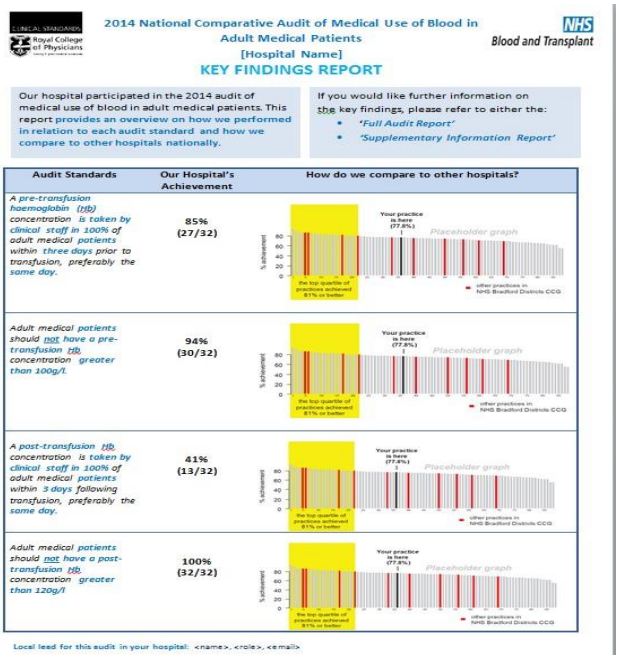


2014 National Comparative Audit of Medical Use of Blood in Adult Medical Patients
[Hospital Name]
KEY FINDINGS REPORT

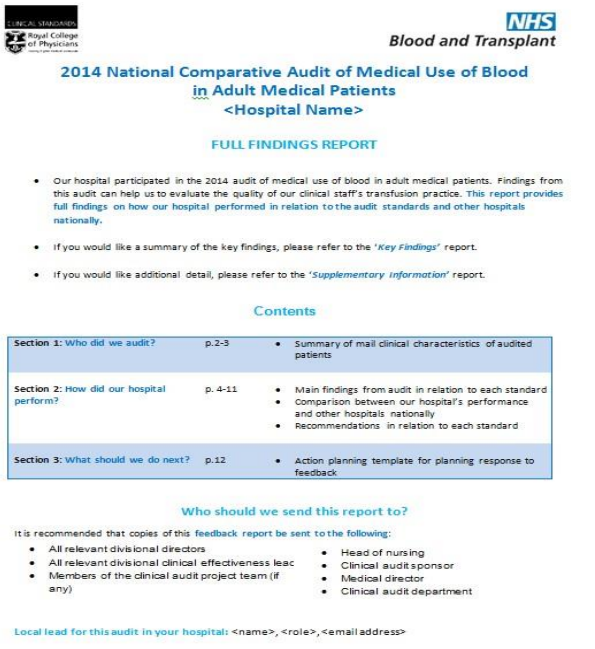
Blood and Transplant

Our hospital participated in the 2014 audit of medical use of blood in adult medical patients. This report provides an overview on how we performed in relation to each audit standard and how we compare to other hospitals nationally.

If you would like further information on the key findings, please refer to either the:
- *'Full Audit Report'*
- *'Supplementary Information Report'*

Audit Standards	Our Hospital's Achievement	How do we compare to other hospitals?
A pre-transfusion haemoglobin (Hb) concentration is taken by clinical staff in 100% of adult medical patients within three days prior to transfusion, preferably the same day.	85% (27/32)	
Adult medical patients should not have a pre-transfusion Hb concentration greater than 100g/l.	94% (30/32)	
A post-transfusion Hb concentration is taken by clinical staff in 100% of adult medical patients within 3 days following transfusion, preferably the same day.	41% (13/32)	
Adult medical patients should not have a post-transfusion Hb concentration greater than 120g/l	100% (32/32)	

Local lead for this audit in your hospital: <name>, <role>, <email>



Blood and Transplant

2014 National Comparative Audit of Medical Use of Blood in Adult Medical Patients
<Hospital Name>

FULL FINDINGS REPORT

- Our hospital participated in the 2014 audit of medical use of blood in adult medical patients. Findings from this audit can help us to evaluate the quality of our clinical staff's transfusion practice. This report provides full findings on how our hospital performed in relation to the audit standards and other hospitals nationally.
- If you would like a summary of the key findings, please refer to the *'Key Findings'* report.
- If you would like additional detail, please refer to the *'Supplementary Information'* report.

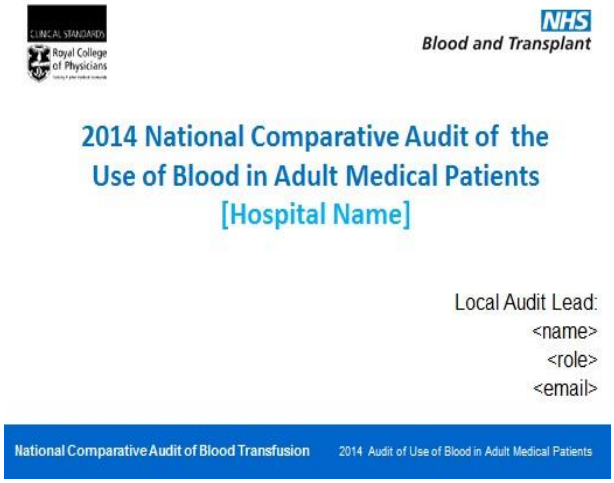
Contents

Section 1: Who did we audit?	p.2-3	• Summary of mail clinical characteristics of audited patients
Section 2: How did our hospital perform?	p. 4-11	• Main findings from audit in relation to each standard • Comparison between our hospital's performance and other hospitals nationally • Recommendations in relation to each standard
Section 3: What should we do next?	p.12	• Action planning template for planning response to feedback

Who should we send this report to?

It is recommended that copies of this feedback report be sent to the following:
- All relevant divisional directors
- All relevant divisional clinical effectiveness leac
- Members of the clinical audit project team (if any)
- Head of nursing
- Clinical audit sponsor
- Medical director
- Clinical audit department

Local lead for this audit in your hospital: <name>, <role>, <email address>

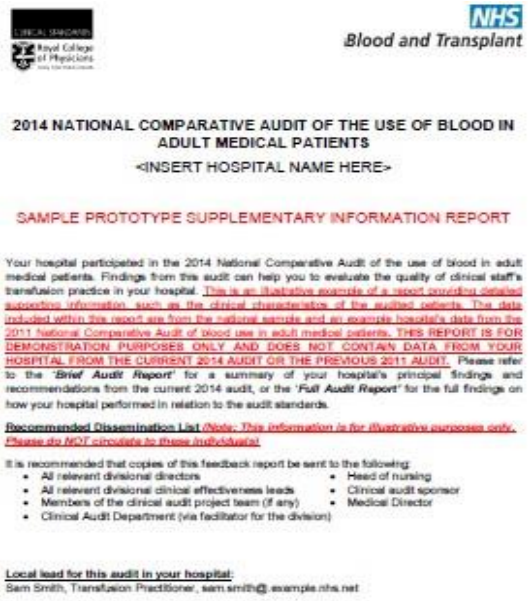


Blood and Transplant

2014 National Comparative Audit of the Use of Blood in Adult Medical Patients
[Hospital Name]

Local Audit Lead:
<name>
<role>
<email>

National Comparative Audit of Blood Transfusion — 2014 Audit of Use of Blood in Adult Medical Patients



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2014 NATIONAL COMPARATIVE AUDIT OF THE USE OF BLOOD IN ADULT MEDICAL PATIENTS
<INSERT HOSPITAL NAME HERE>

SAMPLE PROTOTYPE SUPPLEMENTARY INFORMATION REPORT

Your hospital participated in the 2014 National Comparative Audit of the use of blood in adult medical patients. Findings from this audit can help you to evaluate the quality of clinical staff's transfusion practice in your hospital. This is an illustrative example of a report providing detailed supporting information, such as the clinical characteristics of the audited patients. The data included within this report are from the national sample and an example hospital's data from the 2011 National Comparative Audit of blood use in adult medical patients. THIS REPORT IS FOR DEMONSTRATION PURPOSES ONLY AND DOES NOT CONTAIN DATA FROM YOUR HOSPITAL FROM THE CURRENT 2014 AUDIT OR THE PREVIOUS 2011 AUDIT. Please refer to the *'Brief Audit Report'* for a summary of your hospital's principal findings and recommendations from the current 2014 audit, or the *'Full Audit Report'* for the full findings on how your hospital performed in relation to the audit standards.

Recommended Dissemination List (Note: This information is for illustrative purposes only. Please do NOT circulate to these individuals)

It is recommended that copies of this feedback report be sent to the following:
- All relevant divisional directors
- All relevant divisional clinical effectiveness leads
- Members of the clinical audit project team (if any)
- Clinical Audit Department (via facilitator for the division)
- Head of nursing
- Clinical audit sponsor
- Medical Director

Local lead for this audit in your hospital:
Sam Smith, Transfusion Practitioner, sam.smith@.example.nhs.net

Enhancement 1: *Short, Relevant, Punchy*

Ensure feedback delivered is clearly related to an audit standard, and place supplementary findings in an appendix report.

***Rationale*:**

- Control Theory argues that individuals manage/change their behaviour in a cyclical process:
- starting with establishing what they want to do/achieve (i.e. **setting a goal** or standard),
- trying to do it (*i.e.* **action**), ○ monitoring the behaviour (*i.e.* **audit**),

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- assessing whether they are making progress towards the goal (*i.e.* **feedback**, which informs as to the nature and extent of any **discrepancy** between behaviour and goals),
- and adapting what they do in light of the feedback (*i.e.* **action planning**)

- This process happens in a **cyclical manner** (i.e. a feedback 'loop'), which requires **close correspondence between each step in the loop**

- Therefore, it is important that the **information on behaviour that is fed back to an individual is closely linked to the goal set**, and that **any action plans or goals set in light of feedback is clearly related to the goal and the identified discrepancy between current behaviour and goals**.

- Feeding back any **additional information can dilute this correspondence** and disrupt the loop (Figure 7).

Figure 7. An illustration of Control Theory applied to blood transfusion A&F

- Applied to transfusion: Feedback provided in the NCA reports should be clearly related to the audit standards. Recommendations and action plans formulated in response to the feedback should also be clearly related to any identified discrepancies between current transfusion practice and the audit standards.

Relevant findings from empirical work:

- Analysis of the main feedback reports from three A&F cycles ○ Extracted number of items providing feedback on clinical practice ○ Identified how many of these items were related to the stated audit standards (Table 1):

Table 1. Results from analysis of NCA Reports: % of feedback items related to audit standards.

A&F Cycle Main Reports	Total Number of feedback items	% related to a standard
Medical Use of Blood	195	**33%**

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Platelets II	252	**71%**
Neonates & Children	161	**26%**

- In current NCA feedback reports, a high volume of information is included which is not directly related to the audit standards.

- This additional information can dilute the salience and impact of the 'key messages' (i.e. how is the hospital performing in relation to the audit standards).

- Interviews conducted with hospital staff also indicate that current feedback reports are typically considered too long and contain too much information, making it difficult to extract key findings:

  '*I think **they tend to be quite long, there is a lot of information** in there, and it can be **hard to digest**, get your head round, you know?…and**, I haven't got the time** to go through them. I'd quite like **more of a summary**…'* [Transfusion Practitioner]

Description of proposed enhancement:

- The general principle is '**the smaller the document the better**,' and the aim of this enhancement is to ensure the feedback report(s) are as **short, concise and relevant** as possible, so that clinical staff are able to **readily extract key information** from the report.

  *'I think it is about **keeping things as concise as possible**, because, sometimes you can lose your -- it's natural, isn't it? You start off reading a document all enthusiastic and reading it very carefully and by the time you get to the fifth, sixth, seventh page you start to skim and that's a natural thing to do. **So if you want to get your message across, you have to keep it brief and focused'*** [Consultant Haematologist]

- The main feedback report(s) should only contain information that is **clearly linked to an audit standard**.

- Some **information on the clinical context** (i.e. patient characteristics, clinical settings, transfusion indication), may be necessary to support the interpretation of the main feedback related to the audit standards. This ***should be kept to a minimum*** in the main feedback report(s).

- The remaining detail on clinical context may be included in a **supplementary file/ appendix**.

- Recommend adopting a **graded entry approach** (Table 2), whereby different reports are produced that provide an increasing level of detail on the findings from this audit.

- This provides differing levels of detail/information, so that **clinical staff can access the level of information most appropriate/desirable to them**

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Table 2. Description of Graded Entry approach, applied to blood transfusion A&F*:*

Level	Title	Description	Potential Target
1	**Key Findings Report** (See Appendices 1;5)	- ‘ Small’ sized/ shortest summary document - Recommended information: ○ Limit results to one or two pages maximum in total (i.e. one line/row per standard in which audit standards + key finding related to each standard is presented; no information on clinical context other than sample size) ○ Prioritise use of graphs over text and tables: Graphs can provide a high volume of feedback, including multiple comparators (see enhancement 4) concisely. ○ 1 page of recommendations, with at least one recommendation related to each standard ○ 1 page with recommended dissemination list and action planning template	- Wider dissemination - Consultants, nurses, junior doctors, audit departments, senior management
2	**Full Audit Report** (see Appendices 2 and 6)	- ‘Medium’ sized document - Include statement emphasising why this audit document is important to patient care - Include detailed results + limited amount of supporting information on clinical context only if *related to the audit standards* - Prioritise use of graphs over text and tables; include text only if it helps to explain the numerical results/graphs - Follow fixed format for each audit standard: Standard+ Feedback+ Comparative data (i.e. national/ regional findings)+ Statement as to why this standard is important + Recommendations - Action planning template at end of report - Recommended dissemination list	- Hospital Transfusion Team (i.e. transfusion practitioner, lab manager, consultant haematologist)
3	**Supplementary Information Report** (Appendices 4 and 8)	- **‘**Large’ sized document - Reference resource containing detailed information on clinical context and/or any supporting information (e.g. details on audit data collection, data analysis) - Not intended to be a main feedback report for wider dissemination	- Reference/ resource document for those with a specific interest in this detail

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PPT	**PowerPoint** (Appendices 3 and 7)	- In order to engage clinical staff, include statement emphasising why this audit document is important to patient care - Focus on key findings related to each audit standard - Prioritise use of graphs over text and tables - Minimal information on clinical context - Recommendations related to each audit standard - Action planning template - Keep as short as possible (~10-15 minutes max to deliver) - To help reduce number of slides consider placing explanatory content in 'presenter notes'	- For presentation at key meetings (e.g. Hospital transfusion committee; Junior Doctor inductions)

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Examples:

- Appendices 1-4 provide examples of populated Level 1-3 + PowerPoint Feedback reports.
- Appendices 5-8 provide blank templates of each graded entry level report to populate.

- Examples of feedback directly related and unrelated to an audit standard are presented in Table 3.

Table 3. Examples of feedback extracted (un)related to an audit standard, extracted from an existing NCA feedback report (i.e. Medical Use of Blood, 2011).

Audit Standard	**Feedback related to an audit standard**	**Feedback not related to an audit standard**
A pre-transfusion haemoglobin (Hb) concentration is taken by clinical staff in 100% of adult medical patients within three days prior to transfusion, preferably the same day.	• A pre-transfusion Hb concentration was taken by clinical staff in 91% (29/32) of our patients. • For 50% (16/32) the pretransfusion Hb was taken on the same day as the red cell transfusion, and in 85% (27/32) within three days prior to transfusion.	The median age was 64 years, IQR 49 to 68 years, range 0-95 years
Adult medical patients should not have a pretransfusion Hb concentration greater than 100g/l.	6% (2/32) of our adult medical patients had a pre-transfusion Hb greater than 100g/l.	59% (1948) were men and 41% (1347) were women
A post-transfusion Hb concentration is taken by clinical staff in 100% of adult medical patients within 3 days following transfusion, preferably the same day.	• A post-transfusion Hb concentration was taken by clinical staff in 47% (15/32) of our patients. • For 3% (1/32) the pretransfusion Hb was taken on the same day as the red cell transfusion, and in 41% (13/32) within three days prior to transfusion.	In adults the median weight was 73kg, IQR 63 to 85kg. In paediatric cases the median weight was 24kg, IQR 15 to 47kg
Adult medical patients should not have a posttransfusion Hb	% (0/32) of our patients had a post-transfusion Hb concentration greater than 120g/l	68% (2225/3296) of all cases were inpatients [66% (2024/3067) adult and 88% (201/229) paediatric] and 32% (1071/3296) were outpatients

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concentration greater than 120g/l		

Consensus panel rating: **4.85** out of 5

- As a reminder: each proposed enhancement was presented to a multidisciplinary panel of transfusion clinical staff (i.e. transfusion practitioners, consultant haematologists) and behavioural scientists for discussion as to whether the enhancements were in line with existing behaviour change theory/evidence, and whether the enhancements made sense and were feasible from a clinical perspective.

- Panel members rated their perceived importance of each enhancement on a scale from 1 (*Not Important*) to 5 (*Highly Important*).

Quotes from acceptability interviews with clinical staff:

Table 4. Transfusion clinical staff's views on the graded entry prototype enhanced reports

Feedback report level	**Clinical staff member**	**Quote**
Level 1- Summary report	Transfusion Practitioner	**'**...This is probably the sort of level of report that **would be useful**, because, that's sort of the level of information that you're **actually able to disseminate widely through the hospital.** You know, anything more than a page . . . effectively one page, is very difficult to communicate.**'**
	Consultant Gastroenterologist	**'**I just **love the fact that you know exactly where you are against each standard without having to look very far.** So you're not combing through – 'cos as I say, the current NCA reports, you're looking through 256 pages to find out how you've done. **You know, it's very clear, it's directly in front of you…I would definitely read this.**'
Level 2- Full report	Lab Manager	'It's good. It's **not too big**, I mean a lot of the audit reports in the past have been way longer than this and I think if that's the full audit report, **it feels readable**, has got a bit of, a good mix of being very descriptive but also with a bit of narrative as well'

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	Transfusion Practitioner	'I **quite like the fact that the template seems to be the same throughout the document**, so you've got your standard, you've got, you know, "Why is it important? What are your recommendations?" You've got your results, so that's **quite nice, it is clear, and focused**.'
Level 3- Supplementary Findings Report	Regional Transfusion Practitioner	'This has gone a **bit more in depth**, which I would imagine would be a little bit more **suited to those with a specific clinical, who, you know, want to have a look at some supplementary data** – which isn't necessarily focused on the standards'
	Consultant	'This one may be a bit over kill. **I would skim read it** but, **wouldn't really be interested** in this report. I mean, it is **nice to have this information to hand**, but not for me.'
	Obstetrician	
PowerPoint	Consultant Gerontologist	'It's **easy to follow**, it **conveys all that key information** over, from the reports, but it is **quicker** in slide format as well.'
	Regional Transfusion Practitioner	'So I can see that this would be a **very useful** sort of standard presentation sort of format of presentation to give, **it has what I need**, and is **clear**.'

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Enhancement 2: *Who should What, to Whom, When and Where*

Ensure audit standards, feedback, recommendations and action plans are phrased in a behaviourally specific manner.

Rationale:

- The importance of 'being specific' when trying to change behaviour has been discussed on p.10.
- There is evidence that using specific, concrete wording can increase the likelihood of information being understood and remembered.[15,16] A&F is also more effective when it includes *explicit* action plans and goals.[8]
- The TACTA framework provides guidance for increasing behavioural specificity.[17,18]
- As a reminder: phrasing behaviours in a specific/concrete manner involves specifying: **Who** (Actor), **Should do what** (Action), **To/for/with whom** (Target), **Where** (Context), and **When** (Timeframe).
- Components of the Control Theory loop should be phrased in a behaviourally specific manner, including: goals (i.e. **audit standards**), **feedback**, **action plans** and goals (i.e. **recommendations**) in light of feedback.

Relevant findings from empirical work:

- Analysis of the feedback reports from three A&F cycles (n= 12 reports)
- Extracted extent to which the Target, Action, Context, Timeframe, and Actor were specified in the audit standards (Table 5), feedback on behaviour (Table 6), action plans (Table 7), and recommendations (Table 8).

Table 5. Results from analysis of NCA reports: Extent of behavioural specification of **Audit Standards**:

A&F CYCLE	***Who responsible* specified**	**Doing *What* specified**	***Where* specified**	***When* specified**	***To Whom* specified**
Medical Use of Blood	0%	73%	0%	82%	100%*
Platelets II	0%	65%	0%	46%	100%*

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Neonates & Children	5%	68%	5%	32%	89%

*Typically specified elsewhere in the document

Table 6. Results from analysis of NCA reports: Extent of behavioural specification of **Feedback on behaviour**

A&F CYCLE	***Who responsible* specified**	**Doing *What* specified**	***Where* specified**	***When* specified**	***To Whom* specified**
Medical Use of Blood	4%	67%	0%	45%	97%
Platelets II	34%	96%	0%	30%	55%
Neonates & Children	12%	87%	4%	20%	60%

Table 7. Results from analysis of NCA reports: Extent of behavioural specification of **Action Plans**:

A&F CYCLE	***Who responsible* specified**	**Doing *What* specified**	***Where* specified**	***When* specified**	***To Whom* specified**
Medical Use of Blood	21%	100%	0%	21%	95%
Platelets II	12%	100%	0%	28%	30%
Neonates & Children	0%	100%	0%	0%	50%

Table 8. Results from analysis of NCA reports: Extent of behavioural specification of Recommendations:

A&F CYCLE	***Who responsible* specified**	**Doing *What* specified**	***Where* specified**	***When* specified**	***To Whom* specified**
Medical Use of Blood	-*	-	-	-	-
Platelets II	0%	100%	0%	21%	42%
Neonates & Children	41%	100%	0%	14%	60%

***No recommendations specified**

- Behavioural specificity varies across audit cycles, and components of Control Theory (i.e. standards, feedback, action plans, and recommendations).
- Typically the Target (To Whom), Action (what) is specified, but the Actor (Who), Timeframe (When), and Context (Where) is rarely specified.

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Description of proposed enhancement:

- To increase the likelihood of A&F changing transfusion practice, it is **important that all standards, feedback, action plans and recommendations are worded in a behaviourally specific, concrete manner.**

- Therefore, this enhancement proposes that each audit standard, feedback, action plan, and recommendation should be specified in terms of:

    - **Who** is responsible for performing the behaviour (e.g. *Nurses*) ○ **What** action is to be performed: (e.g. *Checking wristband*) ○ To **Whom** is the behaviour being done: (e.g. *Patients*) ○ **When** is the behaviour to be performed: (e.g. *Immediately pre-transfusion*) ○ **Where** is the behaviour to be performed: (e.g. *At the bedside*)

  The concretely specified behaviour would therefore be:

  'Nurses should check patients' wristbands at the bedside immediately pretransfusion.'

- Of note: Transfusion is a behaviour performed by multiple clinical staff, in multiple contexts. At times it **may not always be feasible/appropriate to specify all components of the behaviour, or it may not be necessary to do so as some components are obvious (i.e. context).**

- Audit standards, feedback, action plans, and recommendations should be behaviourally specified to the **extent that is appropriate and feasible**. For example:

    - **Who** is responsible for performing the behaviour (e.g. *Clinical Staff*) ○ **What** action is to be performed: (e.g. *Taking a Hb Concentration*) ○ To **Whom** is the behaviour being done: (e.g. 100% of *Adult Medical Patients*)
    - **When** is the behaviour to be performed: (e.g. *Immediately pre-transfusion*)
    - **Where** is the behaviour to be performed: (e.g. *not specifiable- multiple locations; obvious*)

  The concretely specified behaviour would therefore be:

  'Clinical staff should take a pre-transfusion Hb concentration in 100% of adult medical patients.'

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Examples:

Table 9. Examples of behaviourally specific components of Control Theory applied to transfusion A&F

Component of Control Theory	**Behaviourally specific example**
Audit Standard	'**A post-transfusion Hb concentration is taken** [what] by **clinical staff** [who] in 100% of **adult medical patients** [whom] **within 3 days following transfusion** [when], preferably the same day' *'where' not specified
Feedback	**Clinical staff** [who] **took a post-transfusion Hb concentration** [what] in 100% of **adult medical patients** [whom] **within 3 days following transfusion** [when]'
Action Plan	(see template below) (Figure 8)
Recommendation	**Clinical staff** [who] **should take a post-transfusion** [when] **Hb concentration** [what] **in 100% of adult medical patients** [whom]. If there are good clinical justifications for not taking a post-transfusion Hb concentration (e.g. chronically transfused patients), **alternative outcome measures should be assessed and recorded** (e.g. checking symptoms of anaemia) [what].

Figure 8. Example of prototype action planning template:

Recommendation from Audit Report	**Key Action(s) to be taken**	**Coordinator for Action**	**Target of Action**	**Location for Action**	**Timescale for Action**	**Indicator of Outcome of Action**
*Our **Selected recommendation(s)** to address*	(*i.e. **WHAT** needs to be done to address this recommendation in our hospital)*	(*i.e. **Who** will be responsible for this action)*	(i.e. ***Whom** is this action going to affect?)*	(*i.e. **WHERE** will this action take place or be discussed)*	*(i.e. **WHEN** will this action be completed (mm/yyyy)*	*(i.e. **HOW** will the outcome of the action be monitored to ensure it has achieved the desired effect?)*

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Consensus panel rating: **4.42** out of 5.

Quotes from acceptability interviews with clinical staff:

Table 10. Transfusion clinical staff's views on behaviourally specific feedback reports

Clinical staff member	**Quote**
Regional Transfusion Practitioner	''This action plan…we can **set timeframes** within it and we can **task people with it** so I think that sort of thing trusts would love because it gives you a very concrete thing, "**This is what we're doing, this is who is doing it, this is when we will do it by,** and check that we do**"…**we need this practical stuff.'
Transfusion Practitioner	'The standards are very **precise**, **clearly defined**, and I like the way they are written.'

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Enhancement 3: *Complete each step of the loop.*

Include behaviour change techniques (BCTs) consistent with Control Theory in <u>each</u> feedback report.

Rationale:

- P.9 of this document provides an introduction on BCTs and their link to Control Theory.
- As a reminder: each component in the Control Theory self-regulation 'loop' represents a set of behaviour change techniques (BCTs) (Figure 9).

Figure 9. BCTs consistent with Control Theory

- BCTs consistent with Control Theory largely fall into five clusters representing different stages of the Control Theory loop (Table 11):

Table 11. Cluster of BCTs consistent with different stages of Control Theory self-regulation loop

Cluster	BCT label	BCT Definition[14]	Example[14]

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1. Setting a goal	Goal-setting (behaviour)	Set or agree on a goal defined in terms of the **behaviour** to be achieved	Set the goal of eating 5 pieces of fruit per day as specified in public health guidelines
	Goal-setting (outcome of behaviour)	Set or agree on a goal defined in terms of a positive **outcome** of wanted behaviour	Set a weight loss goal (e.g. 0.5 kilogram over one week) as an outcome of changed eating patterns
2. Monitoring current behaviour	Self-monitoring of behaviour	Establish a method for the person to monitor and record their behaviour(s) as part of a behaviour change strategy	Ask the person to record daily, in a diary, whether they have brushed their teeth for at least two minutes before going to bed
	Self-monitoring of outcome of behaviour	Establish a method for the person to monitor and record the **outcome(s)** of their behaviour as part of a behaviour change strategy	Ask the person to weigh themselves at the end of each day, over a two week period, and record their daily weight on a graph to increase exercise behaviours
3. Feedback	Feedback on behaviour	Monitor and provide informative or evaluative feedback on performance of the behaviour *(e.g. form, frequency, duration, intensity)*	Inform the person of how many steps they walked each day (as recorded on a pedometer) or how many calories they ate each day (based on a food consumption questionnaire).
	Feedback on outcome of the behaviour	Monitor and provide feedback on the outcome of performance of the behaviour	Inform the person of how much weight they have lost following the implementation of a new exercise regime
4. Discrepancy	Discrepancy between behaviour and goal	Draw attention to discrepancies between a person's current behaviour (in terms of the *form, frequency, duration, or intensity* of that behaviour) and the person's previously set outcome goals, behavioural goals or action plans (goes beyond self-monitoring of behaviour)	Point out that the recorded exercise fell short of the goal set
5. Adaptation in light of feedback	Action planning	Prompt detailed planning of performance of the	Prompt planning the performance of a

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		behaviour (must include at least one of context, frequency, duration and intensity). Context may be environmental (physical or social) or internal (physical, emotional or cognitive)	particular physical activity (e.g. running) at a particular time (e.g. before work) on certain days of the week
	Problem solving	Analyse , or prompt the person to analyse, factors influencing the behaviour and generate or select strategies that include overcoming barriers and/or increasing facilitators	Prompt the patient to identify barriers preventing them from starting a new exercise regime e.g., lack of motivation, and discuss ways in which they could help overcome them e.g., going to the gym with a buddy
	Review behaviour goal	Review behaviour goal(s) and consider modifying goal(s) or behaviour change strategy in light of achievement. This may lead to re-setting the same goal, a small change in that goal or setting a new goal instead of (or in addition to) the first, or no change	Examine how well a person's performance corresponds to agreed goals e.g. whether they consumed less than one unit of alcohol per day, and consider modifying future behavioural goals accordingly e.g. by increasing or decreasing alcohol target or changing type of alcohol consumed
	Review outcome goal	Review outcome goal(s) jointly with the person and consider modifying goal(s) in light of achievement. This may lead to re-setting the same goal, a small change in that goal or setting a new goal instead of, or in addition to the first	Examine how much weight has been lost and consider modifying outcome goal(s) accordingly e.g., by increasing or decreasing subsequent weight loss targets

- In order to fully implement Control Theory in A&F, **BCTs representing each component in the Control Theory loop should be delivered as part of the A&F intervention cycle**.

- The Cochrane Review of A&F found that **A&F interventions are more effective when they include the BCTs action planning and goal-setting.[8]**

Relevant findings from empirical work:

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- The content of 12 feedback reports from three existing NCA A&F cycles was examined for the presence of BCTs consistent with Control Theory (Table 12).

Table 12. Results from analysis of NCA reports: Delivery of BCTs consistent with Control Theory

BCT	% Documents featured in (n=12)
Goal-setting (behaviour)	**92%**
Goal-setting (outcome)	**8%**
Review behavioural goal	**0%**
Review outcome goal	**0%**
Self-monitoring of behaviour	**42%**
Self-monitoring of outcome of behaviour	**8%**
Feedback on behaviour	**58%**
Feedback on outcome of behaviour	**42%**
Discrepancy behaviour/goal	**58%**
Problem solving	**42%**
Action planning	**58%**

- In existing NCA feedback reports, there is a wide range in the frequency with which BCTs consistent with Control Theory are delivered.
- No single NCA feedback report examined contained BCTs from each cluster of BCTs representing the different stages of the Control Theory loop.

Proposed Enhancement:

- To deliver transfusion A&F that is consistent with Control Theory and the empirical evidence base, include at least one BCT from each cluster of BCTs consistent with Control Theory.
- Include BCTs from each cluster of BCTs consistent with Control Theory feature in **each level of the feedback report**, because feedback recipients will read only some of the levels (i.e. the Transfusion Practitioner may disseminate the Level 1 'key findings report' to junior doctors, but not Levels 2+3).
- Examples and suggestions of how to deliver each BCT consistent with Control Theory are provided overleaf.

Consensus panel rating: **4.85** out of 5

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Examples

Table 13. Examples of how to apply BCTs with Control Theory to blood transfusion A&F

BCT	**Definition[14]**	**Application in transfusion A&F**	***Example***	***Recommendations for delivery***	***Quotes from Acceptability Interviews***
Cluster 1: Setting a goal					
Goal-setting (behaviour)	Set or agree on a goal defined in terms of the **behaviour** to be achieved	Audit Standards	'Clinical staff take a pre-transfusion Hb concentration in 100% of adult medical patients within three days of transfusion, preferably the same day.'	• Ensure audit standards are stated in <u>each</u> feedback report • Ensure all audit standards are behaviourally specific and phrased concretely (see enhancement 2). • Ensure audit standards are phrased consistently (using same terminology) <u>across</u> and <u>within all feedback reports.</u>	'It's nice, actually, that each page is dedicated to one standard and it doesn't go much beyond that. The standard is clearly stated at the top of the page, can't miss it.' [Consultant Haematologist]
Goal-setting (outcome of behaviour)	Set or agree on a goal defined in terms of a positive **outcome** of wanted behaviour	Audit Standards	'Adult medical patients should not have a pretransfusion Hb concentration greater than 100g/l.'	• Ensure audit standards are stated in <u>each</u> feedback report • Ensure all audit standards are behaviourally specific and phrased concretely (see enhancement 2). • Ensure audit standards are phrased consistently (using same terminology) <u>across</u> and <u>within all feedback reports.</u>	'The standards are very precise, clearly defined, and I like the way they are written.' [Transfusion Practitioner]
Cluster 2: Monitoring					

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Selfmonitoring of behaviour	Establish a method for the person to monitor and record their behaviour(s) as part of a behaviour change strategy	Audit data collection/ Audit tool	Extracted from Medical Use of Blood audit tool: 7.Date of pretransfusion Hb: ☐ ☐ - DD/MM/YY - Not Done	[This BCT is part of the audit process. This document focuses on providing guidance for enhancing ***feedback*** processes.]	[This BCT is part of the audit process. This document focuses on providing guidance for enhancing ***feedback*** processes.]*?*
Self-monitoring of outcome of behaviour	Establish a method for the person to monitor and record the **outcome(s)** of their behaviour as part of a behaviour change strategy	Audit data collection/ Audit tool	Extracted from Medical Use of Blood audit tool: 10. Patient posttransfusion Hb concentration: __g/l	[This BCT is part of the audit process. This document focuses on providing guidance for enhancing ***feedback*** processes.]	[This BCT is part of the audit process. This document focuses on providing guidance for enhancing ***feedback*** processes.]
Cluster 3: Feedback					

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Feedback on behaviour	Monitor and provide informative or evaluative feedback on performance of the behaviour *(e.g. form, frequency, duration, intensity)*	Feedback on current clinical practice in relation to the audit standards that reflects a **behaviour**	**'**A pre-transfusion Hb concentration was taken by clinical staff in 80% of adult medical patients within three days of transfusion, and 60% on the same day of the transfusion.'	• Ensure all feedback is behaviourally specific and phrased concretely (see standard 2). • In the main feedback reports (i.e. Levels 1 and 2, + PowerPoint), only include feedback that is directly related to the audit standards. Additional feedback on clinical context should be included in a supplementary appendix file (Level 3) (See enhancement 1) • Prioritise delivery of feedback in a visual format (i.e. graphs, tables, charts) over text (see Mode of Delivery suggestions)	'I don't have a lot of time to read these reports, I know they are important, but I need to get the main messages quickly, so I quite like the pie charts because again, it's very visual. It's very easy to read rather than having sort of lists of numbers where you can't glance at it quite so quickly.' [Consultant Obstetrician]
Feedback on outcome of the behaviour	Monitor and provide feedback on the outcome of performance of the behaviour	Feedback on current clinical practice in relation to the audit standards that reflects an **outcome of behaviour**	**'**5% of adult medical patients had a posttransfusion Hb concentration greater than 120g/l.'	• Ensure all feedback is behaviourally specific and phrased concretely (see standard 2). • In the main feedback reports (i.e. Levels 1 and 2, + PowerPoint), only include feedback that is directly related to the audit standards. Additional feedback on clinical context should be included in a supplementary appendix file (Level 3) (See enhancement 1) • Prioritise delivery of feedback in a visual format (i.e. graphs, tables, charts) over text (see Mode of Delivery suggestions)	**'**You have your standard, how you did in relation to your standard, why it is important to know this, not much else….good. This is good. This is what I need to know and I don't need to dig for it' [Regional Transfusion Practitioner]
Cluster 4: Discrepancy					

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Discrepancy between behaviour and goal	Draw attention to discrepancies between a person's current behaviour (in terms of the *form, frequency, duration, or intensity* of that behaviour) and the person's previously set outcome goals, behavioural goals or action plans (goes beyond selfmonitoring of behaviour)	Feedback on current clinical practice that highlights a discrepancy with the audit standards	**'**Your hospital's performance did not reach the audit standard, as only 80% of adult medical patients had a pretransfusion concentration taken by clinical staff within three days of transfusion.'	• See notes on BCTs feedback on behaviour/outcome of behaviour • Include comparative data to further emphasise discrepancies between a hospital's current performance and the audit standards (see enhancement 5) • Use colour and visual presentation of information to emphasise discrepancy (see Mode of Delivery suggestions).	**'**And the reason I like this report is that you are telling me how I am doing, how everyone else is doing, so you can see on the first page that this report is going to attract you to it because it is right there . . . we're an outlier' [Consultant Obstetrician]
Cluster 5: Adaptation in light of feedback					
Problem solving	Analyse , or prompt the person to analyse, factors influencing the behaviour and generate or select strategies that include overcoming barriers and/or increasing facilitators	Recommendations	Instruction in Action Planning template: 'We recommend that you pick two or three recommendations from the list above that is important for your hospital to address. You may find it useful to complete some or all of this action planning template when planning your	Problem solving is likely to be highly context specific to each hospital. It is up to each hospital transfusion team to decide what local barriers are needed to be addressed in their hospital to achieve their chosen recommendations to address. The action planning template can be a useful prompt to doing so.	**'**I think that's a really good way of making sure that the action does take place.' [Regional Transfusion Practitioner]

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<table>
<tr><td></td><td></td><td></td><td>hospital's response to the feedback from this audit.'</td><td></td><td></td></tr>
<tr><td>Review behaviour goal</td><td>Review behaviour goal(s) and consider modifying goal(s) or behaviour change strategy in light of achievement. This may lead to re-setting the same goal, a small change in that goal or setting a new goal instead of (or in addition to) the first, or no change</td><td>Recommendations for standards related to behaviour</td><td>'Your hospital's performance for this standard was lower than 50% of other hospitals nationally. In order to improve patient care, you should consider prioritising this standard when planning your response to feedback. Consider formulating an action plan to achieve a more feasible short-term goal, such as working to increase your performance towards the national median for this standard (X %).'</td><td>• Trying to change multiple things at once can be difficult and counter-productive to achieving the desired goal(s)
• A&F cycles typically have multiple standards
• Feedback reports should include recommendations related to <u>each</u> standard but consider instructing hospitals to select one or two standards/ recommendations they wish to address/ action plan for. This can also make the adaptation in light of feedback more personal and relevant to each hospital (e.g. We recommend that you pick two or three recommendations from the list above that is important for your hospital to address').
• Also consider recommendations aimed at different target groups (i.e. Hospital transfusion service; clinical staff making the decision to transfuse), as this increases specificity of 'who' the recommendation is aimed at.
• Recommendations should be tailored to the hospital's performance in relation to the audit standard:
<table><tr><th>If</th><th>Then</th></tr></table></td><td>'I think sometimes, you know, you've got one, two, lots of recommendations, you know, and it's whether or not the hospitals actually need to address every single item, or whether or not just to pick out a few because lots of things sometimes take a long time to implement and, if you have too many targets and too many changes, then it might be very difficult to actually mean anything, at the end of the day, it might be better to identify what maybe two or</td></tr>
</table>

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				Hospital has **achieved the standard** (i.e. 100%)	Provide a positive message of encouragement e.g. '*Your hospital has achieved this standard. Well done. This achievement represents the high standard of patient care provided within your hospital, which should be recognised and encouraged. You should*	three key ones to focus on' [Transfusion Practitioner]

					consider formulating an action plan to maintain this high standard of patient care.' Or 'Our hospital's performance has achieved this standard. This achievement represents the high standard of care that we are providing to our patients. We should recognise and encourage this, and formulate an action plan to maintain our high standard of patient care'	

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				If hospital is in the **upper two quartiles** (i.e. 50-99%), but has ***not*** **achieved the standard**.	Recognise that the hospital is one of the higher achieving hospitals, but could still do better to reach the standard e.g. 'Although your hospital performed better for this standard than half of the other hospitals, there is still room for improvement. To improve patient care, you should consider formulating an action plan to continue to build on your performance towards achieving this standard.' Or 'Our performance for this standard was higher than that of 50% of other hospitals nationally. We should want to look at room for further improvement, to	

					improve patient outcomes. We should formulate an action plan to continue to improve our practice towards achieving this standard.'	

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				If the hospital is in the **bottom two quartiles**, and has ***not*** **achieved the standard**.	Suggest set an interim/ more feasible goal to reduce discrepancy and work towards national median + standard e.g. 'Your hospital's performance for this standard was lower than 50% of other hospitals nationally. In order to improve patient care, you should consider prioritising this standard when planning your response to feedback. Consider formulating an action plan to achieve a more feasible short-term goal, such as working to increase your performance towards the national median for this standard (X %). Or 'Our performance in relation to this standard was lower than half of the other hospitals nationally. In order to improve the care we provide to our patients, we should prioritise this standard when planning our response to this feedback. We should formulate an	

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					action plan to improve our performance towards a more feasible short-term goal such as the national median, X%.	
Review outcome goal	Review outcome goal(s) jointly with the person and consider modifying goal(s) in light of achievement. This may lead to re-setting the same goal, a small change in that goal or setting a new goal instead of, or in addition to the first	Recommendations for standards related to **outcome of behaviours**	*See above*	*See above BCT: Review Behavioural Goal; Same recommendations apply to reviewing outcome goals.*		**'**It is nice to see some recommendations for the lab too…It's useful that it's laid out that to challenge larger requests for blood, which, you know, we do, you know, it gets flagged up here and, in particular, to avoid over transfusion as well with elderly patients, but it is good to see something relevant to us' [Lab manager]

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Action planning	Prompt detailed planning of performance of the behaviour (must include at least one of context, frequency, duration and intensity). Context may be environmental (physical or social) or internal (physical, emotional or cognitive)	Action Planning template	See p. 23 See Appendices 1-2, 5-6.	• The action planning template is intended to facilitate hospitals in planning their response to feedback. • Therefore, these templates should be the least burdensome as possible • To increase likely effectiveness, action plans should also be behaviourally specific (see enhancement 2). • Ensure the action plan includes sections for hospitals to specify: The Target, Action, Context, Timeframe, Actor, and Indicator of outcome (see template, p. 23). • Consider instructing hospitals to select one or two standards/ recommendations they wish to complete the action plan for. This can also make the adaptation in light of feedback more personal and relevant to each hospital (e.g. We recommend that you pick two or three recommendations from the list above that is important for your hospital to address').	'I think that it's useful to have in the tabular form the key actions and who is responsible for it. I think that's a really good way of making sure that the action does take place.' [Regional Transfusion Practitioner]

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Enhancement 4: *How do we compare?*

Consider multiple comparators

Rationale:

- Control Theory proposes that behaviour be compared against a set goal (i.e. current transfusion practice against an audit standard).

- However, there is a theoretical basis for including additional comparators when providing feedback, as comparative data can be highly motivating to the recipient of feedback and encourage behaviour change.[19]

- For example, from the Cochrane review, that A&F interventions that include 'achievable benchmarks of care' (i.e. top 10% of peers) can lead to greater improvements in processes of care than A&F interventions providing comparisons to median performance of peers.[19-20]

Relevant findings from empirical work:

- Apart from a comparison between current clinical practice and a specified goal/target (i.e. audit standards), current NCA A&F reports typically contain two additional comparators (Tables 14-15):

i) National Median:

Table 14. Example from an existing NCA feedback report (i.e. Medical Use of Blood, 2011) of feedback providing comparative data in the form of the national median:

	National (9126)		Your site (72)	
	%	N	%	N
Same day as transfusion	51	4678	49%	35
Day before	32	2922		23
2 days before	7	616		5
3 days before	3	264		3
Within 3 days	93	8480	92%	66
More than 3 days before*	6	566		5
Not known	1	80		1

*Some of these (unknown number) will be input errors in dates.

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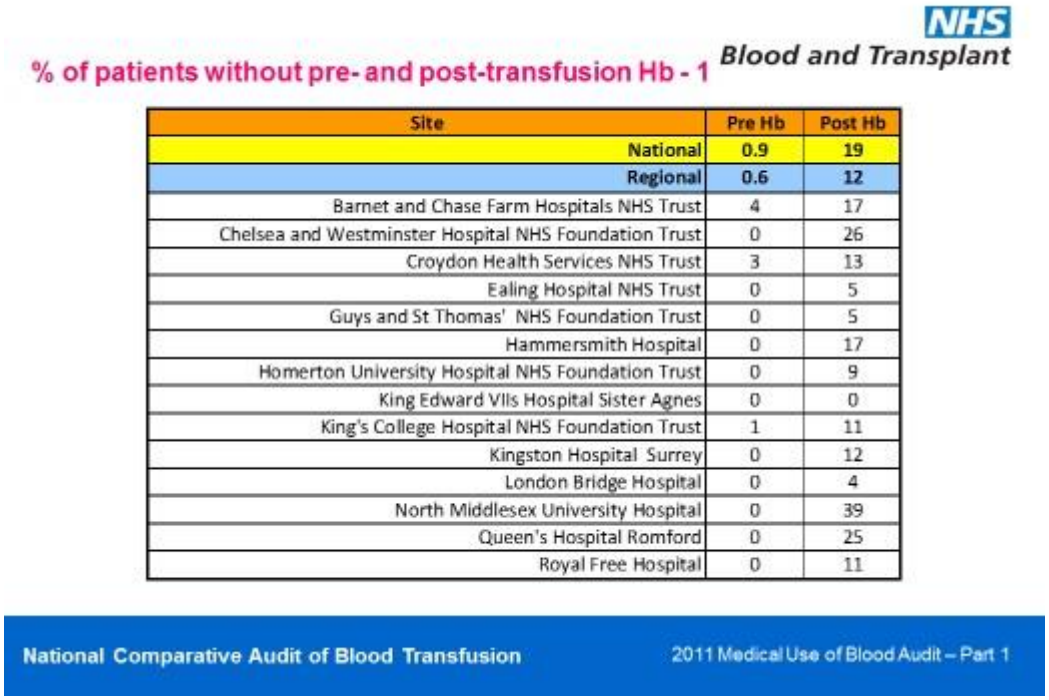
iii) Regional

Table 15. Example from an existing NCA feedback report (i.e. Medical Use of Blood, 2011; Regional PowerPoint) of feedback providing comparative data in the form of the regional findings:



% of patients without pre- and post-transfusion Hb - 1

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Site	Pre Hb	Post Hb
National	0.9	19
Regional	0.6	12
Barnet and Chase Farm Hospitals NHS Trust	4	17
Chelsea and Westminster Hospital NHS Foundation Trust	0	26
Croydon Health Services NHS Trust	3	13
Ealing Hospital NHS Trust	0	5
Guys and St Thomas' NHS Foundation Trust	0	5
Hammersmith Hospital	0	17
Homerton University Hospital NHS Foundation Trust	0	9
King Edward VIIs Hospital Sister Agnes	0	0
King's College Hospital NHS Foundation Trust	1	11
Kingston Hospital Surrey	0	12
London Bridge Hospital	0	4
North Middlesex University Hospital	0	39
Queen's Hospital Romford	0	25
Royal Free Hospital	0	11

National Comparative Audit of Blood Transfusion 2011 Medical Use of Blood Audit – Part 1

Description of proposed enhancement:

- Individuals may differ in terms of which type of comparative data they find most motivating and interesting.

- Therefore, to maximise the potential of comparative data to motivate change, consider including **multiple comparators** when providing feedback on current clinical practice in relation to the audit standards.

- Potential comparators to consider include:
  - ✓ Current performance vs the goal/target (i.e. audit standard)
  - ✓ Past performance (i.e. as part of a re-audit)
  - ✓ Achievable benchmarks (i.e. top 10%; upper quartiles)
  - ✓ Like-for-like comparisons (i.e. hospitals of same sizes, case mixes etc)
  - ✓ Different clinical specialities/ departments (i.e. gastroenterology vs obstetrics)
  - ✓ Regional comparators ✓ National median

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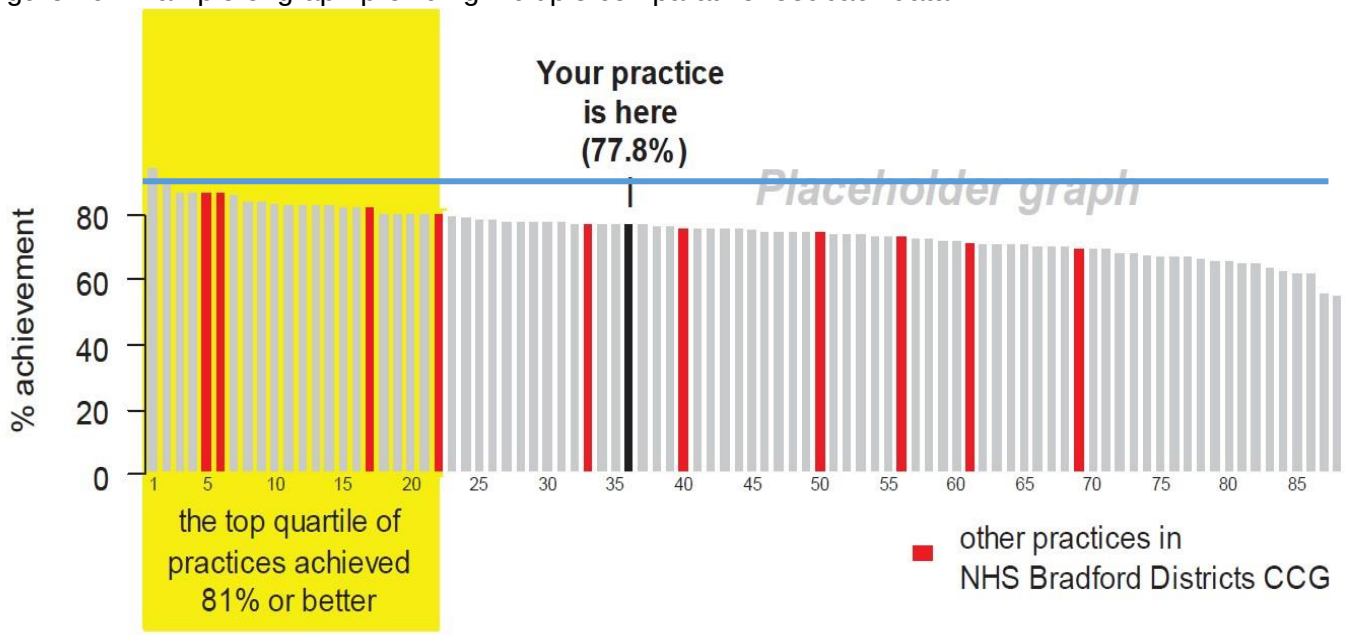
- Prioritise the use of graphs for presenting multiple comparators (see example Figure 10).
- Use colour to emphasise comparative data (e.g. present past vs present performance in a re-audit in different colours)

Examples:

Figure 10. Example of graph providing multiple comparative feedback data



- In Figure 10, a single graph is used to provide feedback on the practice's current performance in relation to the audit standard (i.e. horizontal blue bar), and compares this against multiple, additional comparators:
  - ✓ Other regional practices (i.e. vertical bars in red)
  - ✓ National performance (i.e. all vertical bars)
  - ✓ An achievable benchmark (i.e. top quartile; highlighted in yellow).

Consensus panel rating: **5.0** out of 5

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Quotes from acceptability interviews with clinical staff:

Table 16. Transfusion clinical staff's views on different types of comparative feedback

Type of Comparator	**Clinical staff member**	**Quote**
National median	Lab Manager	'See, these graphs I like. I prefer this layout. It's **easy to compare what your hospital is doing, with other ones nationally**. It gives you the **bigger picture**.'
Regional	Transfusion Practitioner	'The other thing I would do... so you've got hospital reports**, I would actually prefer to have regional reports as well** so you can complement these. And on those reports, have a little bit of... so not just a thing if you're in or out with the guideline; you know, some sort of things to prompt discussions or different ways of doing things'
Like-for-Like comparisons	Transfusion Practitioner	'It would be really nice to **compare with trusts of similar size** -- I can't compare us, for instance, with [Hospital Name] because they're a big centre that do thoracic surgery so their use of blood would be different than ours. If you were **comparing us to a similar hospital to us, which would be much more meaningfu**l to us.'
Past performance	Consultant Haematologist	'And I suppose it gives you quite a **clear indication, about whether your results are higher or lower**, from the previous audit…which is good, because, you know, we **can see whether we are improving or not.'**
Different clinical specialities	Transfusion Practitioner	'It would be **quite nice to be able to look at our use within departments**. You don't break it down that small so within oncology, for instance, **what do we do compared to other oncology units, that would be quite helpful**.'
	Consultant Gastroenterologist	'From a clinical point of view, knowing what other people doing is interesting…you know, if I am honest, **everyone is just interested in what everyone else is doing, and how we compare**. So when I get this report, **straight away I am looking for my specialties**, really, so there, gastro…16%'
Achievable benchmarks (i.e. top quartile)	Audit manager	'….because that **gives us a sense of reality of what we can achieve or not achieve and compares us to everybody else** in what we want to do or **benchmarking'**

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Enhancement 5: *Well done!*

If performance is high/ achieving the standard, then include a positive message of encouragement.

Rationale:

- Control Theory proposes that behaviour change is directly influenced by the rate with which an individual or team progress through the different steps of the loop (Figure 11).
- People quite simply feel good about rapid progress and frustrated by no progress, or progress that is slower than expected.

Figure 11. Rate of progression towards goal achievement in Control Theory

- Emphasising a discrepancy between current behaviour and the goal can motivate people to change their behaviour to work towards achieving the goal.

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- **Positive, or encouraging feedback** is also motivating.

Evidence from relevant empirical work:

- Analysis of feedback reports from three existing NCA A&F cycles identified that encouragement of 'good' or 'high quality' practice occurred rarely. For example:

  Medical Use of Blood 2011, Full Audit Report:

  '*Much of the transfusion practice seen was* ***appropriate and reflected the high quality of care given****, but there are some areas of concern*…'

- Emphasis is typically placed on identifying a discrepancy between current clinical practice and the audit standards.

Description of enhancements:

- When hospitals achieve the set target/goal (i.e. the audit standard, achievable benchmark, improvement relative to past performance in a re-audit, etc), this should be recognised in the feedback provided.

- Consider including a recommendation that hospitals recognize their high level of current performance and emphasise to clinical staff that this represents the high level of good patient care they are currently providing.

- Also consider providing a recommendation to hospitals to formulate an action plan to maintain this high level of current practice (Table 17).

Example:

Table 17. Examples of positive/encouraging recommendations that recognise goal achievement

IF	THEN

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Hospital has **achieved the standard** (i.e. 100%)	▯ Provide a positive message of encouragement e.g. '*Your hospital **has achieved this standard. Well done**. This achievement **represents the high standard of patient care provided within your hospital**, which **should be recognised and encouraged**. You should consider **formulating an action plan to maintain** this high standard of patient care.'* Or 'Our hospital's performance has **achieved this standard.** This achievement **represents the high standard of care that we are providing to our patients**. We should **recognise and encourage this**, and formulate **an action plan to maintain** our high standard of patient care'

Consensus panel rating: **4.75** out of 5

Quotes from acceptability interviews with clinical staff:

Table 18. Clinical staff's views on positive/encouraging recommendations:

Clinical staff member	**Quote**
Transfusion Practitioner	'I think sometimes the feedback reports can be, well you know, a bit negative…So as well as where we've performed really badly, w**e need to pick out where we performed really well too, you know, recognise this a bit more**….. So it's just highlighting those key red flags or the bits where we can go, **"Wow- We've done really well**…' **because it's also about boosting morale** but also highlighting where we can improve so it's trying to balance it a bit really.'

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Mode of Delivery

- The prototype enhanced reports presented in Appendices 1-4 were piloted in four hospitals. Clinical staff were asked for their opinions on these reports, and for suggestions as to how these may be improved.

- This exercise identified a recommendations for how to best structure and present information in the feedback reports.

- Many of these key findings have been covered in the five enhancements presented.

- Other general recommendations related to formatting and presentation of the reports are presented below.

i) Present feedback in a visual format

- A consistent finding across all clinical staff interviewed (n=26) was a strong preference for feedback to be delivered in a **visual format, rather than using text, as it enables the feedback recipient to more easily and readily extract key information**.

- Presenting information visually also facilitates the delivery of **more information, more succinctly**, consistent with keeping feedback reports ‘as short as possible’ whilst delivering the key information and BCTs (e.g. comparative data; Enhancement 5).

- Therefore, **where possible, consider presenting key findings using graphs, charts, tables**, etc.

- Examples of potential ways of visually presenting feedback are presented in Figures 12-15:

Figure 12. Example of visual presentation of feedback using graphs (i)

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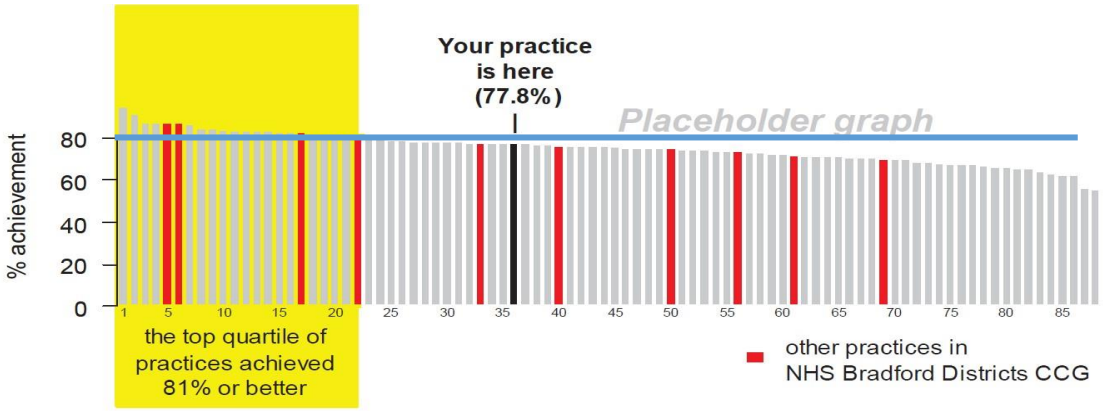

Figure 13. Example of visual presentation of feedback using pie charts:

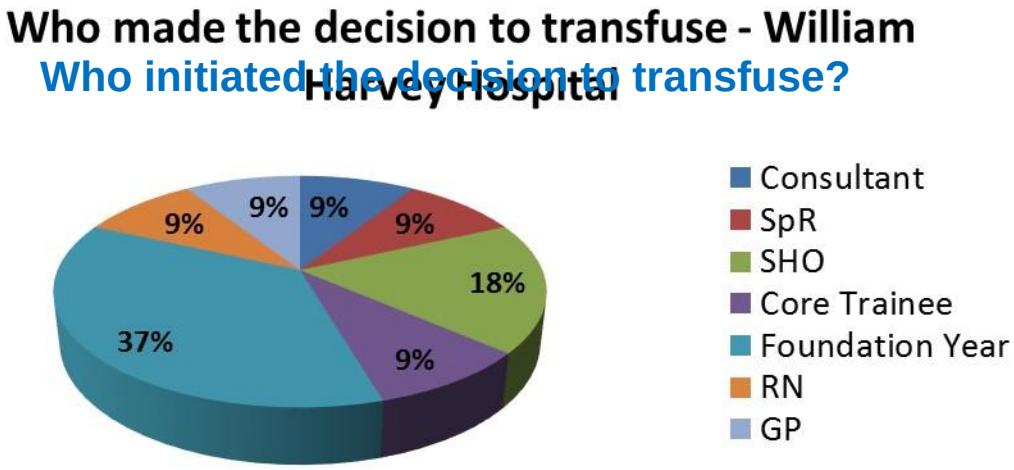

Figure 14. Example of visual presentation of feedback using tables:

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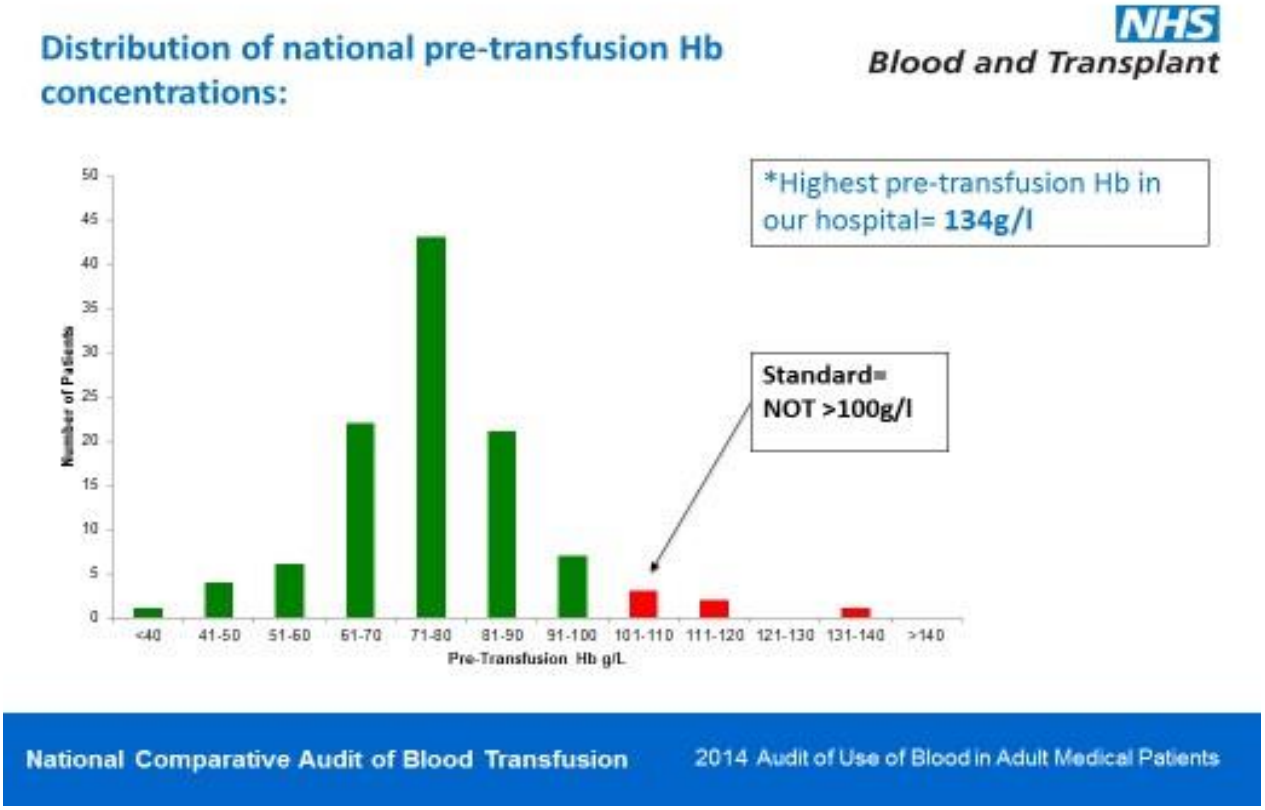
% of patients for which clinical staff took a pre-transfusion Hb concentration

	Overall	Within 3 days	Same day
National 2014	81% (111/137)	73% (100/111)	40% (55/137)
Our Hospital 2014	**88% (29/33)**	**73% (24/33)**	**45% (15/33)**
Hospital A	83% (25/30)	80% (24/30)	40% (12/30)
Hospital B	69% (29/42)	69% (29/42)	26% (11/42)
Hospital C	91% (29/32)	85% (27/32)	50% (16/32)

National Comparative Audit of Blood Transfusion 2014 Audit of Use of Blood in Adult Medical Patients

Figure 15. Example of visual presentation of feedback using graphs (ii):



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Quotes from acceptability interviews:

Table 19. Clinical staff's views on visual presentation of feedback:

Clinical staff member	**Quote**
Transfusion Practitioner	'But I don't know, you see all this text here? If maybe that could be displayed in a graph or a pie chart; something just a little bit more visually. So **rather than having to read from top to bottom, they can just glance at it and be able to know what the results actually state**.'
Consultant Gastroenterologist	'Well, I mean, possibly more visuals in the shorter ones but then -- **people do like pictures**. I think **that's one of the things that I find that people do respond to** ….But, yeah, **pictures, pie charts, graphs, you know, we love tha**t'
Consultant haematologist	'I **much prefer graphs**…I think graphs could s**ay these key messages a lot easier**'
Regional Transfusion Practitioner	These charts…bar charts, histograms - is that what they're called? – They are great! They **are much better for being able to give an instant recognition of what's going on**.'

ii) Font recommendations

- Unsurprisingly, there was a preference for large, readable font size.
- The use of colour was valued, as it was felt that colour can help attract attention to key findings and emphasise discrepancies or comparative data (i.e. highlighting key findings in yellow, presenting comparative data in a different colour etc). Of note:
  - Red in general was not a valued font colour as it can have negative associations (i.e. 'danger')
  - Use of colour valued as long as it is accompanied by an explanation (i.e. if highlighting certain findings need to explain why).

Figure 16. Example of using colour to highlight key findings in a table:

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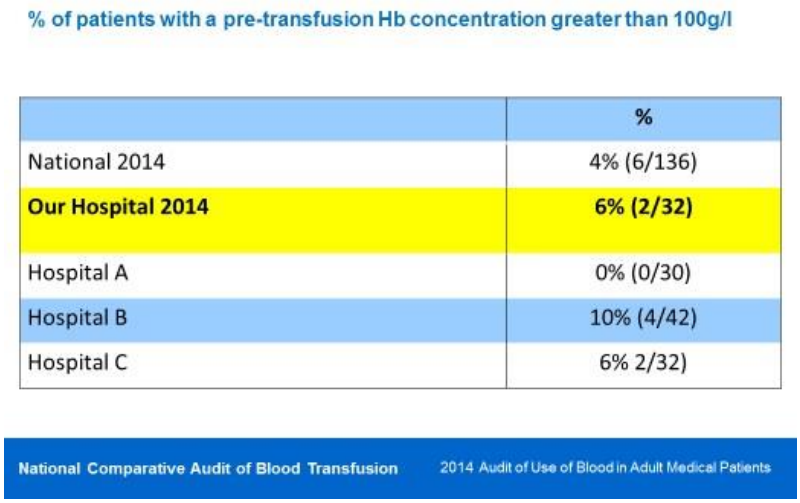

% of patients with a pre-transfusion Hb concentration greater than 100g/l

	%
National 2014	4% (6/136)
Our Hospital 2014	**6% (2/32)**
Hospital A	0% (0/30)
Hospital B	10% (4/42)
Hospital C	6% 2/32)

National Comparative Audit of Blood Transfusion 2014 Audit of Use of Blood in Adult Medical Patients

Quotes from acceptability interviews:

Table 20. Clinical staff's views on font recommendations::

Clinical staff member	**Quote**
Regional Transfusion Practitioner	'The red does draw your eye very distinctly to that because anything written in red is not to highlight because it's a danger normally...There's a lot of red. Red usually indicates something is wrong'
Consultant Obstetrician	'It's good that the data in this section on our hospital's current performance in 2014 has been highlighted yellow. …That really draws your eye to it and it's what you look at for a while.'

iii) Layout

- A clear, consistent structure and layout to feedback reports was valued, in particular use of clear sub-headings phrased as questions. For example:

Figure 17. Example of page layout from the key findings prototype enhanced report (i.e. level 2)

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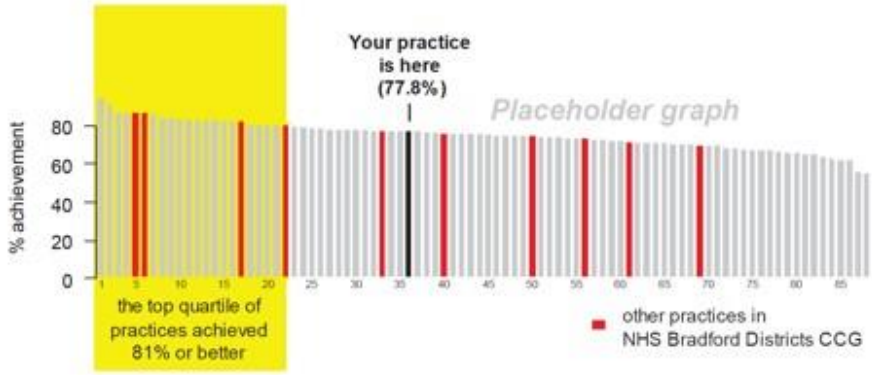
Section 2: How did our hospital perform?

Standard 1: *A **pre-transfusion haemoglobin (Hb)** concentration **is taken by clinical staff in 100%** of adult medical **patients** within **three days** prior to transfusion, preferably the **same day**.*

- A pre-transfusion Hb concentration was taken by clinical staff in **91% (29/32)** of our patients.
- For **50% (16/32)** the pre-transfusion Hb was taken on the **same day** as the red cell transfusion, and in **85% (27/32)** within **three days** prior to transfusion.

How do we compare to other hospitals?



Why is this standard important?

- Good patient blood management requires all decisions to transfuse to be based on a recent pre-transfusion Hb concentration, so that clinical staff may make an **informed decision** about whether to transfuse a patient, and **help avoid potentially unnecessary- or over-transfusion** of red cells.

Recommendations:

For our Hospital	For clinical staff making decisions to transfuse	For the hospital transfusion service
• Our hospital **did not achieve this standard** • We should **formulate an action plan to increase performance towards 100%**	• Prior to administering a transfusion, clinical staff should **make all decisions to transfuse** adult medical patients **on the basis of a recent pre-transfusion Hb concentration**	• In the absence of a recent pre-transfusion Hb concentration, the transfusion laboratory should **challenge clinical staff's decision to transfuse.**

- This page extracted from the prototype Level 2 report (Appendix 2) follows the consistent format adopted throughout the Level 2 'Full audit' report:
  - ✓ < Audit Standard>
  - ✓ <Key findings related to the audit standard>
  - ✓ <Comparative data>
  - ✓ <Statement as to why this standard is important>>

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- ✓ <Recommendations for hospital/ staff making decision to transfuse/hospital transfusion service>

- The sub-headings are also phrased as question statements (i.e. 'How do we compare to other hospitals?)

Quotes from acceptability interviews:

Table 21. Clinical staff's views on page layout in prototype enhanced reports:

Clinical staff member	**Quote**
Regional Transfusion Practitioner	'I like these sub-headings, 'Who did we audit?' 'How did we do?' 'How do we compare'…it just, you know, grabs your attention bit more, bit easier to read.'
Transfusion Practitioner	'I **quite like the fact that the template seems to be the same throughout the document**, so you've got your standard, you've got, you know, "Why is it important? What are your recommendations?" You've got your results, so that's **quite nice, it is clear, and focused**.'

iv) Personalise

- Clinical staff felt the current NCA reports can feel slightly impersonal at times:

'*I thought that the recommendations given sometimes came across as a little bit* ***impersonal****. They felt a bit like standard comments that* ***might not apply to the situation or us in particular****…*'[Consultant Haematologist]

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- Consider phrasing the feedback and recommendations provided in a personalised manner throughout by using terms such as ‘we’ or ‘our hospital’ instead of ‘*your hospital*.’

Table 22. Example of personalised feedback and recommendations:

Feedback	• A pre-transfusion Hb concentration was taken by **our clinical staff** in 91% (29/32) of our patients. • **In our hospital**, the primary reason for red cell transfusion was anaemia in 88% (28/32) of adult medical patients
Recommendations	• **Our hospital did not achieve this standard** We should formulate an action plan to increase performance towards 100%. • **‘Our hospital’s performance** has achieved this standard. This achievement represents the **high standard of care that we are providing to our patients**. **We should recognise and encourage this,** and formulate an action plan to maintain **our** high standard of patient care’

SUMMARY: ENHANCEMENTS QUICK GUIDE

Table 23. Enhancements checklist

Enhancement	**Checklist**	✓
1. **Short, Relevant, Punchy: *Ensure***	□	Graded Entry Approach applied using prototype reports+ templates provided

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feedback delivered is - results maximum (i.e. clinical context; just sample size ***and place*** - ***appendix report.***	☐ Level 1: *Key Findings Report* Report kept as short as possible ***clearly related to*** - In total, 1-2 pages key finding for each standard) ***an audit standard,*** - No information on Recommendations for each standard ***supplementary*** - Recommended dissemination list ***findings in an*** - Action planning template	☐ ☐ ☐ ☐ ☐
	• Level 2: *Full Audit Report* - Statement emphasising importance of audit topic to patient care - Consistent format throughout for each standard (i.e. standard + key finding+ statement of why standard is important+ recommendation) - Minimal supporting information on clinical context essential to interpreting main findings related to audit standards - Action planning template - Recommended dissemination list	☐ ☐ ☐ ☐ ☐
	☐ Level 3: *Supplementary Information Report* - Detailed supporting information: * Information on clinical context * Audit details	☐ ☐
	• PowerPoint (PPT) - PPT kept as short as possible (aim for 10-15 min presentation) - Statement emphasising importance of audit topic to patient care - Consistent format throughout for each standard (i.e. standard + key finding+ statement of why standard is important+ recommendation) - Minimal supporting information on clinical context essential to interpreting main findings related to audit standards - Action planning template - Recommended dissemination list	☐ ☐ ☐ ☐ ☐ ☐

2. **Who should do** A&F component *Who What* To *Whom When Where* **What, to Whom,** specified? specified? specified? specified? specified? specified?						
When, and Where:						
Ensure audit	Standards	☐	☐	☐	☐	☐
feedback,	Feedback	☐	☐	☐	☐	☐
and action plans	Action Plans	☐	☐	☐	☐	☐
behaviourally	Recommendations	☐	☐	☐	☐	☐

standards, recommendations, are phrased in a specific manner

Enhancement	**Checklist**		✓
3. **Complete each step of the loop: *Include BCTs consistent with***	☐ Each feedback report includes *at least one* BCT from each cluster of BCTs consistent with Control Theory:		
	Cluster	BCT label	

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Control Theory in <u>each</u> feedback report	1. Setting a goal	Goal-setting (Behaviour)	☐
		Goal-setting (Outcome of behaviour)	☐
	2. Monitoring current behaviour	Self-monitoring of behaviour	☐
		Self-monitoring of outcome of behaviour	☐
	3. Feedback	Feedback on behaviour	☐
		Feedback on outcome of behaviour	☐
	4. Discrepancy	Note discrepancy between behaviour and goal	☐
	5. Adaptation in light of feedback	Action planning	☐
		Problem solving	☐
		Review behavioural goal	☐
		Review outcome goal	☐
4. **How do we compare?** ***Consider multiple comparators***	☐ Multiple comparators included when providing feedback on current clinical practice:		
	- Current performance vs goal/target (i.e. audit standards)		☐
	- Past performance (i.e. as part of a re-audit)		☐
	- Achievable benchmarks (i.e. top 10% of peers; upper quartiles)		☐
	- Like-for-Like comparisons (i.e. hospitals of same sizes, case mixes etc)		☐
	- Different clinical specialities/departments (i.e. gastroenterology vs obstetrics)		☐
	- Regional comparators		☐
	- National median -		☐
5. **Well done!** ***If performance is high/achieving the***	If	Then	☐

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standard, then include a positive message of encouragement	Hospital has <u>achieved the standard</u> (i.e. 100%)	☐ Provide a positive message of encouragement e.g. '*Your hospital has achieved this standard. Well done. This achievement represents the high standard of patient care provided within your hospital, which should be recognised and encouraged. You should consider formulating an action plan to maintain this high standard of patient care.'* Or 'Our hospital's performance has achieved this standard. This achievement represents the high standard of care that we are providing to our patients. We should recognise and encourage this, and formulate an action plan to maintain our high standard of patient care'	
Enhancement	**Checklist**		✓
Mode of Delivery	☐ Feedback primarily provided in visual format (i.e. graphs, charts, tables) rather than text		☐
	☐ Font is: - Large/readable size - Colour red is avoided - Colour is used to emphasise key findings		☐ ☐ ☐
	☐ A consistent layout/structure is adopted in the feedback reports, phrasing sub-headings as questions) [e.g. Level 2 Full Audit Report: for each audit standard,: - State standard - Key finding related to audit standard (How did our hospital perform?) - Comparative data (i.e. How do we compare to other hospitals?) - Statement as to why this standard is important (Why is this standard important?) - Recommendations related to this standard (What should we do next?] -		☐
	☐ Feedback and recommendations are personalised throughout using terms such as 'we' or 'our hospital/staff/patients' rather than 'your hospital'		☐

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