How to do a really effective audit.

Audits in patient identification and blood transfusion policy.

Georges Andreu

Consultant, Dijon, France

Georges.andreu@numericable.fr

Objectives

- Audit definition
- Audit usefulness
- Favorable environment for organizing an audit
- Steps to organize an audit
  - Preparation
  - Selection of audit review criteria
  - Performance measure
  - Search for improvement
  - Sustaining improvements
- Available tools to help building a transfusion audit

Audit definition

- An audit is a systematic examination to determine whether actual activities :
  - comply with planned activities
  - achieve objectives.
- It is the way to test compliance with a frame of reference, consisting of :
  - regulation,
  - guidelines,
  - professional standards.

The need for a favourable environment

- Audit should be considered as a priority by the board of directors of your institution, so that it is encouraged and supported.

- The existence in your institution of a structure dedicated to audits that coordinates this activity is an additional success factor.

Steps for managing an audit

S 1:   Preparation

S 2:   Selection of audit review criteria

S 3:   Performance measure

S 4:   Search for improvement

S 5:   Sustaining improvements

Step 1 : Preparation

Relevance of the topics for the institution

- **Patient identification** is a cross-disciplinary topic, and a complex task to audit.
  - Tip : restrict the audit to the patient identification in the sole blood transfusion process.
- **Transfusion safety** as well as **clinical indication of blood components** are important for most hospital boards of directors, who can expect from an audit :
  - a better care of patients,
  - an improved control of hospital costs.

Step 2 : Selection of audit review criteria

- Audit criteria :
  - explicit statements defining an outcome to be measured.
  - ensure that the data collected are precise
- Local criteria developed in the institution should be used :
  - more likely to be found in the hospital documentation in paper or electronic format.

Step 2 : choice of method -a

Prospective audit

– Information is collected during the process of care.

Pro :

• it enables more complete data collection since errors can be corrected in real time.

Con :

• practice could be altered if personal are aware that their data are collected.

Step 2 : choice of method -b

Retrospective audit

– Data are collected from records of discharged patients.

Pro :

- information is more representative of day-to-day practice = main target for auditing patient identification and transfusion policy.

Con :

- it is more difficult to obtain complete data on every subject in the sample

Step 2 : choice of method -c

Personal advice for a first audit :

– Do a retrospective data collection

– Be cautious not to introduce any recruitment bias :

- Randomize the patients' files to be collected

– Do collect data over a short time period

– Favor the use of criteria that should be met in 100% cases

Stage 3 : Data collection

Data to be collected should be well defined *a priori* and all the tools for data collection ready for use :

- Patients' files to be collected
  - Method of selection
  - Number enabling a minimal descriptive statistics for quantitative criteria (usually no less than 30)
  - Management of missing data
- Data collection documents
  - Always favor extractions from infomation systems
- Persons in charge of data collection

Stage 3 : Data analysis

- The person(s) in charge of data analysis should be defined *a priori*
  - patient identification and transfusion policy
    - Most criteria should be met in 100% of the files.
  - transfusion prescription
    - Criteria may be complex and the analysis will benefit of selected case review by independent investigators.
- Data analysis must be shared with:
  - all the directly involved personal
  - whoever else in the hospital the audit is relevant to as well.

Stage 4: Building an action plan

Action plan for improvement is built with the participation of the personal involved.

Actions may include :

- dissemination of educational materials,
- modification of documentation or SOPs,
- sensitizing tools such as tutorials, regular reminders, etc.

Means and time necessary to implement the action plan should be well defined

Stage 4 : The audit report

The report formalizes the whole audit process :
– Objectives
– Participants
– Organization and methodology
– Frame of reference and timeline from planning to report
– Both positive findings and issues requiring improvement
– Agreed action plan for improvement
– Annexes (audit protocol, user manual, reference sources)

St 5: Sustaining improvement
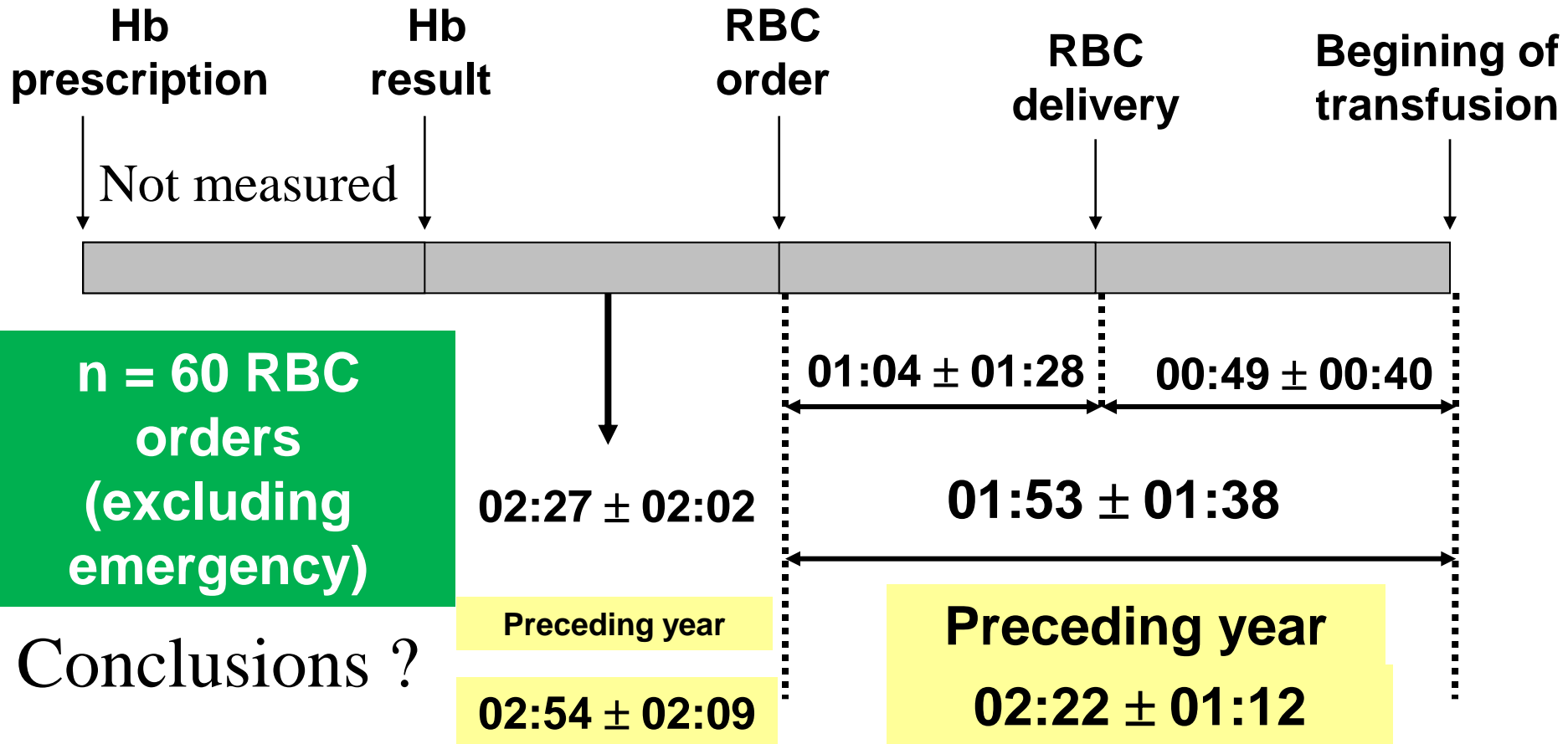
Verify whether changes have had an effect.

- Repeat the audit using the same methodology to ensure it is comparable to the initial.

- The repeat audit will hopefully show that changes have been implemented and improvements made !!

- All the analysis being included in a final audit report.

What can we expect from an audit ?

- Audit can benefit the care of patients by stimulating review and improvement of the way things are done. Audit can :
  - improve understanding of current practice, organization or management (*descriptive audit*),
  - give information about compliance with guidelines (*compliance audit*),
  - give information about the cause of an identified problem (*diagnostic audit*).
- Audit is only useful if it leads to action for improvement.

Exemple of a descriptive audit

Time elapsed from knowledge of transfusion requirement and effective transfusion

| Hb prescription | Hb result | RBC order | RBC delivery | Begining of transfusion |

Not measured

n = 60 RBC orders (excluding emergency)

02:27 ± 02:02

01:04 ± 01:28   00:49 ± 00:40

01:53 ± 01:38

Conclusions ?

Preceding year

02:54 ± 02:09

Preceding year

02:22 ± 01:12

Example of a compliance audit :

Existence of transfusion safety procedures in hospital

Transfusion safety procedures -1

	In your hospital, there are procedures for:	yes	no	na	% "yes"
1	taking informed consent from patient before transfusion	20	1	0	95%
2	taking of patients' pre-transfusion blood samples	21	0	0	100%
3	transportation of pre-transfusion patients' samples	18	3	0	86%
4	pretransfusion testing in the laboratory	19	1	1	90%
5	urgent delivery of red cell concentrates	21	0	0	100%
6	if "yes" to question 5, procedure for urgent delivery without Ab screening / compatibility testing	21	0	0	100%
7	if "yes" to question 5, procedure for urgent delivery without ABO & RH1 testing	21	0	0	100%
8	transportation of blood components from blood bank /blood centre to clinical ward	21	0	0	100%
9	taking delivery of blood components at their arrival in the clinical ward	21	0	0	100%

Transfusion safety procedures -2

	In your hospital, there are procedures for:	yes	no	na	% "yes"
10	patient identification before blood transfusion	21	0	0	100%
11	pre-transfusion checks	21	0	0	100%
12	pre-transfusion bed side tests	21	0	0	100%
13	thawing of FFP	19	0	2	90%
14	Warming blood components	9	12	0	43%
15	controlling transfusion time	15	6	0	71%
16	baseline observation and transfusion monitoring	19	2	0	90%
17	the management of adverse reactions related to blood transfusion	21	0	0	100%
18	traceability of blood components	21	0	0	100%
19	notification of serious adverse events	20	1	0	95%

Example of a compliance audit :

Patient identification and traceability

Patient indentification & traceability

			yes	no	NA	%yes
Patient information and informed consent	1	There is evidence in the patients file that information had been given and/or informed consent for transfusion obtained.	18	31	1	36%
Patient identification and pre-transfusion checks	2	All documents in patient's hospital and blood establishment records show a full concordance of identity (fisrst name, family name, sex, date of birth)	47	3	0	94%
	3	Pre-transfusion checks (documents and / or tests) are recorded in the hospital patient's file	44	5	1	88%
	4	The same blood component identification number is recorded in patient's hospital records and blood establishment records	49	0	1	98%
Traceability	5	In case of prescribed but non transfused blood component, identification number of the blood component unit is documented as such in patient's hospital and blood establishment records	1	0	49	2%

Available tools to help building a blood transfusion audit -1

The Optimal Blood Use Project
http://www.optimalblooduse.eu/

An EU promoted project conducted between 2008 and 2010 by representatives of 18 countries, coordinated by the Scottish Blood Transfusion service.

The manual is translated into French, German, Greek, Italian, Polish, Portuguese and Spanish.

Several frames for auditing transfusion policy, patient wristband management, patient blood sampling and blood component administration practice, are proposed .

Frames for auditing transfusion practice proposed by EU OBU

AUDIT OF TRANSFUSION POLICY

Study Number…………………………………..

Hospital……………………………………………………………………………………………

1. Does your hospital have written policies on blood transfusion practice?   Yes   No

If **YES**   please continue below

2. Does the policy specify details of author, date of issue and date of review   Yes   No

3. Do the staff know where to find the policy   Yes   No

4. Within the document is there a written policy statement on the labeling of blood samples for blood grouping and cross matching?   Yes   No

5. Is there a written policy statement on which staff can take samples for blood grouping and cross matching?   Yes   No

Frames for auditing transfusion practice proposed by EU OBU

PATIENT WRISTBAND AUDIT

This audit will provide you with a snaphot of compliance with the use of a wristband with the essential minimum data set at the time of transfusion within your hospital. Collect data from 10 different transfusion episodes in different clinical areas. Complete each column from the patient's bedside at the time of the transfusion episode. Please write Y for 'Yes' in each column where evidence is found or N for 'No' where there is no evidence present.

Date:_____

Patient	Surg	Gynae	Med	ITU	Other	Does the patient have a wristband on		Does the wristband state full name		Does the wristband state DOB		Does the wristband state Hospital Number		Does the wristband state gender	
						Yes	No	Yes	No	Yes	No	Yes	No	Yes	No

Frames for auditing transfusion practice proposed by EU OBU

AUDIT OF BLOOD TRANSFUSION ADMINISTRATION PRACTICE

This audit will provide you with a snapshot of transfusion practice within your clinical area. Collect data for 12 di column from the patient's bedside at the time of the transfusion episode. Please write **Y** for 'Yes' in each colum there is no evidence present, alternatively **N/A** where the statement is not applicable.

AUDIT QUESTIONS	1	2	3	4	5	6
1. Is the patient an in-patient (admitted to a clinical area at least as an overnight admission?)						
2. Is the patient having the transfusion in an area where they can easily be visually monitored by staff throughout the transfusion episode?						
3. Is the patient conscious?						
4. If conscious, were they asked to confirm their last name, first name and date of birth)?						
Concerning the identification wristband						
1. Is the patient wearing an identification wristband?						
2. If yes, does the wristband contain the patient's surname?						
3. If yes, does the wristband contain the patient's first name?						
4. If yes, does the wristband contain the patient's gender?						
5. If yes, does the wristband contain the patient's date of birth?						

Other frames for auditing transfusion practice proposed by EU OBU

1. Records of blood component use in patient's file, hospital blood bank and/or blood establishment

2. Analysis of blood component use for total hip replacement : data related to the hospital and the general organisation

3. Analysis of blood component use for total hip replacement : patients' data

Examples of audit reports proposed by EU OBU

NHS
Blood and Transplant

**National Comparative Audit
of the Use of Platelets**

East Midland RTC

*Prepared by
John Grant-Casey
Project Manager*

October 2007

National Comparative Audit of Blood Transfusion   **National Blood Service**

Examples of audit reports proposed by EU OBU

Collection of Blood Samples (COBS) data collection carried out on behalf of the International Society of Blood Transfusion (ISBT) Biomedical Excellence for Safer Transfusion (BEST) Committee

Part II Rejected and miscollected samples

Available tools to help building a blood transfusion audit -2

Frame from the French Haute autorité de santé

http://www.has-sante.fr/portail/jcms/c_417448/fr/transfusion-en-anesthesie-reanimation?xtmc=&xtcr=1

17 simple and efficient criteria to audit :

- patient identification,

- transfusion data traceability,

- relevance of clinical indication of RBC in surgery.

This website is useful for those who can read French.

Conclusion

Conducting an audit in Blood transfusion may be complex to organize, due to the fact that independent structures are implied such as :

- hospital,
- blood transfusion centre,
- independent laboratory,
- etc.

However, the available documentation will enable every motivated team to implement successful audits in this field.

Thanks

EU Optimal Blood Use Project members who contributed to the audit section

Shubha Allard (UK), Margarida Amil (Portugal),

Vincenzo de Angelis (Italy), Riin Kullaste (Estonia),

Brian McClelland (Scotland), Simon Stanworth (UK),

Kjell Titlestad (Denmark) and René de Vries (the Netherlands).

French colleagues from hospital blood banks who participated in evaluating several audit frames:

Drs Baledent, Barbut, Benoit, Bertrand, Boyeldieu, Cellard, Chapel,

Chioukh, Combe, Delorme, Didier, Fourcade, Giraud, Grellier, Jan,

Mazataud, Monsaingeon, Rivoire, Siad, Sterckeman, Taupenot;