Empowering transfusion laboratory staff
Why do we need it and what are the barriers to overcome?

Helen Maria
Transfusion Specialist
Obstacles

- Perceived role of the biomedical scientist?
- Support from haematology medical staff
- Transfusion committee and Trust board commitment
Myths to bust!
Myth 1

‘We’re just here to provide a service – no questions asked’
**Better Blood Transfusion**

- Avoid the unnecessary use of blood and blood components in medical and surgical practice

<table>
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<tr>
<th>Objective</th>
<th>Action</th>
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<tr>
<td>Ensure the appropriate use of blood and the use of effective alternatives in every clinical practice where blood is transfused</td>
<td>Implement existing national guidance (see Annex A) on the appropriate use of blood and alternatives</td>
<td>HTC's and HTTs working with clinicians</td>
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|          | Establish local protocols to empower blood transfusion laboratory staff to ensure that appropriate clinical information is provided with requests for blood transfusion. | HTC's and HTTs working with clinicians, pathology managers and blood transfusion laboratories |
|          | Establish local protocols to query clinicians about the appropriateness of requests for transfusion against local guidelines for blood use. | HTC's and HTTs working with clinicians, pathology managers and blood transfusion laboratories |
Patient Blood Management (2014)

- Evidence-based multidisciplinary team approach to optimising the care of patients who might need transfusion
- Focuses on measures for blood avoidance as well as correct use of blood components when needed
- Improves patient care – optimises use of donor blood and reduces transfusion-associated risk
- Reduces financial costs
Where do BMSs fit in to PBM?

• **Collective responsibility to ensure appropriate use of blood:**
  – PATIENT SAFETY
  – Blood conservation
  – Falling blood stocks
  – £££

• Need to be a service which advises **and** challenges to:
  – protect a vital and finite blood supply
  – Help prevent patients receiving inappropriate transfusions
  – Save money
Myth 1

‘We’re just here to provide a service – no questions asked’

MYTH BUSTED!
How do we do this?

• Lab staff should aim to be blood ‘custodians’
  – Collective responsibility, blood stocks, patient safety etc. etc.
• BUT be mindful of urgency and clinical situation and not delay blood provision….
• Review all requests – know the clinical details up front
  – **Active bleeding?** If not:
    • Check for recent results - can ask for blood tests before issue if non-urgent
    • Individual plans for transfusion dependent patients (NICE 24)
      • Single unit transfusions – stable, non-bleeding patients
• Clear guidelines (lab and clinical)
• Support from haematology medical staff, Transfusion Committee, Trust Board backing
**FFP Algorithm**

Is there major life/limb threatening bleeding?
- Yes
  - REFER TO TRUST MAJOR HAEMORRHAGE PROTOCOL
- No
  - Has clotting screen been done?
    - Yes
      - Complies with indications for FFP?
        - Yes
          - Give FFP 15 mls/kg
        - No
          - Refer to Haematologist
    - No
      - Patient bleeding/ needs urgent surgery
      - Suggest Vit K 1-2 mg and repeat INR after 12hrs
      - Patient may need Beriplex® – refer to Haematologist

**Management of Warfarin Reversal**

INR TOO HIGH, NOT BLEEDING
- INR 3 and <6 with target 2.5
- INR 4 and <6 with target 3.5
  - Reduce warfarin dose, or stop warfarin and restart when INR < 5.0
- INR 6-8
  - Stop warfarin, restart when INR < 5.0
  - Consider vitamin K 2 mg oral (use Konakion MM injection)
- INR > 8
  - Reversal in 4 to 24 hours
    - Vitamin K 2 mg oral (use Konakion MM injection) or 1 mg by slow IV injection
  - Reversal within 1 hour
    - Contact haematologist
      - PCC (Beriplex) 30 units/kg

**Urgent Surgery or Procedure**

**Minor Bleeding**
- Stop warfarin
- Consider vitamin K 2 mg oral (use Konakion MM injection) or 1 mg by slow IV injection
- Check clotting screen at 24 hours, or sooner if clinical deterioration

**Significant Bleed without Haemodynamic Compromise**
- Stop warfarin
- Vitamin K 5 mg (use Konakion MM injection) by slow IV injection
- Consider PCC (Beriplex) 30 units/kg (discuss with haematologist)
- Check clotting screen at 4 hours, or sooner if clinical deterioration

**Major or Life Threatening Bleed**
- Stop warfarin
- Contact Haematologist
- Vitamin K 5 mg (use Konakion MM injection) by slow IV injection
- PCC (Beriplex) 30 units/kg
- Major Bleed: Symptomatic bleeding in a critical area or organ, e.g. intracranial, intraspinal, intravascular, intra-articular
- Check clotting screen 20 mins post administration
- If adequate correction, recheck in 4 hours
- If inadequate, discuss with haematologist

**Adult Major Haemorrhage Protocol**

Clinical evidence of major uncontrolled bleeding
- Symptoms BP < 90 mmHg
- Poor response to initial fluid resuscitation
  - Residence
  - High systolic blood pressure
  - Marked tachycardia
- Team leader names consultant, lead, runner
- Keep patient warm, use high flow oxygen
- Permissive hyperfusion strategy: target SBP 80-100 mmHg
- Emergency department
  - Vit D, FFP
  - Abdominal trauma, severe sepsis
  - Haematology or ICU

Communication lead calls: Duty one to declare MAJOR HAEMORRHAGE in location, provide contact number
- Take blood samples: FBC, clotting, KM, biochemistry, Ca²⁺ (ABG)
- Blood Transfusion Lab: 07931 678368
- Request SHOCK PACK A
  - 4 units red cells
  - 4 units blood
  - 1-2 units FFP
  - 1 HES
  - 1 unit platelets
  - 1 tube saved

When patient in Theatre, CONSIDER cell salvage
- Operative field: consider blood salvage
- Check clotting screen 30 mins after cell salvage

Call Blood Transfusion lab to request SHOCK PACK B
- Take further samples: FBC, XM, clotting, blood chemistry, Ca²⁺ (ABG)
- Send runner with samples AND to collect blood components
- Contact on-call haematology medical staff
- When patient in Theatre, consider cell salvage
- Operative field: consider blood salvage
- Check clotting screen 30 mins after cell salvage
Myth 2

‘Doctors know more than us about blood transfusion’
• Clinical transfusion education in medical school and as FY1/2s

• Pick up practice on wards…good and bad
  – Non-haematology consultants & GPs can be ‘out of date’
  – Trainee doctors reluctant to challenge consultant’s authority – this is where you can help...
• Laboratory staff complete lengthy training and education in blood transfusion science

• Annual competencies, CPD programme, NEQAS

• Knowledge extensive in certain areas but lacking in clinical relevance
  – Can offer valuable support and education
  – Can direct to guidelines, haematology advice
Myth 2

‘Doctors know more than us about blood transfusion’

MYTH BUSTED!
Collaboration

- Working together is the key
- Stronger as a team with a common goal – best practice for best patient outcome

**team·work:** (noun) cooperative or combined effort of a group of persons working together as a team for a common cause.
Myth 3

‘I don’t have the authority to challenge’
# Facts

- **Know your rights and responsibilities**
  - **BMS:**
    - HCPC registration – must take responsibility for own actions
  - **Medical staff:**
    - GMC and medical liability insurance - as above, but with extra cover
- **Be aware of your place in the clinical pathway – does the buck stop with you?**
- *Doctors make the difficult decisions and take ultimate responsibility for the patient in their care*
- *You will be held responsible for any avoidable delay in provision which results in patient harm*
So what does that mean?

**THIS IS IMPORTANT**

- You have the authority to challenge a request, but...
- You do NOT have the authority to refuse it

- It’s important they know you aren’t saying ‘No’, you are just seeking advice
- So…if you get a request that doesn't ‘fit’ the guidelines…
Establish clinical urgency immediately

Patient has life-threatening bleeding/trauma/arrest?

**YES**

- Start processing request
- *(bleeding - suggest they declare Major Haemorrhage?)*
- Recommend they discuss with haematologist ASAP
- Take name and number and contact on-call haem medic yourself!

**NO**

- Refer them to relevant Trust guidelines
- Tell them this request must be reviewed by the Transfusion Team and explain how it doesn’t meet Trust guidelines
- Ask for their contact details and aim for a prompt response
Myth 3

‘I don’t have the authority to challenge’

MYTH BUSTED!
Background:

- ‘Delay in appropriate transfusion contributes to death and morbidity in sick patients and is often caused by poor communication between clinicians and laboratory staff’ (Key Message in the 2015 Annual SHOT Report).

- The number of reports of delays causing harm has increased each year (2010-2015).

- There were 94 cases of delays in the 2015 Annual SHOT Report; some patients suffered cardiac arrest. Many delays, 67%, were emergency or urgent requests. There were 6 deaths in which delay contributed and 5 cases of major morbidity, 2 in major obstetric haemorrhages.

Common Reasons:

Communication Failure contributed in 25% of delays reported (SHOT 2015-16):

Key Messages:
Desire to follow good transfusion practice in some areas, if taken out of context, may risk patient death or morbidity due to delays in transfusion in MH scenarios.

Examples include:

- avoidance of unnecessary use of O D- at all
- giving 2 units of O D- only and no more permitted while a patient’s sample is tested for ABO group, or a 2nd group check is awaited, or a discrepancy in patient identification means that a repeat sample is needed
- withholding any blood as the antibody screen is positive but antibody identification is not yet known
- avoiding wastage

In all these scenarios, there are safety concerns, but if clinical harm to patients from withholding blood outweighs these, then emergency blood is essential and should be offered (e.g.: O D-, O D+, group specific, or ABO full Rh & K matched, depending on the scenario).

- Treat all MH calls as emergencies until proven otherwise
To achieve this?

- Guidelines must be pragmatic and comprehensive, well evidenced – NICE, BSH
- Accessible to lab staff & medical staff
- Medical staff must know the lab staff will challenge requests
  - Medical induction/teaching
  - Governance meetings etc.
- Good education for medical staff
- Changes hospital perception of labs
  - Will start asking labs for advice
  - Supportive service
- AfC banding
What if things get heated?

- Empathise – you do not have the patient in front of you
- It takes two...try not to get sucked in
- Always be polite and calm, constructive and helpful
- This is where robust guidelines help
- Take their name and contact number
- Document *everything*

PASS IT ON TO A HAEMATOLOGIST

REMEMBER: *no-one* has the right to be rude or abusive
- there is a *patient* at the end of this – it’s not about you
- *We’re all on the same side* – common goal
Essentials for an empowered blood transfusion lab?

✓ Educated, competent, supported and motivated team of BMSs
✓ Enthusiastic blood transfusion manager and TT
✓ Clear guidelines for use of all components
✓ Supportive haematology medical team
Thanks!
Any questions?