Empowering transfusion laboratory staff

Why do we need it and what are the barriers to overcome?

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Obstacles

- What is the role of a biomedical scientist?
- Input from senior BMS colleagues
- 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 3

DH Department of Health

Health Service Circular

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Better Blood Transfusion
Safe and Appropriate Use of Blood

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

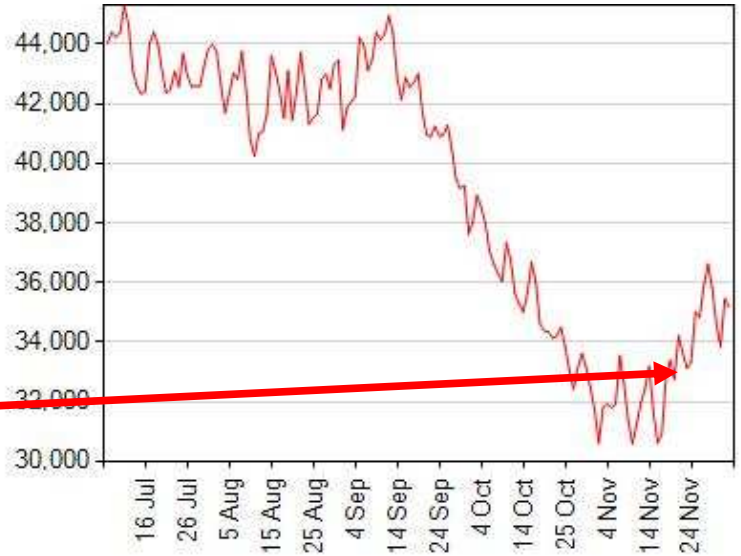
Objective	Action	By whom
Ensure the appropriate use of blood and the use of effective alternatives in every clinical practice where blood is transfused	▲ Implement existing national guidance (see Annex A) on the appropriate use of blood and alternatives	HTCs and HTTs working with clinicians
	• Establish local protocols to empower blood transfusion laboratory staff to ensure that appropriate clinical information is provided with requests for blood transfusion.	HTCs and HTTs working with clinicians, pathology managers and blood transfusion laboratories
	• Establish local protocols to empower blood transfusion laboratory staff to query clinicians about the appropriateness of requests for transfusion against local guidelines for blood use	HTCs and HTTs working with clinicians, pathology managers and blood transfusion laboratories

Patient Blood Management

- 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:
  - Blood conservation
  - Falling blood stocks
  - PATIENT SAFETY



- Need to be a service which advises and challenges to:
  - protect a vital and finite blood supply
  - Help prevent patients receiving inappropriate transfusions

Myth 1

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

How do we do this?

- Lab staff should aim to be ‘gate keepers’
  - Collective responsibility, blood stocks, patient safety etc. etc.
- BUT be mindful of urgency and clinical situation and not delay blood provision….tricky!

- Review all requests – know the clinical details up front
  - Active bleeding? If not:
    - Check Hb
    - Check clotting for FFP
    - Demand blood tests before issue if non-urgent
- Clear guidelines (lab and clinical)
- Good support from haematology medical staff
- Transfusion Committee help
- Trust Board backing

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FFP Algorithm

Is there major life/limb threatening bleeding?

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

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BLOOD COMPONENT USE - A GUIDELINE

Use of Red Cells

RUH transfusion thresholds

Healthy stable <65yrs	70 g/L
Healthy stable >65yrs	80 g/L
Cardiac/cerebral disease	90 g/L
Symptomatic	100 g/L
Chemotherapy	100 g/L
Active bleeding	100 g/L

Use of Platelets

Prophylactic	***(x10⁹/L)***
Stable transient BM failure	10
Stable long term BM failure	only if bleeding
The above with risk factors for bleeding (e.g. fever)	20
Minor surgical procedure	50
Major surgery, epidural removal/insertion, liver biopsy	80
Ops in critical sites (brain, eyes, CNS)	100
Therapeutic	
Active bleeding	50
Massive transfusion	50

(recommend seek haematologist advice, esp. junior staff)

Use of Fresh Frozen Plasma

- All requests for FFP must adhere to BCSH* guidelines
- All requests, excluding those involving major life-threatening bleeding, that do not comply must be discussed with a Haematologist

Indications

- ***Reversal of Warfarin only if major bleeding or emergency surgery imminent (if Beriplex® unavailable or inappropriate – d/w Haematologist)***
- ***Acute DIC based on coagulation tests***
- ***Massive Transfusion***

Use of cryoprecipitate

Indicated in acute DIC where fibrinogen <1.5 g/L
Used in Declared Major Haemorrhage where fibrinogen <2.0 g/L

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ADULT MAJOR HAEMORRHAGE PROTOCOL

Clinical evidence of major uncontrolled bleeding
Systolic BP < 90 mmHg
Poor response to initial fluid resuscitation

- **Team leader** nominates **Communication lead, Runner**
- Keep patient warm; use high capacity fluid warmer
- Permissive hypotension strategy: Systolic BP 80-100 mmHg
  (exceptions: severe head injuries; the elderly, ischaemic heart disease, pregnancy)

Consider early use of:
Tranexamic acid (dose difference in obstetrics – check obs N'thage protocol)

- 1 g IV over 10 min
- IV infusion 1 g over 8 hours

Emergency O RhD Neg blood
2 adult units in blood fridges in ED, South & Central fridges, 3 adult & 1 paed in P&W theatres fridge

- Communication lead calls **Switchboard 2222** to declare **MAJOR HAEMORRHAGE** in **LOCATION**; provide best **CONTACT NUMBER**
- **Take blood samples**: FBC, clotting, XM, biochemistry; Ca^{2+} (ABG)
- Runner transports samples to laboratory
- *Runner waits in lab for blood**

Blood Transfusion Lab
x4735/4734
Mon-Fri 09:00-17:20
or **BLEEP 7555**
out of hours| w/ends| BHols

- **Blood Transfusion Laboratory** calls Comms lead on given number
- Give them full patient details - MRN essential for blood issue
- Provide full clinical picture
- Give them **YOUR name, location and CONTACT NUMBER**
- Request **SHOCK PACK A** – **Runner to collect*

SHOCK PACK A

- **4 units suitable* red cells**
- **4 units suitable* FFP**
- *(*lab to select based on whether blood group known)*

Communicate stand down ← No ← Continuing blood loss?
Continuing blood loss? → Yes

Lab prepares shock pack B after issuing A

Myth 2

‘Doctors know more than us about blood transfusion’

- Transfusion education in medical school?
- F1/F2s taught on induction…
- Pick up practice on wards…good and bad
- Consultants out of date
- Outside Haematology, small part of clinical knowledge
- They need support

- Laboratory staff complete lengthy training and education in blood transfusion
- Annual competencies, CPD programme
- Quality assurance
- Knowledge extensive in this area
- Can offer valuable support and advice

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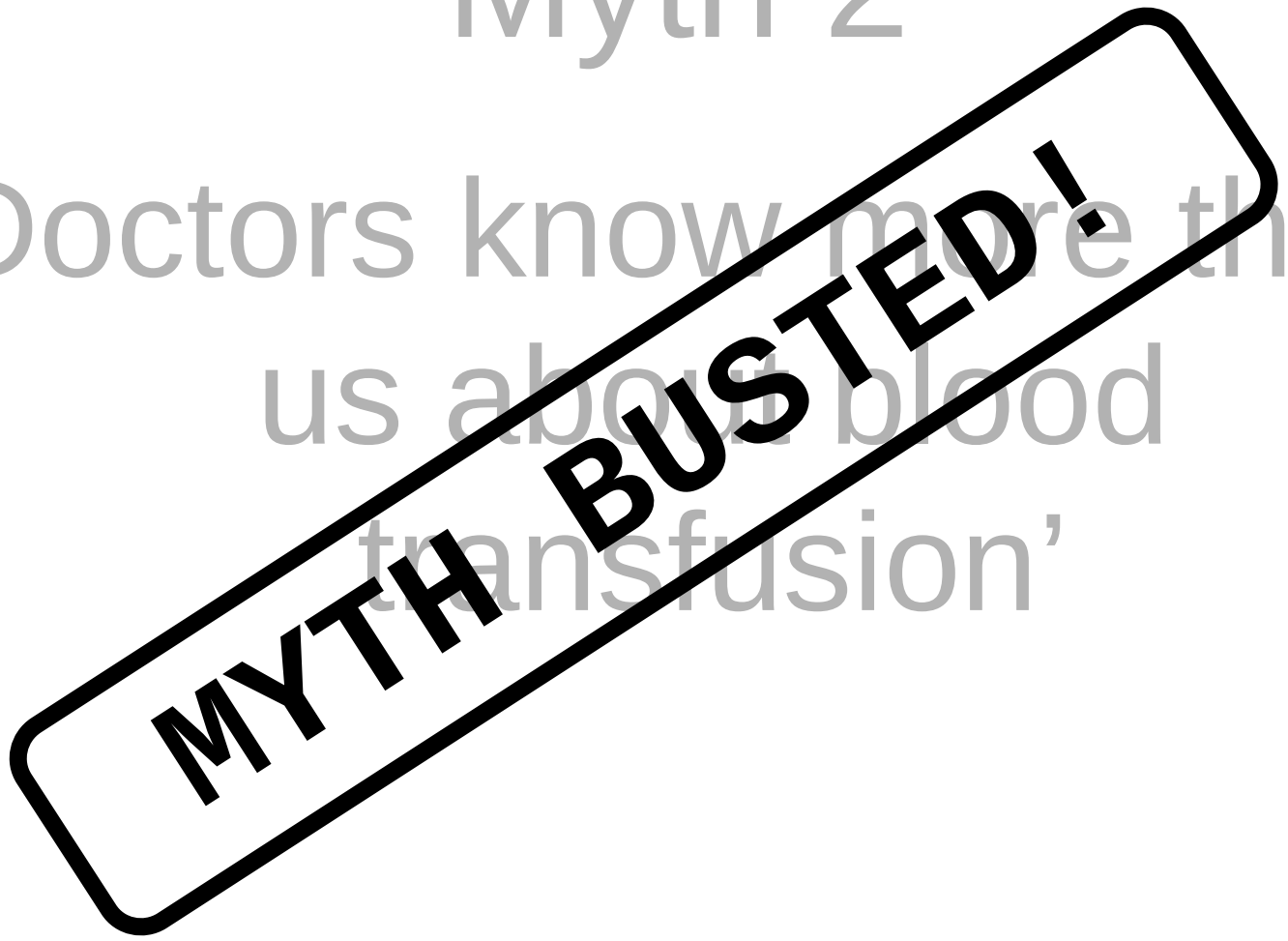

Myth 3

‘I don’t have the authority to challenge’

Facts

- Be aware of your position in the clinical pathway – does the buck stop with you?
- Know your rights *and* responsibilities
- BMS: HCPC registration – must take responsibility for own actions
- Medical staff: GMC and medical liability insurance
  - Doctors are paid to make difficult decisions and take ultimate responsibility for their patient
  - Your medics will make the difficult decisions

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
- So…if you get a request that doesn't 'fit' the guidelines…(and the patient isn't *in extremis**)
  - Challenge it by referring them to trust guidelines
    - And if necessary…
  - Pass it up
    - Haematology medical team
    - Transfusion team
  - Act on advice

*pass details on after you've issued the request

To achieve this?

- Guidelines must be pragmatic and comprehensive, well evidenced
- Accessible to lab staff
- Accessible to 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

Myth 3

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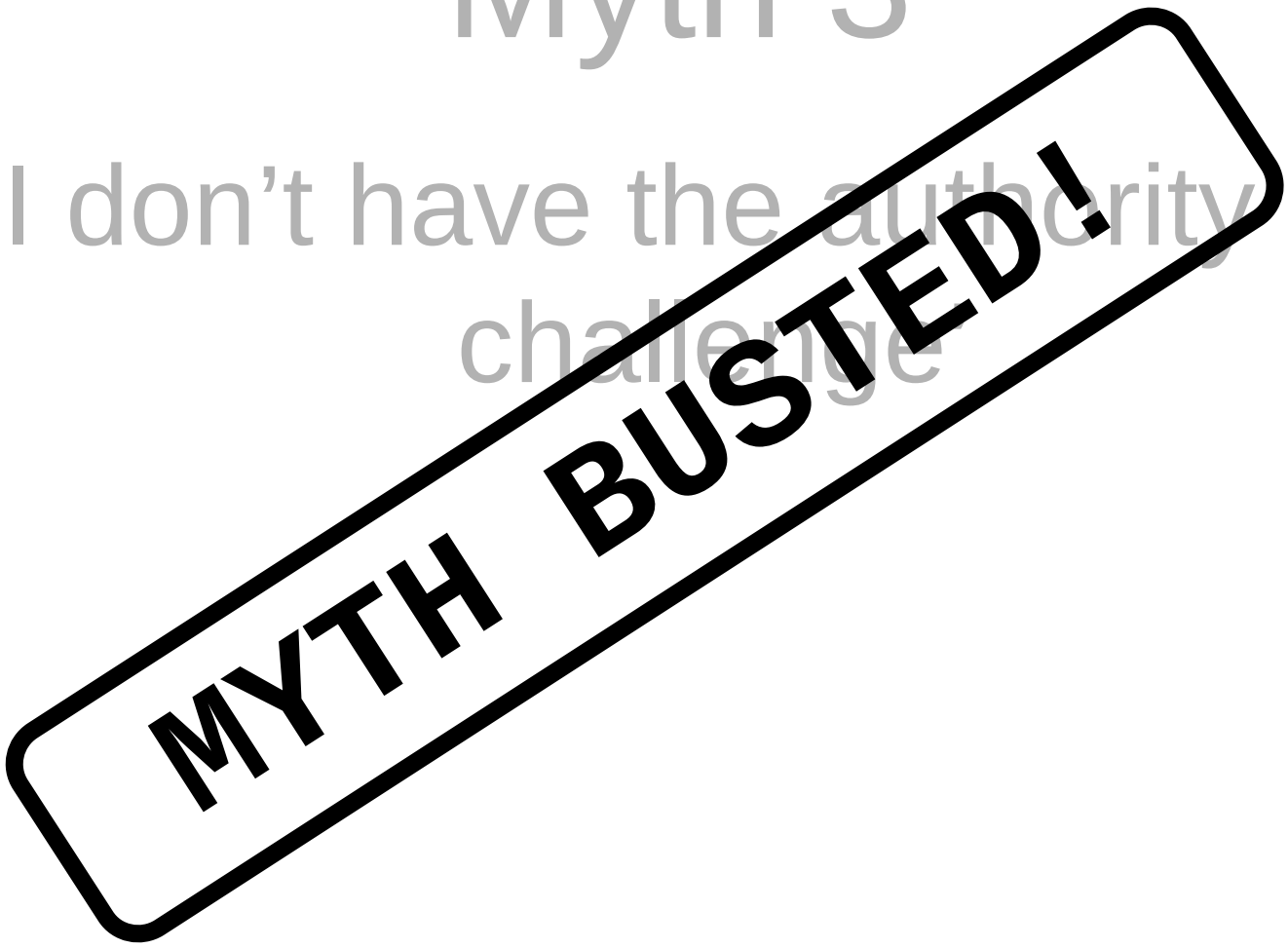

What if things get heated?

- Empathise
- It takes two…try not to get sucked in
- Always be polite and calm
- Try to be constructive and helpful
- This is where robust guidelines help
- Take their name and contact number
- Document everything

PASS IT ON TO A HAEM MEDIC

REMEMBER: no-one has the right to be rude or abusive

- there is a patient at the end of all this – it's not about you
- We're all on the same side – common goal
- You are part of a team – you will be supported by them

Essentials for an empowered blood bank?

- ✓ Educated, competent, supported and motivated team of BMSs
- ✓ Enthusiastic blood bank manager and TT
- ✓ Excellent clear guidelines for use of all components
- ✓ Supportive haematology medical team

Thanks!

Any questions?