Do nurses need to know ABO compatibility for blood components?

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YES - All professionals involved in the transfusion process need to know ABO compatibility for blood components

- To know and understand ABO compatibility is to know and understand the consequences of an incompatible blood transfusion.
Never Events list 2018

**Never Events** are serious, largely preventable safety incidents that should not occur if the available preventative measures are implemented.

- **General**
- 10. Falls from poorly restricted windows
- 11. Chest or neck entrapment in bed rails
- 12. Transfusion or transplantation of ABO-incompatible blood components or organs
- 13. Misplaced naso- or oro-gastric tubes
- 14. Scalding of patients
- 15. Unintentional connection of a patient requiring oxygen to an air flowmeter
The most common cause of death from a blood transfusion is a clerical error in which an incompatible type of ABO blood is transfused.

Dean L. Bethesda (MD): National Center for Biotechnology Information (US); 2005

In 2017, 317/342 potential ABO errors resulted from wrong blood in tube (WBIT)

Human factors errors account for 85.5% of all reported incidents during 2017.

https://www.shotuk.org/resources/current-resources/

These and other incidents described demonstrate that staff involved in transfusion do not check compatibility properly at the time of transfusion. Staff must not assume that the bag in their hands is necessarily safe. Compatibility check is one of the essential steps in the bedside check (BSH Robinson et al. 2018, DH 2017).
• An ABO mix up could happen anywhere in the transfusion process

• Pre-administration check is the last check point in the transfusion chain

• The checker needs to know if the blood component is incompatible with the patients group
Training and application of knowledge result in

The number of ABO–Incompatible red blood cell transfusions being reduced.
Blood Components

• **Fresh Frozen Plasma, Platelets, Cryoprecipitate**
  Reaction: antibodies in donor unit lyses patients red cells – limited to donor antibodies present

• **Red Blood Cells**
  Reaction: patients antibody lyses donor red cells. Systemic response – more antibodies produced
Blood Components

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73% of transfusion are for Red Cells
SHOT Report 2017

Evidence

• ABO-incompatible red cell transfusion n=1
• ABO incompatible FFP transfusion n = 4
• ABO incompatible platelet transfusion n = 1

Key recommendation 1

• Training in ABO and D blood group principles is essential for all laboratory and clinical staff with any responsibility for the transfusion process. This should form part of the competency assessments

Action: Hospital Chief Executives and Medical Directors, National Blood Transfusion Committee, Hospital Transfusion Teams
Transfusion Education

• Most Safe Transfusion presentations and Transfusion E-learnings include ABO RED CELL compatibility training since first SHOT recommendations

• Reported attempts at explaining the converse FFP/ Platelet ABO compatibility have led to confusion on overall compatibility
Tools to ensure the nurse knows ABO compatibility

Accepting FFP/ Platelet ABO compatibility have led to confusion on overall compatibility, nurses have a responsibility to ensure a knowledge base

A knowledge base is defined as a library of information about a service, product, topic or department that is designed to provide self-serve help

Nurses MUST have the knowledge as to where and how to source FFP/ Platelet ABO compatibility

– could be in this format, with accessibility to all with in the ward/ department / unit.

<table>
<thead>
<tr>
<th>Patient ABO D blood group</th>
<th>Compatible RED CELLS</th>
<th>Compatible FRESH FROZEN PLASMA / OCTAPLAS / CRYOPRECIPITATE</th>
<th>Compatible PLATELETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown</td>
<td>O</td>
<td>AB, A*, B*</td>
<td>AB, A*, B*, O*</td>
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<tr>
<td>O</td>
<td>O</td>
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<td>Pos or Neg</td>
</tr>
<tr>
<td>Neg#</td>
<td>Neg#</td>
<td>Not applicable</td>
<td>Neg#</td>
</tr>
</tbody>
</table>
NMC code of conduct

• Practise effectively
  – You assess need and deliver or advise on treatment, or give help (including preventative or rehabilitative care) without too much delay and to the best of your abilities, on the basis of the best evidence available and best practice. You communicate effectively, keeping clear and accurate records and sharing skills, knowledge and experience where appropriate.
Nurse role

• Always practise in line with the best available evidence

To achieve this, you must:

6.1 make sure that any information or advice given is evidence-based, including information relating to using any health and care products or services
Nurse/patient client relationship

• This relationship is based on honestly and trust, how can the nurse meet the responsibility of this relationship without being able to answer the question

‘Nurse, why can I only get one type of blood, when Mary in the next bed says she have any type!?’

‘Nurse, what happens if I get the wrong blood?’
Do nurses need to know ABO compatibility for blood components?

YES

The NMC code of conduct and nurse patient relationship demand it!!
A Blood Type Personality
Clever, passionate, sensitive, and cooperative.
Loyal, patient, and they love peace.
Sometimes, they may be overly sensitive.
Careful decision makers,
Not good at multi-tasking, as they prefer to handle one task at a time.
Very organized, and they do not like haphazard actions. Keep everything neat and in the right place.
Plan everything, and every task that they engage in is carried out with a lot of consistency and seriousness.

B Blood Type Personality
Creative
Make decisions very quickly
Not good at taking orders.
When they focus on something, they put their all into it, and they are unlikely to let go even if the goal is unachievable.
They have a very strong drive or desire to be the best at anything that they have set their minds to do.
Nevertheless, they are poor at multi-tasking, and they are likely to neglect other important tasks and put all their focus on whatever they have set their mind on at the moment.

AB Blood Type Personality
Blood type AB is a mix of A and B personality types. People consider them complicated and double-sided. For instance, they can be outgoing just like Bs and shy like As. At times, people view them as having double personalities, and they keep their true personalities from strangers. It is hard for a stranger to instantly decide which personality people with blood type AB have until they get to know them. They are the rarest blood types in the world.
Popular and charming
Fun and exciting
Small stuff does not them
Poor in handling stress.
ABs are empathetic, and they are always careful when dealing with others. They make sure that they consider other people’s point of view. People with blood type have exceptional logical and analytical skills, and they are seen as humanists.

O Blood Type Personality
Outgoing, go-getters, and daring
They usually set high standards for themselves, and they do all they can to achieve them.
Have excellent leadership capabilities. Little things do not concern them, and this makes them appear as selfish to people in blood group A who are overly sensitive.
Generous and kind-hearted.
Adapt well to change
They are flexible and resilient and can do relatively well even in tough situations.
Self-determined, easygoing, optimistic, calm, confident, outgoing, loyal, cautious, passionate.
Are also jealous, rude, ruthless, insensitive, unpunctual, unpredictable, cold, self-centered, workaholic, and arrogant.
They are honest people and hate people who tell a lie or hide the truth. People with this blood type are not overly cautious about small details, as they tend to focus more on the big picture.
Other resources to ensure the nurse knows ABO compatibility

- Blood Bank staff 24/7 cover for queries
- Policy charts
- Bedside/ Clinical Area chart