


Transfusion Associated Circulatory Overload (TACO)

An Overview

SNBTS
Transfusion
Team
July 2023



What is Transfusion Associate Circulatory Overload (TACO)?

TACO is a potentially preventable pulmonary complication of transfusion

TACO is defined as **acute or worsening respiratory compromise** and/or **acute or worsening pulmonary oedema** during, or up to, 12 hours[†] of transfusion, with additional features including cardiovascular system changes not explained by the patient's underlying medical condition; **evidence of fluid overload** and a relevant biomarker

TACO is the leading cause of transfusion related death and serious harm!

[†]SHOT accepts cases up to 24 hours of transfusion

Where does TACO occur?

TACO is more commonly reported in elderly, non-bleeding patients but is seen across all age groups

There is an increased risk of TACO in lower-weight patients

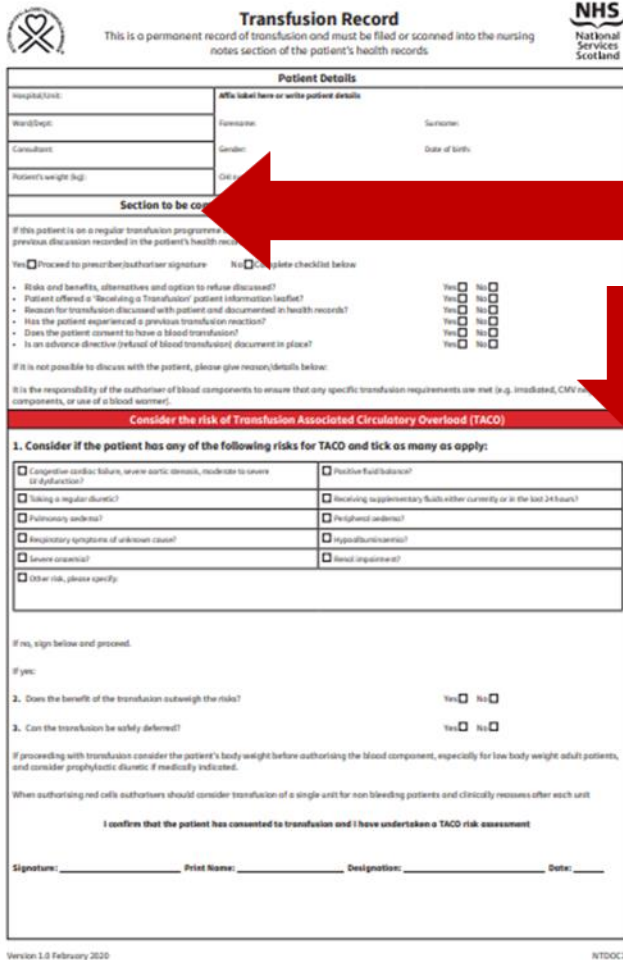
TACO was reported more in adult female patients compared to male

Adult medical specialties and haematology continue to be the most common specialties where TACO is recorded

Think: HEART – LUNGS - FLUID

How to reduce the risk of TACO

Think: HEART – LUNGS - FLUID



Transfusion Record
This is a permanent record of transfusion and must be filed or scanned into the nursing notes section of the patient's health records.

NHS National Services Scotland

Patient Details
All to label here or write patient details

Ward/Dept: _____ Room No: _____ Suite No: _____
 Consultant: _____ Gender: _____ Date of birth: _____
 Patient's weight (kg): _____ Other: _____

Section to be completed

If this patient is on a regular transfusion programme, a previous discussion recorded in the patient's health records:

Yes Proceed to prescribe/authorise signature No Complete checklist below

- Risks and benefits, alternatives and option to refuse discussed? Yes No
- Patient offered a 'Recalling a Transfusion' patient information leaflet? Yes No
- Reason for transfusion discussed with patient and documented in health records? Yes No
- Has the patient experienced a previous transfusion reaction? Yes No
- Does the patient consent to have a blood transfusion? Yes No
- Is an advance directive (refusal of blood transfusion) document in place? Yes No

If it is not possible to discuss with the patient, please give reason/details below:

It is the responsibility of the authoriser of blood components to ensure that any specific transfusion requirements are met (e.g. irradiated, CMV negative components, or use of a blood warmer).

Consider the risk of Transfusion Associated Circulatory Overload (TACO)

1. Consider if the patient has any of the following risks for TACO and tick as many as apply:

<input type="checkbox"/> Congestive cardiac failure, severe aortic stenosis, tricuspid or aortic regurgitation?	<input type="checkbox"/> Positive fluid balance?
<input type="checkbox"/> Taking a regular diuretic?	<input type="checkbox"/> Receiving supplementary fluids either currently or in the last 24 hours?
<input type="checkbox"/> Pulmonary oedema?	<input type="checkbox"/> Peripheral oedema?
<input type="checkbox"/> Respiratory symptoms of unknown cause?	<input type="checkbox"/> Hypoalbuminaemia?
<input type="checkbox"/> Severe anaemia?	<input type="checkbox"/> Blood impairment?
<input type="checkbox"/> Other risk, please specify: _____	

If no, sign below and proceed.

If yes:

2. Does the benefit of the transfusion outweigh the risks? Yes No

3. Can the transfusion be safely deferred? Yes No

If proceeding with transfusion consider the patient's body weight before authorising the blood component, especially for low body weight adult patients, and consider prophylactic diuretic if medically indicated.

When authorising red cell authorisers should consider transfusion of a single unit for non-bleeding patients and clinically reassess after each unit

I confirm that the patient has consented to transfusion and I have undertaken a TACO risk assessment

Signature: _____ Print Name: _____ Designation: _____ Date: _____

Version 1.0 February 2020 INTDCC1

Complete Pre transfusion risk assessment

Record **patient's weight**

Complete **TACO checklist**

If the risk of TACO is identified then the risk of continuing with the transfusion must be balanced against not giving the transfusion

Avoid unnecessary transfusion where possible

Where present replace any haematinic deficiency e.g., B12, iron, folic acid

How to reduce the risk of TACO

- Ensure appropriate dose of red cells (for non bleeding patients consider manual or online dose calculator based on patients weight or

Think TACO: Think about choosing one

- Transfuse maximum of one unit of Red Cells at a time for non bleeding adult patients and clinically reassess after each unit
- Consider giving a prophylactic diuretic if there are no contraindications

Example of weight-adjusted red cell dosing implemented in clinical practice www.rcdcalculator.co.uk



How to recognise clinical signs of TACO

- New breathing difficulties
- Increased Oxygen requirement during transfusion
- Pulmonary oedema
- Cardiovascular changes: raised Blood Pressure, tachycardia

If your patient experiences any of these up to 24hrs of transfusion, then **assess for a pulmonary complication of transfusion or allergic reaction**

Note that Pulmonary oedema can be a sign of TACO or TRALI

The Clinical Flowchart for the Management of Acute Transfusion Reactions in the **National Transfusion Record** will guide you

Record any Serious Adverse Reaction such as TACO to your organisations Risk Management System e.g., Datix

Consider downloading the NHSBT BloodAssist App <http://www.bloodassist.co.uk/>