

SAFE BLOOD TRANSFUSION PROCEDURE IN CLINICAL SETTINGS



2018.1. 23

Kazuki Miyazaki, RN, BSN

Bureau of International Health Cooperation,
National Center for Global Health and Medicine

Care, Commitment, Communication for a Healthier World







NCGM

Name

[National Center for Global Health and Medicine](#),
National Research and Development Agency

Mission/
Basic policy

The Center Hospital provides the best general healthcare services to overcome diseases and improve health with the aim of contributing to society.

No. of
hospital beds

781 beds

Clinical
Departments

43 departments

No. of
doctors

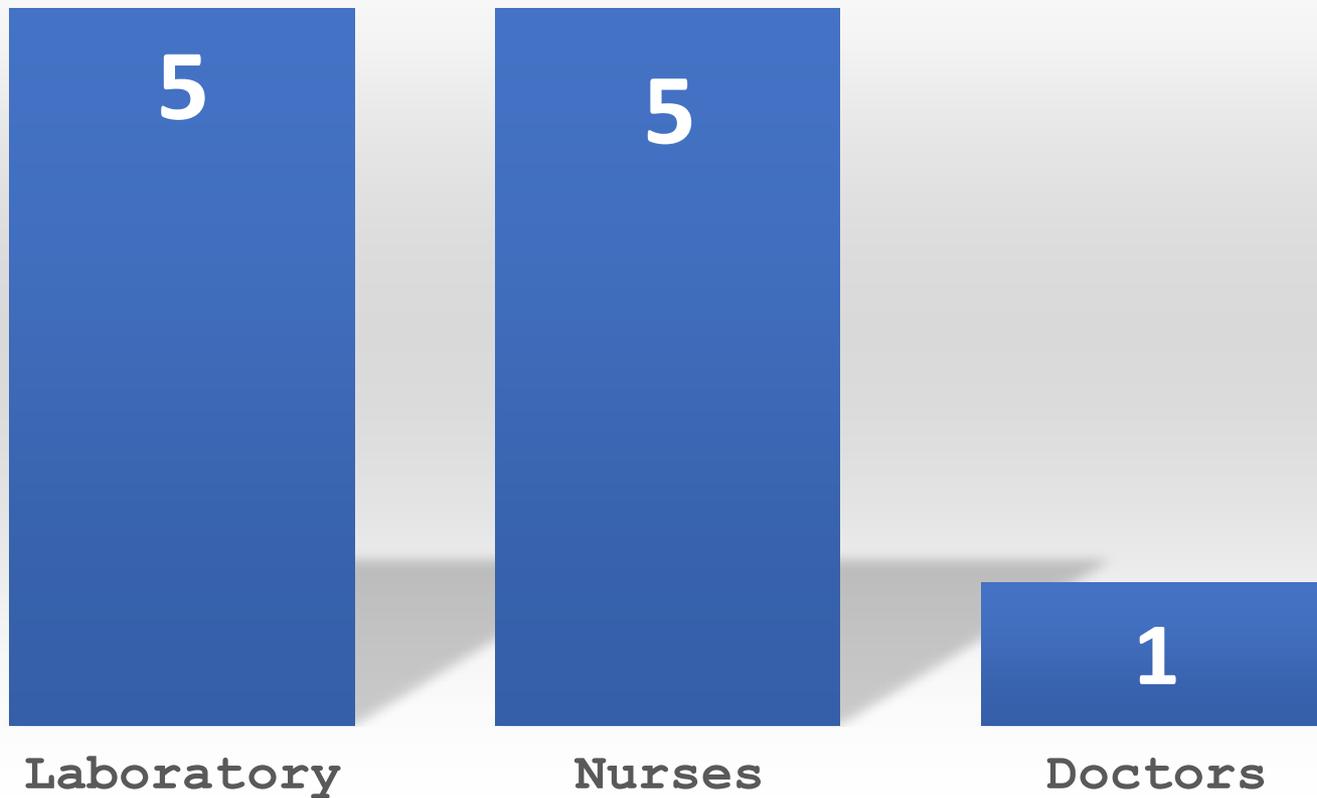
469 doctors

No. of nurses

698 nurses



No. of reported incident related to Blood Transfusion in 2017



Types of incidents reported

Serial No. mistake for autologous blood

Incorrect entry of blood type judgment

Ordering blood products for **another patients**

Administration by **wrong flow rate**

Administration **without pre-medication**

Administration using normal IV set **but not BT IV set**

Administration **without IC form**

A case in Japan;
Man died with **transfusion mistake**



Different blood type was given to a man injured traffic accident at ER, and the man died 3 hours later.



Preparation flow of Blood Transfusion in Hospital

Blood bank (Red Cross) provides the blood products.



Provision



Order

Laboratory in hospital manage and stock the amount of blood products.



Doctor decide patient need Blood transfusion

Explain Patient and obtain Informed Consent

Order Blood type test

Identify patient Blood type

- ABO
- Rh
- Irregular antibody

Order appropriate Blood product by doctor

Preparation for the Blood product @ Lab.

- Cross match test

Ready for use Blood product

- Call to doctor or nurse

Receive Blood product from Lab.

- Double check Blood product

Administration for patient

- Double check Blood product

Explain the procedure and obtain consent form from the patient.



Information about Blood Transfusions

1. What is a blood transfusion?

- A blood transfusion is an important therapy that is used to replenish each of the blood components (such as red blood cells, platelets, protein components, and blood coagulation factors) when their function or amount is reduced.
- A blood transfusion can have a certain degree of risk. It is, therefore, used only when we expect good results.

2. Indications for blood transfusions

- When a patient cannot produce enough blood by himself/herself.
- When a patient's life is threatened by massive bleeding caused by disease, surgery or an injury.

3. Blood products for each blood component

- "Red cell products" are used when a patient has anemia, which is a deficiency in red blood cells.
- "Platelet products" are used when platelets, which play an important role in stopping bleeding, are deficient.
- "Plasma products" are used when blood coagulation factors are deficient or circulating plasma volume is reduced.
- "Whole blood products", which contain all of the blood components, are used when a patient has massive bleeding or is in shock.

4. Options for blood transfusions

- If drugs are available for treatment, we may observe the patient's condition without giving a blood transfusion.
- There are two types of blood transfusion: allogeneic transfusion, which uses donated blood from other people, and autologous transfusion, which uses one's own blood.
Allogeneic transfusion • • • In principle, only necessary blood components are transfused using blood products provided from the Japanese Red Cross, such as red cell products, platelet products, or fresh frozen plasma. In principle, allogeneic transfusion starts with a minimal volume of the necessary components.
Autologous transfusion • • • A patient's own blood is collected before surgery and no adverse reactions will occur when the patient receives the transfusion.
Autologous transfusion is, however, usually limited to patients expecting surgery, whose general condition is good, and who do not have complications, such as infection. Therefore, not all patients can have this type of transfusion. If blood loss is massive, allogeneic blood may be used in combination with the patient's own blood.

- For blood transfusions, in principle, only the necessary blood components are used.

Consent Form for Blood Transfusion

If you agree to have a blood transfusion, please sign below.

I have received a thorough explanation about blood transfusions and their risks by reading "Information about Blood Transfusions", and I understand the content. I have also confirmed the details described below in the "types and amount of scheduled blood transfusions". As a result, I agree to have a blood transfusion. (Even after you sign, you can withdraw your agreement at any time.) I also agree that my blood transfusion may be cancelled based on my doctor's decision, and that the details of my blood transfusion may be changed from those described below in the "types and amount of scheduled blood transfusion" based on my doctor's decision in case of a life-threatening emergency or if my doctor decides that a blood transfusion is necessary during my treatment.

■ Types and amount of scheduled blood transfusion

1. Types: My own blood Red cell products Platelet products
 Fresh frozen plasma Other ()
2. Amount: _____ (ml)

Date of agreement (YYYY/MM/DD): _____ / _____ / _____

Patient's name : _____ (print)

Patient's signature : _____

Patient's address : _____

Representative's name : _____ (print)

Representative's signature : _____ (relationship to patient: _____)

Representative's address : _____

If you refuse to have blood transfusion, please read the following statement. If you understand it, please sign below.

I have received an explanation of the necessity of a blood transfusion; however, I refuse to have a blood transfusion. I will not hold my doctor or hospital liable regarding the consequences of my decision.

Date of signature (YYYY/MM/DD): _____ / _____ / _____

Patient's name : _____ (print)

Patient's signature : _____

Patient's address : _____

Representative's name : _____ (print)

Representative's signature : _____ (relationship to patient: _____)

Representative's address : _____

I provided the explanation about blood transfusion to the person who signed above.

Date of explanation (YYYY/MM/DD): _____ / _____ / _____ Department: _____

Attending doctor: _____ Seal

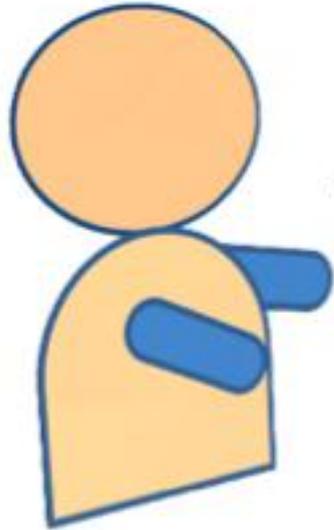
I confirm that the patient (or his/her representative) above has agreed or refused to have a blood transfusion by signing this document.

Date of confirmation (YYYY/MM/DD): _____ / _____ / _____ Department: _____

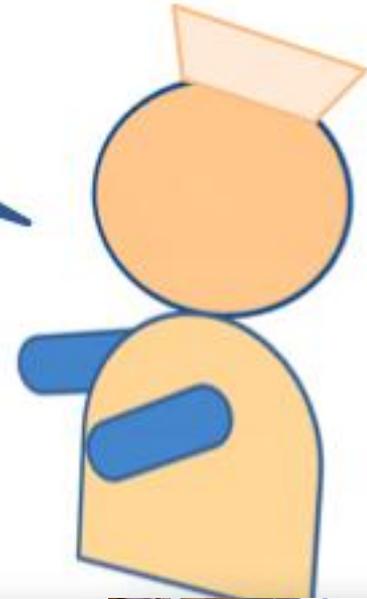
Attending doctor: _____ Seal

*If the patient is a minor who does not have the ability to agree, or cannot agree and sign because of a lack of consciousness or other medical condition, the signature in the "Representative" section above must be provided by a parent, guardian, responsible adult, or relative.

Supply blood products from BT preparation room



Taro Yamada
RBC 2 units
123-456-789



**Double check with suppliers
(lab. Technicians) and
receivers (nurses).**



Check the blood product



Staphylococcus aureus

- Leaking
- Coagulation
- Abnormal color
- Patient name, ID

Orders:

- Formulation
- Unit
- Flow rate
- Pre & Post medication
- Consent form

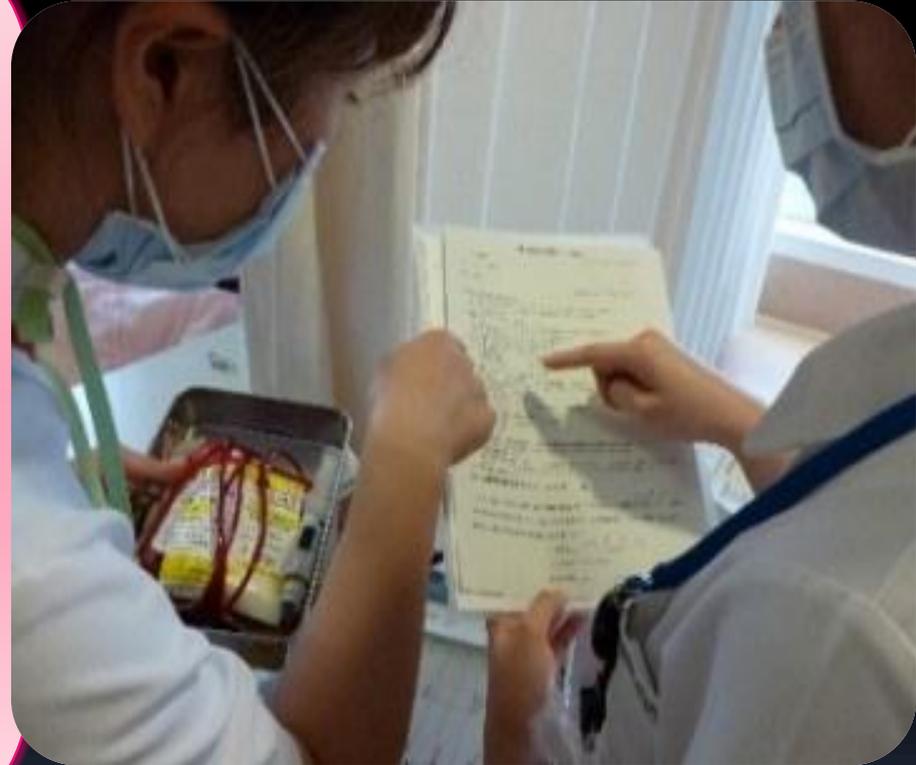


Select appropriate IV line set



@ the Patient bedside

1. Name
2. Blood type(ABO &Rh)
3. ID
4. Blood product/amount
5. Pack number
6. Transfusion day
7. Irradiation
8. Final expiration date
9. Doctor's orders



Identify the patient

Patient

My name is Taro Yamada.
Blood type is AB Rh +

Nurse A

Please tell me your name and blood type

Check the patient information from

1. PC or PDA
2. Ordered paper
3. The label on the blood product

Mr. Taro Yamada
Blood type is AB +

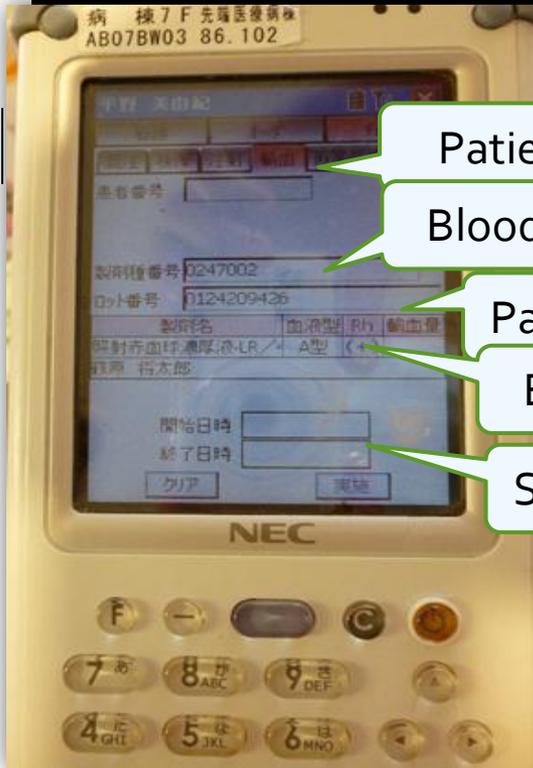
ID number is 1234567

Nurse B



Mr. taro Yamada
Blood type is AB +

ID number is
1234567



Patient ID

Blood product number

Pack number

Blood product

Start / finish time

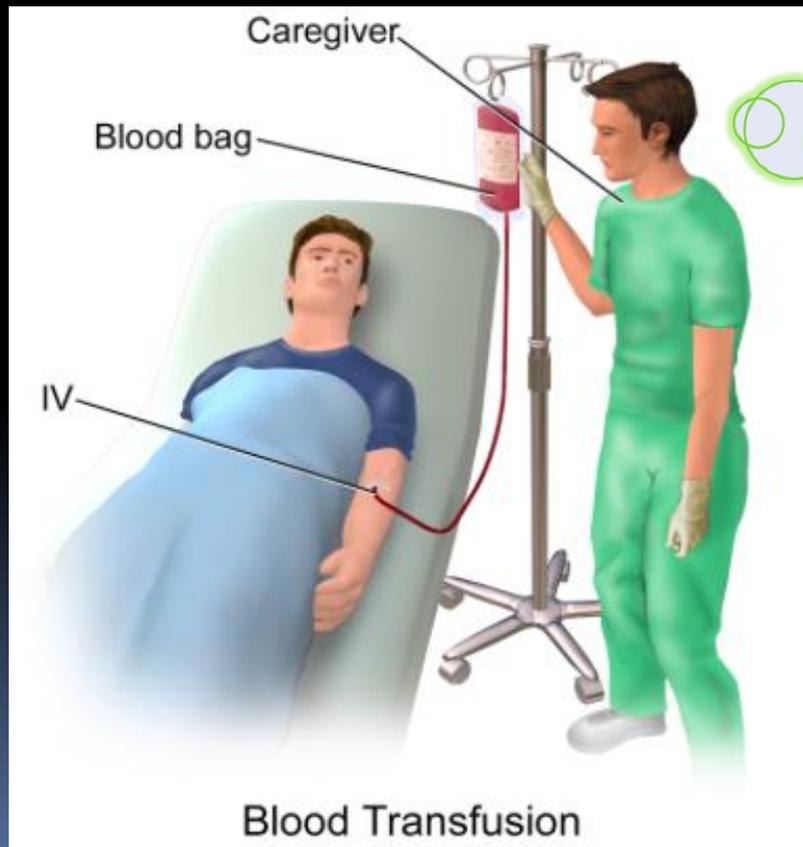


Stay and monitor the patient for first 5 min.

Flow rate:

1 ml / min. : 0-15 min.

5 ml / min. : After 15 min.



Possible signs of side effects...

- **Anxiety**
- **Chills**
- **Flushing**
- **Itching**
- **Shortness of breath**
- **Chest pain**
- **Tachycardia**

Observe and record any symptoms in 5 min., 15 min., and Finish

5min

15min

Finish

No side effects

副作用なし

悪寒・戦慄	血圧低下
熱感・ほてり	血圧上昇
掻痒感・かゆみ	動悸・頻脈
悪寒・ふるえ	血管痛
発赤・顔面紅潮	意識障害
発疹・蕁麻疹	血尿(ヘモグロビン尿)
呼吸困難	血管浮腫
嘔気・嘔吐	不明
胸痛・腹痛・腰背部	中止
頭痛・頭重感	

やめる 登録

Chill	Decreased / Increased BP
Heat sensation	Palpitation
Itchiness	Vascular pain
Shivering	Disturbance of consciousness
Redness	Hematuria
Rash	Angioedema
Difficulty of breathing	Unknown
Nausea/Vomit	Stop transfusion
Chest pain	
Headache	

B bod Stem Cell Collection

D: _____ **Name:** _____ **Age:** _____ **Ward:** _____

Date _____
Days of hospitalization _____

Time															
BP	R	PR	T												
300	70	170	41												
250	60	150	40												
200	50	130	39												
150	40	110	38												
100	30	90	37												
50	20	70	36												
0	10	50	35												

Observation	Spo2												
	ECG												
	Num bness												
	Nausea												
	D izz ness												
	V cte: B bedng												
	V cte: Pan												
	V cte: Redness												

Procedur e												
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Rec ord												
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Signature _____

Summary;

For safety procedure

- Double checking;
Pointing and repeating by two persons,
can prevent error



- As human, we're going to make mistakes

A black and white photograph of a person in a light-colored kimono kneeling on a tatami mat. Their hands are pressed together in a traditional Japanese prayer gesture (gassho). The person is wearing a dark obi. In the background, a glowing cylindrical lamp is visible on the left, and a framed picture hangs on the wall. The text "Thank you very much!" is overlaid in the center in a bright yellow font.

Thank you very much!