Patient Safety in Transfusion Therapy in Emergency and Exceptional Situations
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Ministry of Health, Israel
Israel’s population (2013): **8.2 million**

Jerusalem - 815.308

Tel - Aviv - 414.565

Haifa - 272.181

Over 90% of the population reside in 76 cities nationwide the country. The rest reside in villages. Only 2% in kibbutzim
• The Israeli **Ministry Of Health (MOH)**, is responsible for formulating health policies. The ministry plans, supervises, regulates, licenses and coordinates the country's health care services during peace time and war.

• In addition to overseeing health services and family health centers, the ministry maintains **46 General hospitals**, **13 Geriatric hospitals**, **320 Geriatric long term facilities** (Licensed Hospital), and **10 Psychiatric Hospitals**.

• Out of the 46 General hospitals only **20** (medium size over 200 beds) maintain functional blood banks.
The Israeli National Blood Service, a division of the non-profit organization “Magen David Adom” (MDA), in collaboration with the MOH is responsible for the collection, processing, testing and distribution of blood units and blood products throughout the country.

It includes the Central Blood Bank, which is located in “Tel – Hashomer” hospital (15 minutes drive from Tel-Aviv, and 45 minutes from Jerusalem).
Over 280,000 units of blood are collected yearly from volunteers: 90% are collected using MDA Mobile Units in schools, factories, community centers and army camps. The other 10% are collected at fixed sites - donor rooms at MDA first-aid stations, located in towns and cities all over Israel.

After initial testing at the MDA’s National Blood Service the units of blood are transferred to blood banks in 20 general hospitals.
280,000 Collected units

screening

- Grouping
- Transmissible Disease
- Distribution

Hospitals
In its short modern history, Israel has had to contend with numerous mass-casualty incidents caused by terrorism. As a result, it has developed practical guidelines for emergencies.
• During routine, 1200 units are transfers from the national blood bank to the general hospitals.

• On terror, war and mass casualty events the use of units of blood doubles or triples.

• Notification to MDA includes: number of casualties, age, gender, severity of injury, and names of admitting trauma centers and hospitals.
Transfusion Procedures in Emergency
as same as for
Routine Transfusions

No short cuts, no cutting corners, no skipping steps!
Proceed step by step according to the MOH national guidelines.
Regulations in emergency:

• Evacuate the wounded to the nearest hospital.

• At the trauma site, in cases of massive blood loss - infuse fluids, heamacelle, plasma or blood type O- for immediate life saving purposes.

• During war physicians serving on combat helicopters are permitted (by the supreme hospital authority) to transfuse packed cells type O Rh+, or dried plasma diluted with saline, without cross-matching.

• During war hospitals receiving masses of casualties are authorized (by the supreme hospital authority) to administer blood type o Rh+ without cross-matching.
Scoop & run.

Distances in Israel are short. Mean evacuation time from disaster site to nearest hospital = 20 minutes
• Magen David Adom (MDA) armored mobile intensive care unit

• The Israeli Defense Forces do not operate an independent blood bank, they rely entirely on the National Blood Services of Magen David Adom
• The MOH standard for the amounts of blood to be provided during war or mass casualty events:

2 units per light casualty
7 units per moderate-severe casualty

• Hospitals should ensure immediate availability of blood and blood products. The hospital should be able to manufacture, test, store, and distribute these products in the shortest time possible.
Emergency = Routine

• Transfusions should be carried out at the patient’s bed.

• According to MOH national guidelines, every hospital should have written standard operating procedures for the routine and emergency administration of blood products.
The local hospital guidelines follow the 2012 MOH circular: "Guidelines for operating blood banks and blood administration."

- Procedures for blood donation; drawing patients’ blood samples (by authorized clinical member, two syringes); preparation of blood at the lab; cross-matching; grouping; screening for transmissible infections; compatibility, storage and transportation.
- Before administration identification of patient and compatibility should follow a local checklist by two professionals.
Blood Transfusion Test Form:

1. **IDENTIFY THE PATIENT**
   - Mark ✓ in the circle
   - Options: By the bracelet tag, By personal recognition, By the patient's chart, By patient's details on the blood unit, By patient's details on blood type form
   - **NAME of PATIENT**
   - **IDENTITY NO.**

2. **INSPECTION OF THE BLOOD**
   - Options: Color of the blood (no sign of infection, no turbidity, the unit is transparent when hemolytic), Date of expiry

3. **COMPATIBILITY CHECK OF PATIENT WITH BLOOD TYPE**
   - Comparison must be made and confirmed that:
     - The blood type of the patient noted on the form is
     - The blood type of the patient noted on the blood unit is
     - The blood type of the unit is
     - The hospital blood unit number is
     - The numbers noted on the form which is glued to the blood unit bag must be compared and checked with the numbers on the blood unit.
   - Type and Cross confirmed.

The blood unit has been checked and confirmed by – signatures:
1. 
2. 

STICK THIS FORM IN PATIENTS CHART AFTER TRANSFUSION
3 compulsory steps to be carried out and signed on the test form at the patient’s bed site

a. Identification of patient
b. Inspection of blood unit
c. Compatibility test between patient’s blood type and the unit’s.
A. Identify patient by 4 steps:

- Check bracelet patient’s details:
  Full mane and identification number.
- Cross match with details on patient’s documents.
- Check patient’s details on blood unit.
- Check patient’s details on blood type form.
- Put in writing and sign____________ sign____________
- Date________ hour_______
B. Inspect unit color for

- Hemolysis (will look transparent)
- Infection (will look murky)
- Expiration date
C. Compatibility test between patient’s blood type and the unit’s.

Check and fill in, on the test form:

1. The blood type of patient noted on the document attached to the blood unit is ________
2. The blood type of the patient noted on the unit is________
3. The blood type of the unit is_______
4. The hospitals blood unit number is________________
5. The number noted on the form attached to the unit, matches the number on the unit itself.
• Confirm type and cross by two signatures
Thank you for your attention

Ministry of Health, Israel
at the hospital’s blood lab

1.科学院实验室
2.标签
3.血液袋
4.标签
5.血液袋
Near the patient’s bed, the procedure should be carried out by two authorised staff members before administration there should be present:

1. The unit of blood attached with the CLEAR blood type.
2. The patient’s medical file/documents.
3. The patient himself with his identification bracelet (name and ID number).

In case of anonymous the number given to him at admission to the ER.
1. DOULE CHECK THE 3 ITEMS
2. CHECK COLOR (MURKY HEMOLITIC?)
3. CHECK TYPE AND EXPIRATION DATE
4. CHECK THE FORM ATTACHED
דהן 1234
יהושע 5678
AT THE END OF INFUSION
ADD THE DOCUMENTS TO
THE PATIENT’S MEDICAL FILE