

Transfusion Service in Croatia

Bucharest, 07.07.2014.



**HRVATSKI ZAVOD ZA
TRANSFUZIJSKU MEDICINU**

About the blood donors in Croatia

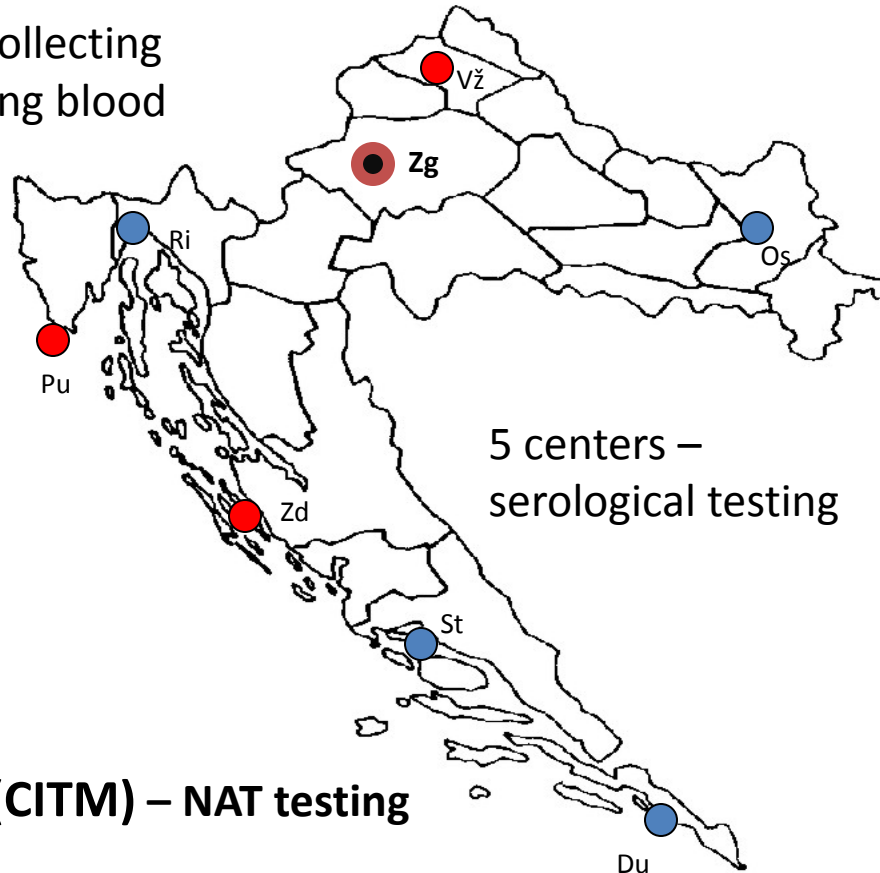


❑ Croatia: total population = 4 290 612 /2011.

- 4,2 % of the population donate blood. 42 units of blood per 1000 inhabitants.
- In the Croatian Register of blood donors registered about 100,000 donors who annually gives about 175,000 blood donations
- 85% of blood donors are male, and 15% are women.
- The average age of donors in Croatia = 42 years.
- Blood donors are predominantly men, married people who have one or more children and belong to middle socio - economic class.
- Very often these people have expressed sense of social and active in various cultural and sports clubs.

Organisation of Transfusion Service– 2013.

8 centers – collecting and processing blood



5 centers – serological testing

1 center (CITM) – NAT testing

CITM

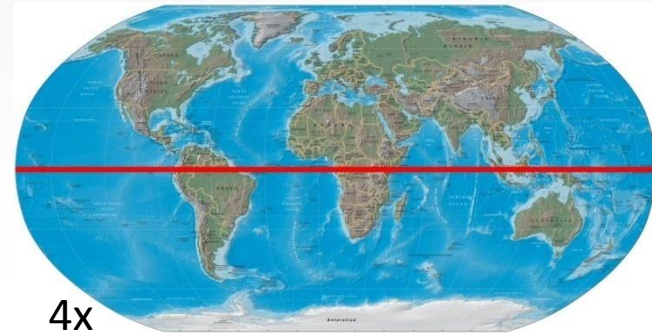


99.482 doses of donated blood

101.703 doses (incl. apheresis)

4 mobile teams + 2 teams in CITM

189.000 km

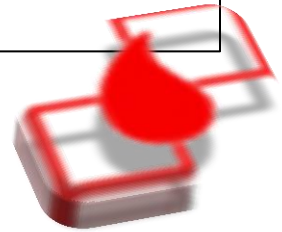


95.986 issued Red Blood Cells

A record number of collected blood units in the Republic of Croatia was during The Homeland war in the early '90s. In 1992. it was collected over 192,000 doses - altruism.



Legislation – “ *Blood as a drug* ”



EU - the need for legislation to cover the area of blood products, tissues and organs - because of the large differences between EU countries.

- 2002. – Directive 2002/98/EC ⇒ aim to prescribe standards for the quality and safety of blood within the EU.

Croatia - the 2013 enlargement of the European Union saw Croatia join the European Union as their 28th member state on 1 July 2013.

- today a series of laws and regulations is in accordance with EU regulations.

CITM in the collection, processing and testing of the collected blood is using the recommendations of the Council of Europe. Guidelines for the preparation, use and quality assurance of blood components – 16th edition.

The laws of the Republic of Croatia:

- Health Care Law (OG 150/08; 71/10) - primary health care organization.
- Law on Blood and Blood Components (Directive 2002/98) OG 79/06 - supply of blood and blood components.
- The Law on the Croatian Red Cross (OG 71/10-2) - organization and public donation.
- The Law on Protection of the Population from Infectious Diseases (OG 79/07; 113/08; 43/09) - detection and reporting of the infectious diseases.
- Law on Health Care Quality (OG 107/07) - improvement quality health care, the establishment of the Agency for Quality and Accreditation in Healthcare



The laws of the Republic of Croatia:

- Amendments to the primary health care network (OG 115/07) - reorganization of transfusion service - provided 8 Centers for collecting and processing, 5 for serological testing, 1 for NAT testing.
- The network of public health services (OG 98/09) - transfusion is contracted in hospital healthcare institutions and government departments - provided max 50 units.
- Changing public health care services (OG 81/10)- Zagreb has 7 hospitals, 5 transfusion units.
- The Regulation on Amendments to the Regulation on the internal organization of the Ministry of Health and Social Welfare (OG 02/09) in the Directorate of Medical Affairs is added to the Department of Inspection and Monitoring of blood, tissues and cells.



Regulations of the blood products:

- Regulations on specific technical requirements for blood and blood products - in accordance with Directive 2004/33/EU (OG 80/07).
- Ordinance on the traceability of blood and monitoring of serious adverse events and serious adverse reactions (OG 63/07; 18/09) - in accordance with Directive 2005/61/EU.
- Regulations on the quality assurance for the blood and blood products in the medical institutions (OG 80/07, 18/09) - in accordance with Directive 2005/62/EU.
- Rules about space, professional workers and medical - technical equipment for the activity of planning, data collecting and testing of blood and the production, storage, distribution of blood products (OG 41/10).



Summary:

- **Implemented National IT networks** throughout the transfusion service in Croatia (from vein of donor to the vein of patient),
- **reorganized** transfusion service,
- introduced **ID NAT testing in CITM for all samples** on 01 march 2013.,
- we have **coordinated program of specialist training** with the EU directives (since 1963. in Croatia there is specialization of transfusion medicine - before harmonization with EU directives it was 3 years long, now 5 years),
- we have matched **all legislation** with the EU acquis for the blood and blood products,
- we actively and fully participate in all EU bodies and with working groups (ISBT, IHN, EBA) - indirectly creating the EU Directive,
- collect data, submit reports, conduct haemovigilancia, educate yourself.



PROTOCOL FOR EMERGENCY CIRCUMSTANCES



- The purpose of this Protocol is to:
- prescribe the action mode for transfusion centers, hospital transfusion units and the overall transfusion services in the preparation and effective responses to the state of natural disaster or in the crisis circumstances (war, terrorist attacks).

All of these circumstances may have a highly affect on the blood supply. The main intention in the Protocol is to facilitate coordination between the Crisis Staff of the Ministry of Health, national transfusion service, and transfusion centers and hospitals in the event of a disaster.

GOALS:



1. determine demands of blood and blood components,
2. plan and execute the smooth transportation of blood from one destination to another,
3. inform the community about existing blood stocks and the possible demands for the blood in the damaged area/s.

This protocol refers only and exclusively to process of the most urgent supply to the hospitals with blood products, which means RBC O blood group.

RESPONSIBILITY

- ❑ Responsibility to establish and to implement this Protocol is on **Ministry of Health**.
- ❑ The Minister of Health is responsible for the establishment of the **Crisis Headquarters and workgroups**. In the **Working group** (for the management of blood supply in emergency circumstances) must be included representatives from the following entities:
 - Ministry of Health - Emergency Headquarters,
 - Croatian Institute of Transfusion Medicine,
 - Croatian Red Cross,
 - Ministry of Defense,
 - Media.

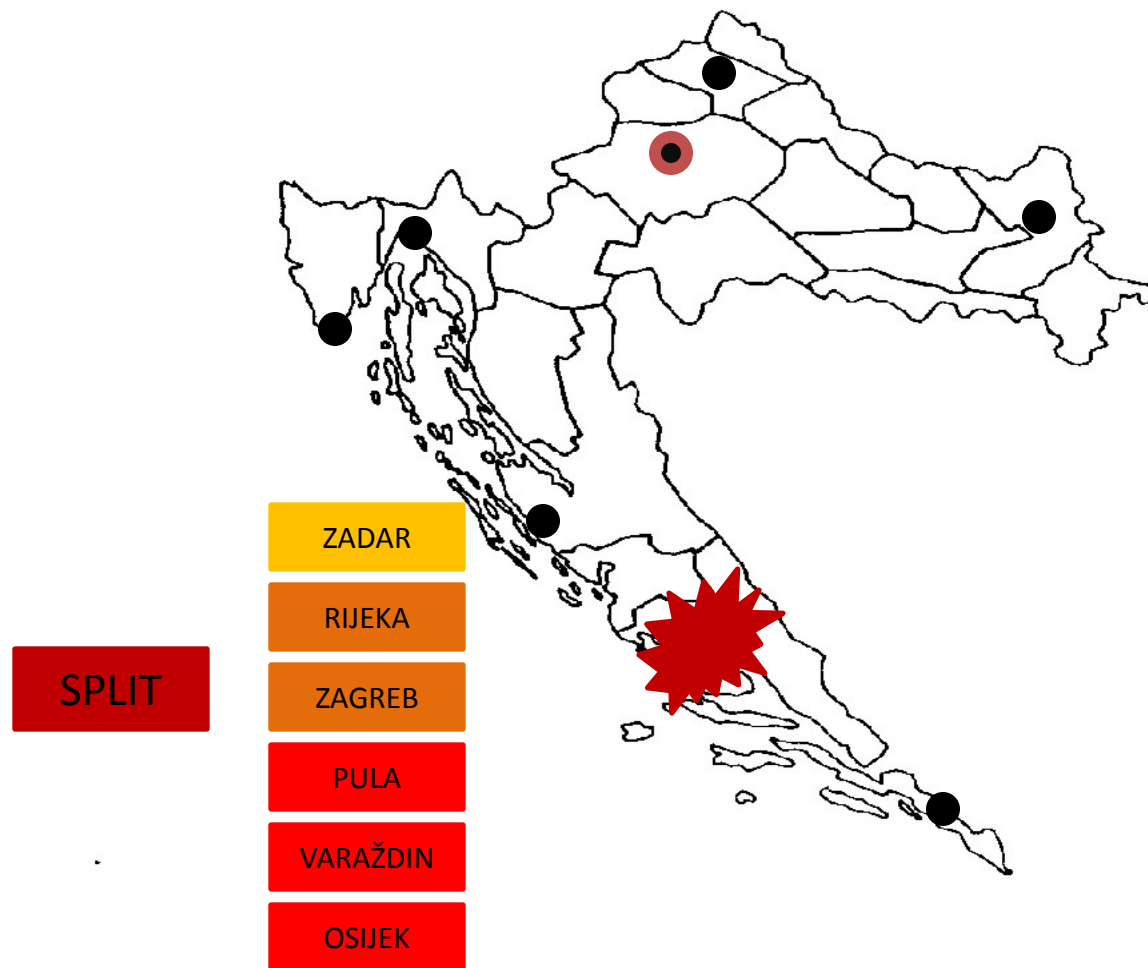


RECOMMENDATIONS:

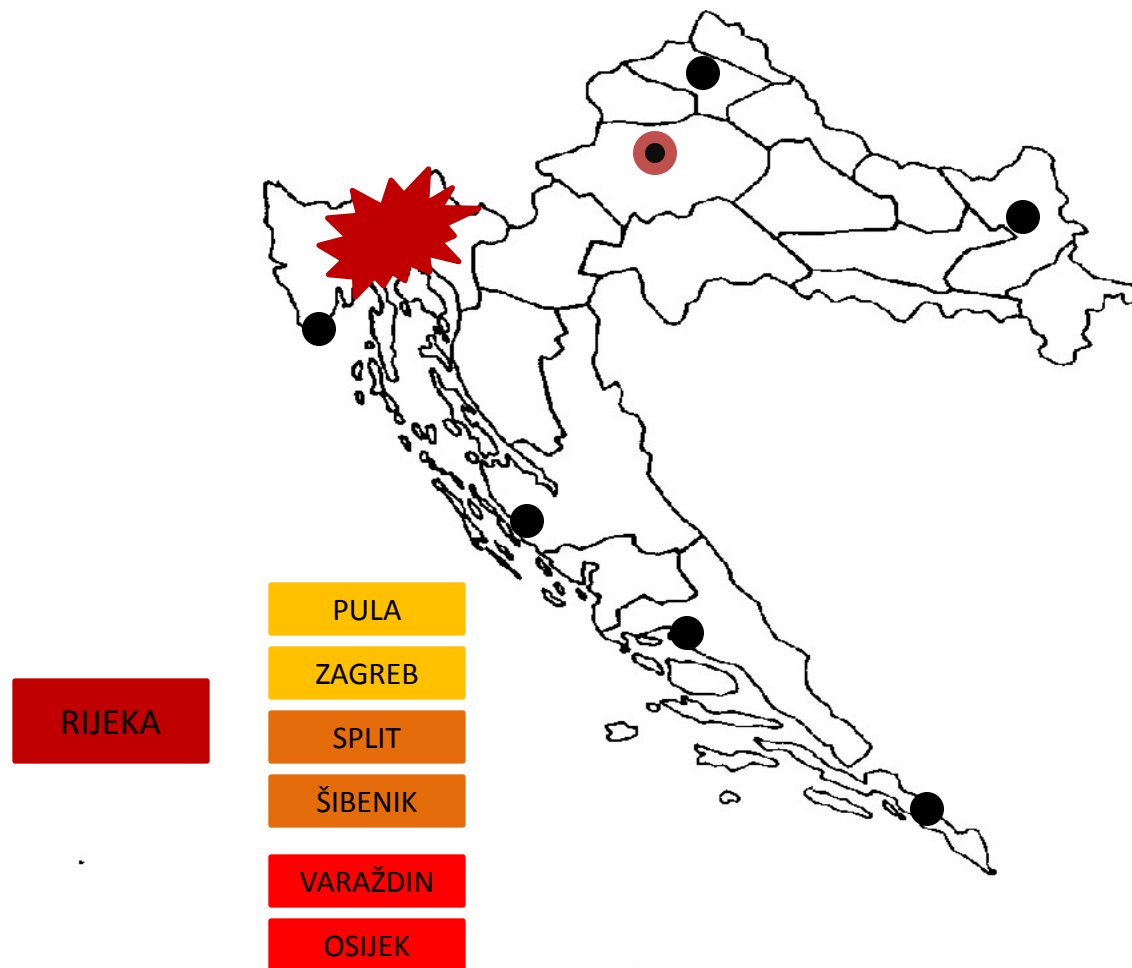
- 1) It is necessary to provide special security for the facilities which keeps supplies of the blood products,
- 2) It is recommended a total seven-day blood supply stock (in an institution that collects blood and hospital transfusion unit),
- 3) Planning the number of collected blood units must be greater than in the standard conditions,
- 4) National and local public needs to be continuously and accurately reported about the blood stocks during the crisis and special circumstances,
- 5) Outside of crisis situations it should be planned and defined all of the obligations of the participants at the national level,
- 6) It is necessary to establish a system of blood stock management and the proposed exchange and transportation of blood products.



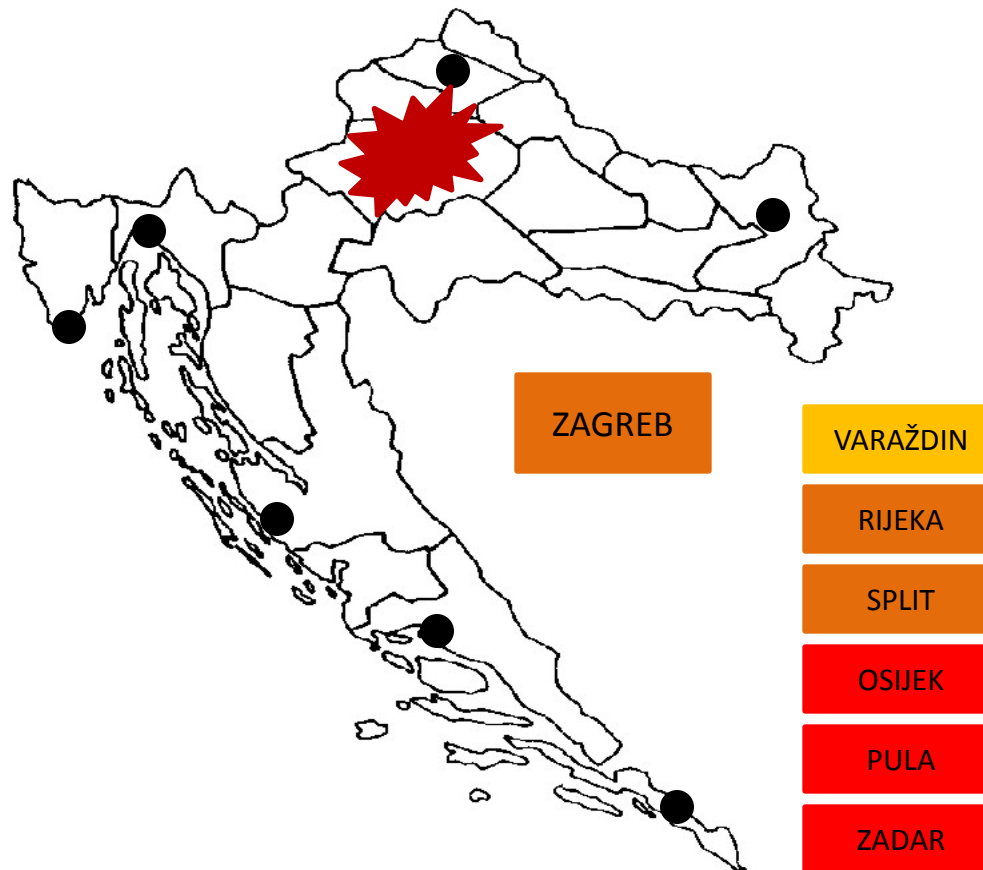
Action in the case of special circumstance (course of action - blood products)



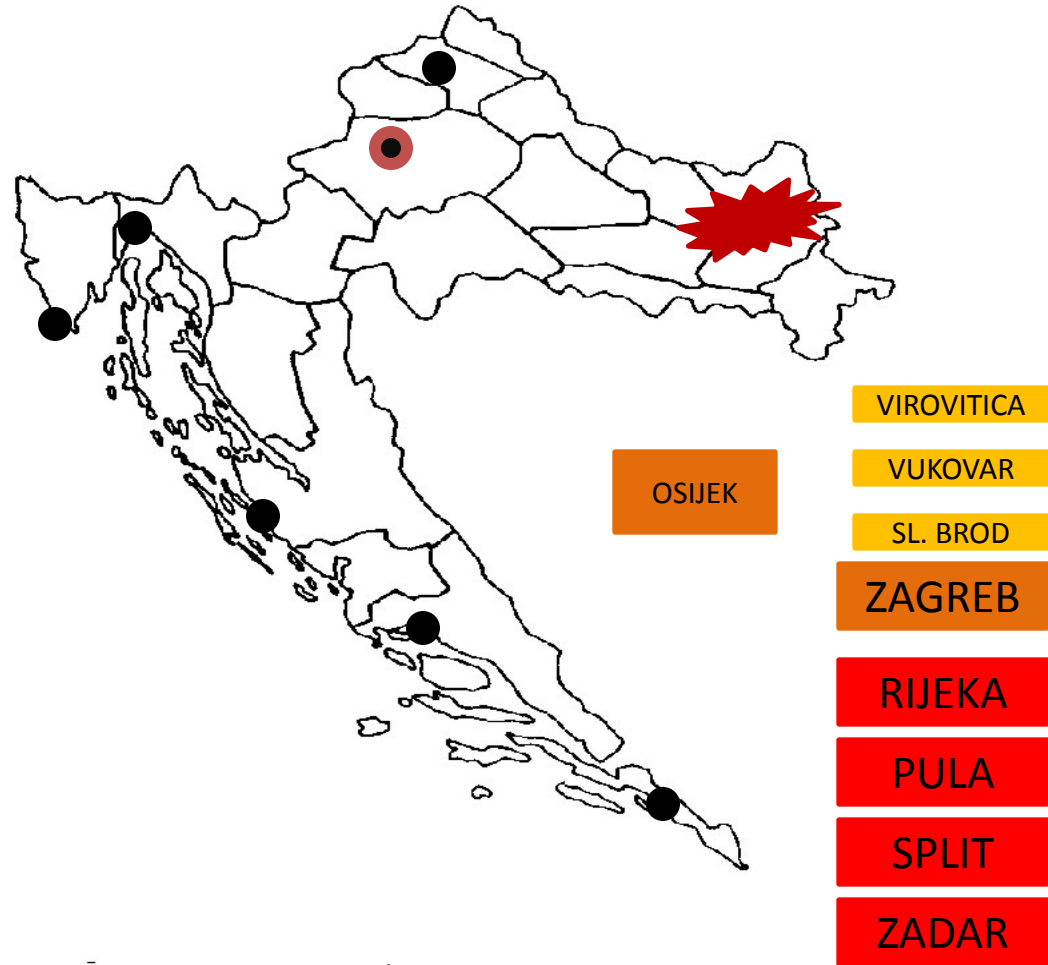
Action in the case of special circumstance (course of action - blood products)



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Action in the case of special circumstance (course of action - blood products)



DEFINITIONS



□ State of crisis or disaster refers to:

- a) the natural causes (earthquakes, floods, ..) or
- b) human act caused (war, terrorist attack, ..) situation in the country or in the region/part of the country which determines:

- 1) rapidly increased demands for blood products, OR
- 2) temporarily disabling or cancellation of authorized medical institutions for collecting, processing, testing and blood distribution OR
- 3) temporarily disabling or obstruction of the local population in the process of donating blood or obstruction to use of available stocks, and thus demand for immediate replacement / replenishment from other centers / regions OR
- 4) rapid response to the increased number of blood donors who come to help the afflicted at the another location.

PLANNING PROCEDURES IN EMERGENCY AND SPECIAL CIRCUMSTANCES



- ❑ The demands for blood components are shown by phases:
 - I. in the first **24 hours** RBC units (blood group O),
 - II. from **1st - 10th day** RBC units (all blood groups ABO / Rh) + concentrates of thrombocytes.
 - III. from **11th - 30th day** RBC units (all blood groups ABO / Rh) + plateletes units. (In the case of radiological biohazard incidents - stem cells and bone marrow).

GENERAL ASSUMPTIONS:

- all emergency circumstances (disaster) are mainly localized,
- demanded blood products will be immediately transported to the nearest authorized health institutions which are connected with the fastest means of transport to the affected area,
- responsible Working group shall immediately examine the blood demands for the next 24 hours after the event (on daily base if necessary), and strategies to meet the demands can be changed, depending on the circumstances.

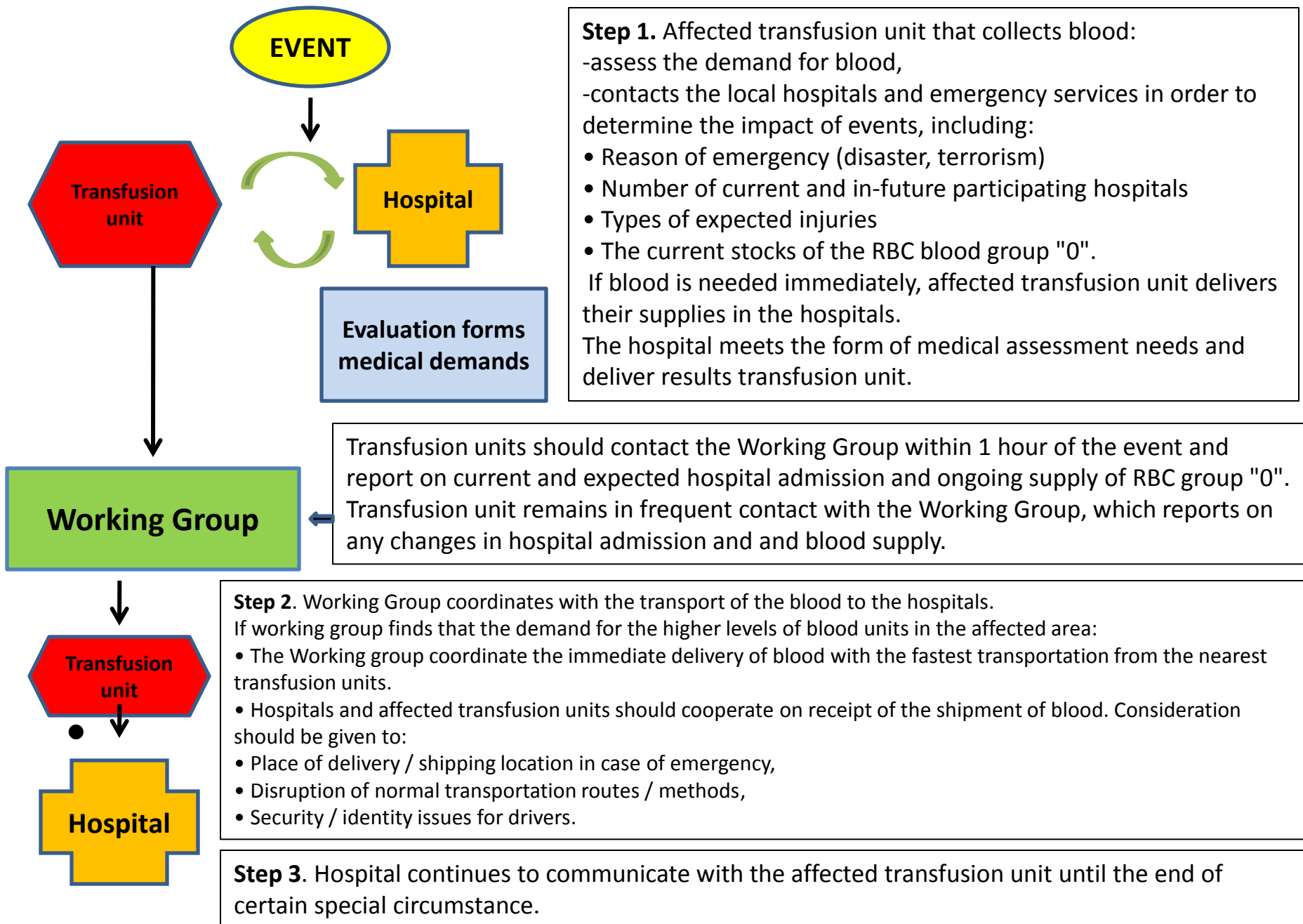


MEDICAL DEMAND FOR BLOOD

- In the emergencies hospitals should cooperate with authorized health institutions in the affected area.
- Within the first 24 hours, hospital determines current demands for the blood products and takes them from the **nearest transfusion center** (in this area).
- The center became the main communication channel to the Crisis Center and the responsible Working group.
- **The Working Group** recommends action strategies, including existing stocks, and sharing information to the wider community.



Schematic presentation of procedures:



Assessing the demands of the hospitals for the blood products

➤ Expected reception conditioned crisis:

The current state of the hospital: _____

Potentially possible reception: + _____

Total expected state: = _____ (A)

➤ Available stocks RBC “0” pos and neg blood groups:

Existing stocks of RBC “0” blood group in hospital: _____

The standard needs to RBC “0” blood group : - _____

Number of RBC “0” blood group = _____ (B)

➤ Calculate the total number of doses that should be provided by the Working group:

Total expected state (A) x 3 doses = Total needs RBC “0” blood group

➤ **Total needs RBC “0” blood group - Number of RBC “0” blood group (B) = Number RBC “0” blood group, which must provide a working group.**



THE LEGAL ISSUES AND LOGISTICS

- In emergency circumstances the availability of blood products is the primary, but the authorized health institutions must comply with the prescribed regulations for all activities that are in the chain from the collecting blood to the issuing of the blood products.

The Working Group shall ensure the following:

1.) Blood establishments that collect blood shall conduct any necessary tests on blood samples from the pool of the collected doses.

The exceptions may be allowed only in: - absolute urgency with the relevant knowledge and documentation of emergency,

2.) All activities must be carried out professionally and with trained staff,

3.) Ensure availability and adequacy of appropriate and / or replacement of reagents and equipment,

4.) Assess the impact of events to the existing blood products stock and in-future supply,

5.) Assess the impact of events to the existing stock of reagents and equipment,

6.) Being in constant contact with all relevant parties.



CONTACTS WITH THE MEDIA

- At the moment of the disaster it is mandatory to inform the public about the state of the reserves of the blood products and expected demands.
- Hospital transfusion units in the affected area must be in contact with an authorized health institution which supplies blood products.
- Help by the community in such circumstance is expected and necessary.
- Messages addressed to the general public on the need for blood donations always must be accurate and on right time.



Main goal: a sufficient amount of adequate BP.





Darivanje krvi = transfuzija ljubavi !

**OSTAVITE I VI
SVOJ TRAG...**



Thank you