

MULTI- COUNTRY WORKSHOP on Increasing Blood Availability and Providing the Highest Donor and Patient Safety in Transfusion Therapy in Emerging Special Circumstances

# WHAT ARE THE CHALLENGES FOR BLOOD TRANSFUSION CENTRE OF SLOVENIA IN EMERGENCY SPECIAL CIRCUMSTANCES ?

Polonca Mali



Zavod Republike Slovenije  
za transfuzijsko medicino  
Blood Transfusion Centre of Slovenia

# Slovenia in brief

<b>Area:</b>	<b>20,273 km<sup>2</sup></b>
<b>Population:</b>	<b>2,019,406 (30.6.2007)</b>
<b>Capital city:</b>	<b>Ljubljana</b>
<b>Language:</b>	<b>Slovene; also Italian and Hungarian in nationally mixed areas</b>
<b>Currency:</b>	<b>EURO (since 1 January 2007)</b>
<b>Important dates:</b>	
<b>Independence:</b>	<b>25 June 1991</b>
<b>Member of EU:</b>	<b>1 May 2004</b>

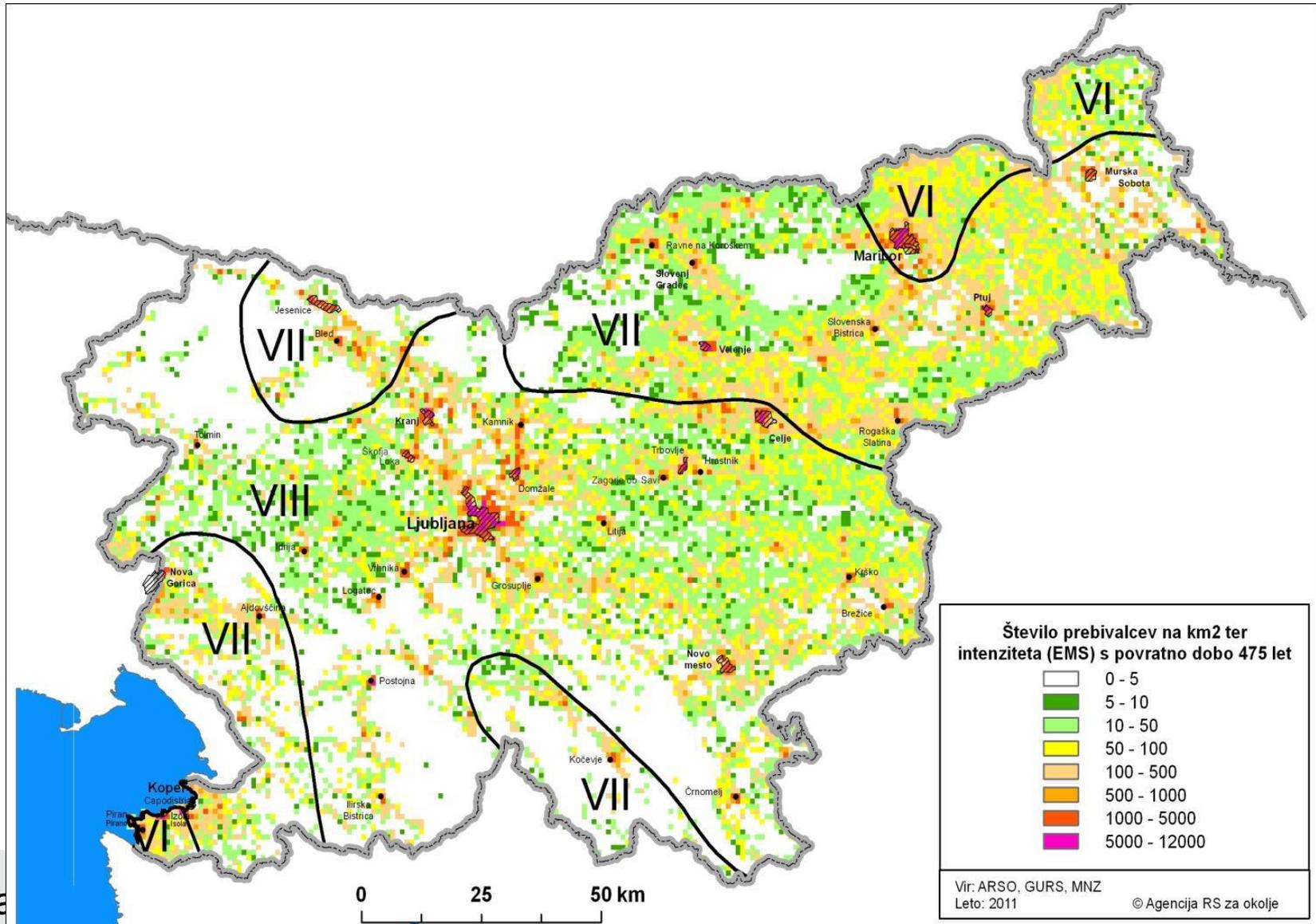




# BLOOD TRANSFUSION SERVICE IN SLOVENIA



# Population density in Slovenia

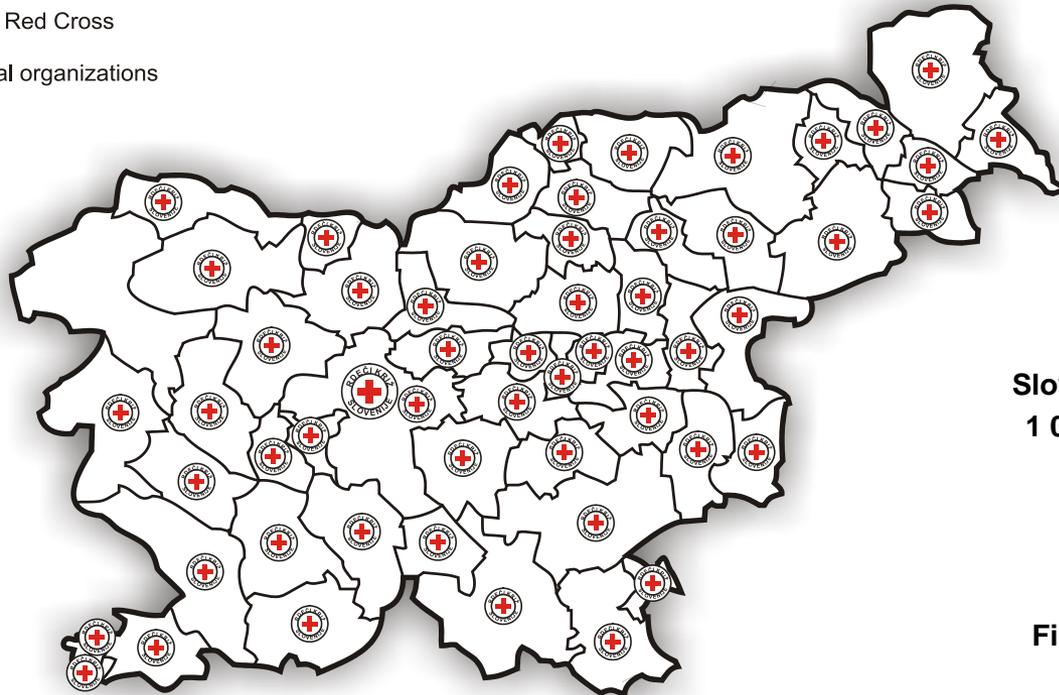


# Slovenian Red Cross

**Blood donation in Slovenia is non-paid, voluntary and anonymous.**

**The Slovenian Red Cross organizes blood donation sessions with 56 local organizations in the country.**

-  The Slovenian Red Cross
-  Red Cross local organizations



**Year 2013:**

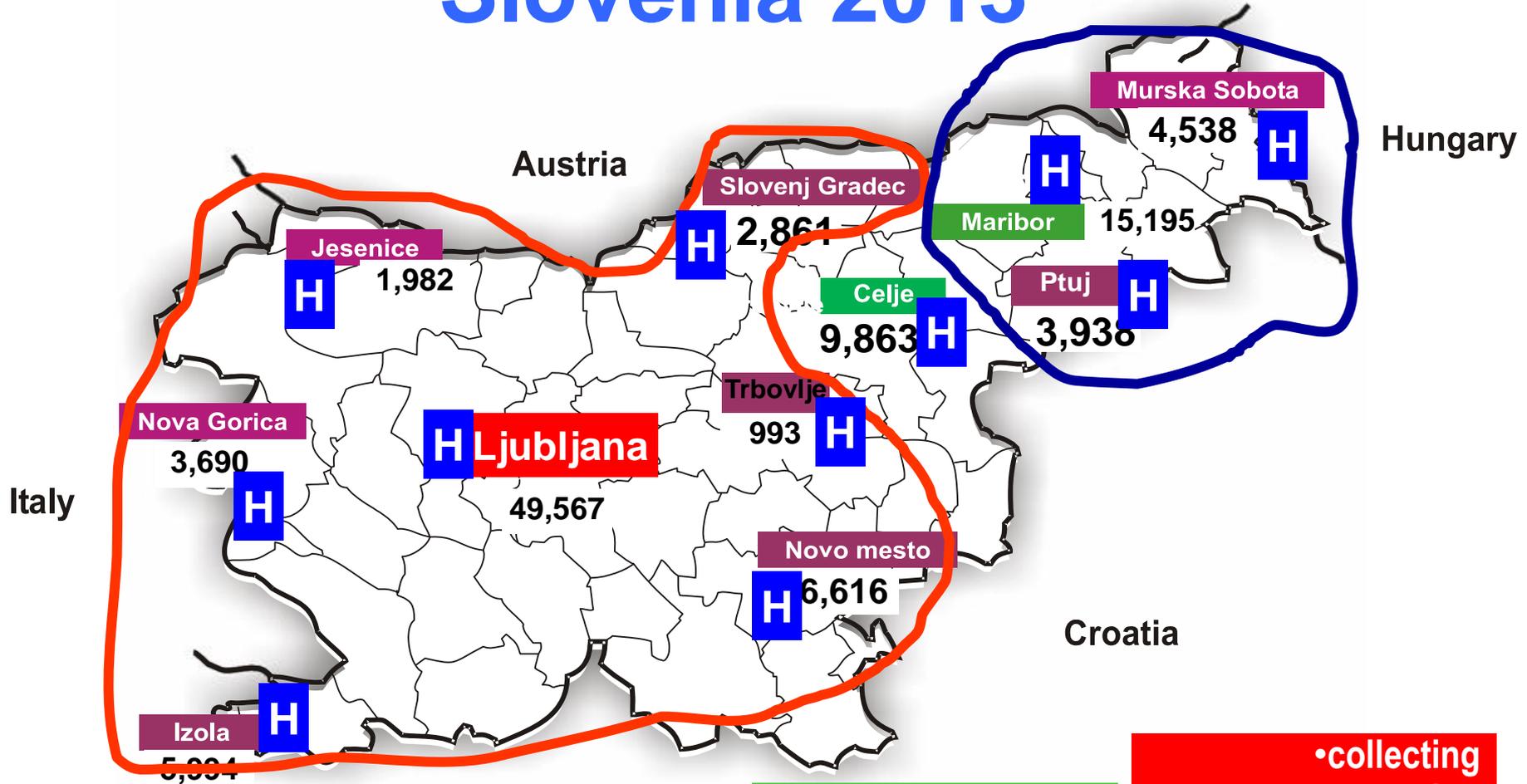
**Slovenian Red Cross organized  
1 070 blood donation sessions**

**323 on field collection sites  
92 479 donations**

**First-time blood donors: 10 %**

**The Main Organizer of Blood Donation Sessions**

# Blood transfusion services in Slovenia 2013



• X-matching

• Collecting  
• X-matching

• collecting  
• processing  
• testing  
• X-matching

• collecting  
• processing  
• testing  
• NAT testing  
• X-matching

# EMERGENCY SPECIAL CIRCUMSTANCES

- WHAT ARE THE NATURE THREATS FOR SLOVENIA
- MASSIVE ACCIDENTS
- ORGANIZING PROBLEMS
  - ( COOPERATION BETWEEN TS – NOT YET ONE TS!,  
FINANCIAL ASPECT,  
BACKUP SERVICE,  
BLOOD SUPPLY PROBLEMS,  
DONOR MANAGMENT AND MOBILE SESSIONS FAST ADAPTATION)
- PATIENTS SAFETY «>> STABLE AND SAFE BLOOD SUPPLY  
NOT INFLUENCED or IMPARED  
( flu , WNV, Chikungunya...EBOLA., massive accidents..)

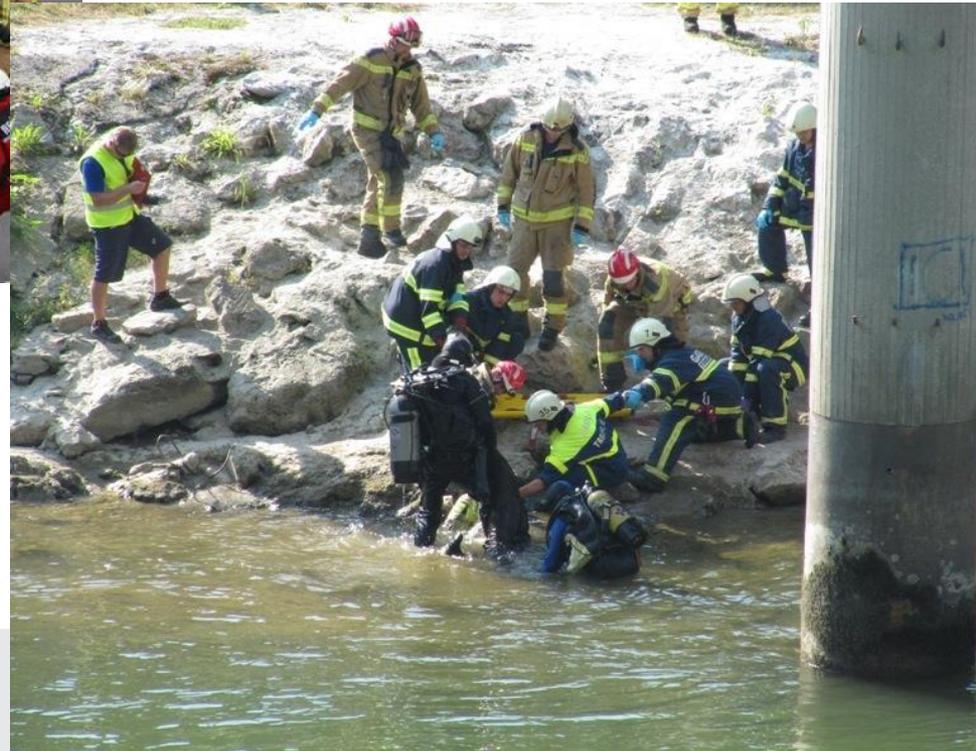


# OUR HISTORICAL EXPERIENCES:

- 2009/2010 Guidelines and preparedness plan for flu H1N1 epidemic
- 2011- Guidelines and preparedness plan for WNV  
( donor selection criteria, organisation of donor collections and testing, blood supply management, in country cooperation between TS, RCS preparedness plan for situations...)
- CRITICAL SITUATION MANAGEMENT IN SLOVENIA on national level  
( workshops for medical staff, national guard, RC...: massive traffic accidents, massive fire accidents, balloon accident...)
- 2010 PCR/ NAT machine TIGRIS system testing breakdown urgent need to have backup in other country ! )



# WORKSHOPS FOR MASSIVE INTERVENTION

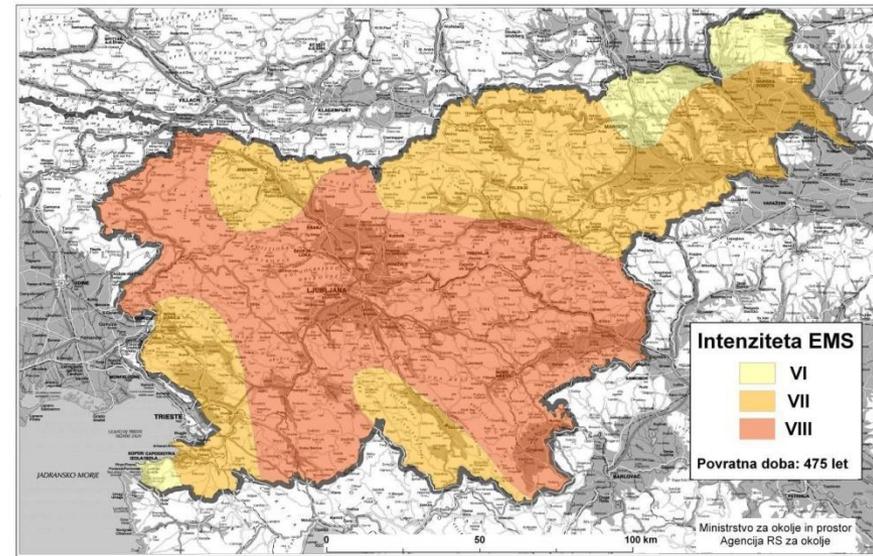


# Baloon fall and fire 23.08.2012



# What can we expect?

- EARTHQUAKE ( 14.04.1895)



# What can we expect?

- FLOODS ( 2010) ✓





# Map of main flood areas in Slovenia

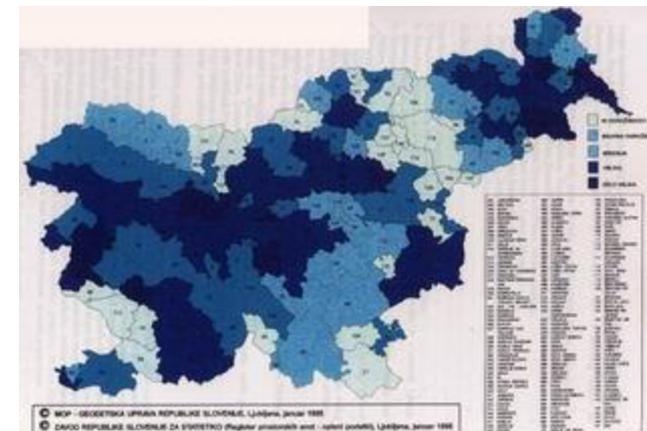
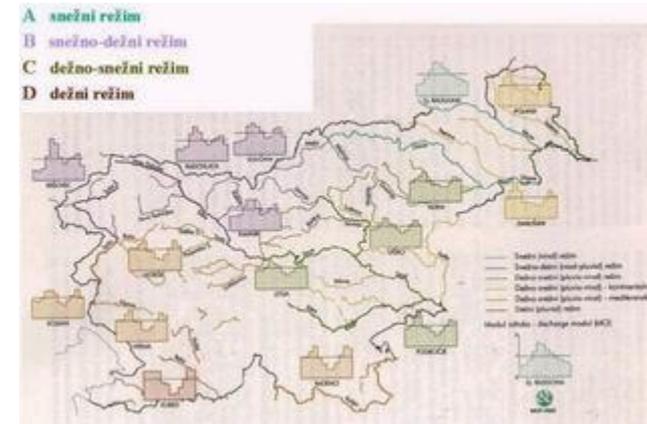
14/8

Floods differ by:

- Type of stream (mountain, valley-bottom, flatland)
- Terrain (sloping, depressed)
- Volume
- Intensity and extent of precipitation
- Season (autumn, spring)
- Type of high-water wave
- Duration
- Frequency (e.g. every 20 years)
- Type of land and of inundated facility

Floods present a threat to over 300,000 hectares of land in Slovenia.

The majority of land prone to flooding (270,000 hectares) lies in narrow valleys carved by torrents.



# Floods in Slovenia

- Most of them Transfusion Services are placed in basement floor of the buildings ( General Hospitals) BUT most of the them are on little hills- so internal waters due to sewage and water supply pipe network
- PROBLEMS TO COPE IN Transfusion service
  - machine damage ( backup?)
  - electric supply cuts ( manual work- staff training problem!, quality management, paper work...)
  - staff shortage ( transport problem to come to work, or work with floods at home)
  - Emerging Infection diseases ( mosquitos, fecal / water supply)..DONORS / PATIENTS are at risk



# “SINGLE” COUNTRY EXPERIENCE?

- ICE ( sleet, february 2014) ✓



# ICE COVERING SLOVENIA

## February 2014

### Problems:

no electricity/ No. of agregats

no transportation

no food/ no heat/ no staff/ no donors



# MOBILE SESSION ŽIRI

18/8

## Mo 03.Febr.2014

- Sun 02.Febr morning : Tv reports of problems with ice , local roads intermitently closed, electric power supply unstable
- Stationary phones dead, mobile intermitently working: communication with local RC organiser what to do
- Due to increasing local problems and stable blood supply (6 days) final decision made: MOBILE SESSION CANCELED ( for donors and staff )
- Notice and media information went out on local TV and national Radio
- Preparations for alternative mobile session place in progress on same day
- Mobile session needed to be in other place next day, donors were called with sms
- Fast and proper information for donors and staff ( Red Cross involvement needed)
- Thank you information for all donors as soon as possible on all web medias ( FB, Twitter...)



## MOBILE SESSION ŽIRI Mo 03.Febr.2014 cont.

- Every hour/ day attention what was going on ( road jams, roads closed..)
- Alertness for staff and donors to make the mobile session possible
- **Lessons leared:**
  1. Always have you mobile phone battery full, use it only when needed
  2. Telephone No. of staff need to be mounthly checked ( due to mobile service provider offers)
  3. High level of good communication and cooperation with RC and media saved a lot of time
  4. Blood supply support from other part of country is possible if transportation is possible ( use of police helicopter??)
  5. NO PROBLEMS WITH BLOOD SUPPLY DUE TO DONORS WHO DONATED EVEN THAT THEY WERE IN ICE



# LESSONS ALREADY TAKEN

20/8

## Quality management

## Staff training.....plans..THEY WORK!



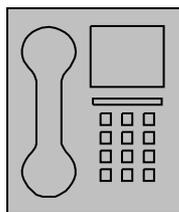
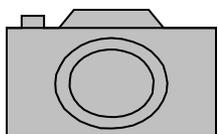
Zavod RS za transfuzijsko medicino

“Življenje teče”

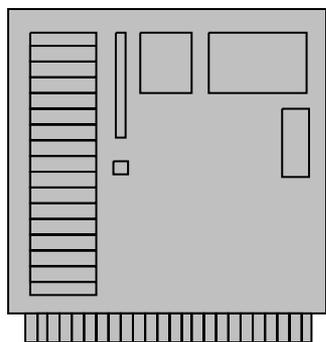


# Telemedicine in the blood transfusion service

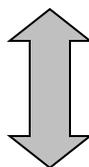
Results of the IH investigations  
XM, IAT, AB0-RhD



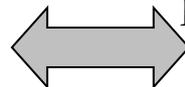
Teleconsultation  
Patient data: medical history  
Professional support for remote transfusion



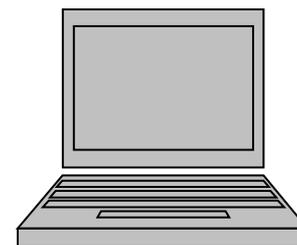
Result: XM,  
IAT, AB0-RhD



Patient data: Blood donor: AB0-RhD  
IAT, AB0-RhD



Host information  
system



Specialist in transfusion medicine

# Teleconsultations

## Why?

- ⊕ **Saving time** (no need to transport samples)
- ⊕ **Saving money** (lower nr. of experts - 11/2, staff)
- ⊕ **24hours / 7days service**
- ⊕ **Equal (the highest) quality of expert immunohaematology**

## Introducing the Prevention of virus & bacteria transmission

- ❖ uniform donor's questionnaire
- ❖ donor eligibility criteria (technical requirements of the Directive 2004/33/EC)
- ❖ fresh frozen plasma from quarantine
- ❖ viral inactivation of platelets
- ❖ universal leucoreduction
- ❖ screening for infection markers (HBsAg, anti-HIV-1/2, p24Ag, anti-HCV, anti-Treponema pallidum, HCV RNA, HIV RNA and HBV DNA ( 2 centres in Ljubljana in Maribor, backup!, Celje ?, but NAT only in Ljubljana- overboarder cooperation)

# OVERBOARD COOPERATION

- DUE TO SAME EU LEGISLATIONS  
( POSSIBLE AND EASY)



but

- DIFFERENT DATABASE/ IT MANAGEMENT OF DONORS AND BLOOD SUPPLY?
- NATIONAL SELFSUFFICIENCY?





ODVZEM KRI

