Haemovigilance in Europe: What do health authorities expect from haemovigilance?

Deirdre Fehily
Substances of Human Origin Team
Directorate General for Health and Food Safety
Unit B4 – Health Products: quality, safety and innovation
European Commission
Vigilance and Surveillance Pyramid

- Rapid alerts
- Notification of adverse occurrences
- Surveillance of Emerging Risks

Categories:
- RARE - URGENT
- ROUTINE - REACTIVE
- CONTINUOUS - PROACTIVE
The Vigilance Reporting Chain

**Hospital/BE**
- Detection of suspected SAR/SAE
- Reports to BB/BE
- Participates in investigation

**BE**
- Detects SAR in donors and SAE and receives notifications: quarantines, recalls other products, as necessary
- Reports nationally
- Participates in investigation, with hospital or independently, as necessary

**National Health Authority**
- Receives notifications, evaluates and intervenes as necessary
- Reports annually to Regional system where relevant (e.g. EU Commission in EU)
- Issues national rapid alerts/guidance where appropriate

**International Bodies**
- Gathers and analyses cumulative SARE reports from individual countries
- Publishes cumulative report
- Highlights important trends
- Intervenes as appropriate
- Issues international rapid alerts when appropriate
Directive **2002/98/EC**: definitions in Article 3 (Serious Adverse Reaction, Serious Adverse Event, Haemovigilance), notification requirements in Article 15.

Directive **2005/61/EC**: more detailed requirements including that the Member States shall submit to the Commission an annual report, by 30 June of the following year, on the notification of serious adverse events and reactions received by the competent authority.

Reporting to the Commission started in 2008, collecting data from the previous year.

Data Collection – feasible, accurate, complete

- Need to agree upon and work with agreed definitions and denominators
- Limited and easy input of data (user-friendly template)

Analysis – comprehensive and simple

- Well structured
- Identify potential issues relevant at EU level

Feedback to MS/Publication of results

- Aggregated data
- Suggest recommendations for future actions to improve safety and quality in SoHO fields
CONTRIBUTION OF THE HAEMOVIGILANCE WORKING GROUP

END OF 2007, THE COMMISSION CONVOKED AN INITIAL COMMON APPROACH WAS LAYED DOWN. THESE EXPERTS HAVE TAKEN PLACE, AND CURRENT DOCUMENTS AND MEETINGS. THESE INCLUDE:

- Meeting of national experts (19 December 2007),


Article 8 of Directive 2005/61/EC provides that ‘Member States shall provide a Commission an annual report, by 30 June of the following year, of all serious adverse events and reactions received, for the purposes of Part D of Annex II and Part C of Annex III.’

However, precisely where serious adverse events and reactions are to be notified to the Commission may not be clear. The Commission and Member States have different approaches for such events and reactions. For example, some states require blood and blood components to be notified to the competent authority. However, this last commits to a scope of definitions of the severity of adverse events.

End of 2007, the Commission convened an initial common approach was laid down. These experts have taken place, and current documents and meetings. These include:

- Meeting of national experts (19 December 2007),


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Blood - Legislation and guidelines

Blood - Other key documents

Blood - Reports on implementation

11 November 2015
2014 RAB annual summary of activity

11 June 2015
Summary of the 2014 annual reporting of serious adverse events and reactions for blood and blood components

15 July 2014
Summary of the 2013 annual reporting of serious adverse events and reactions for blood and blood components

Click here to view the whole list

Organs - Legislation and guidelines

Organs - Other key documents

Tissues and cells - Legislation and guidelines

Tissues and cells - Other key documents

Tissues and cells - Reports on implementation

http://ec.europa.eu/health/blood_tissues_organs/key_documents/
EUROPEAN COMMISSION
HEALTH AND FOOD SAFETY DIRECTORATE-GENERAL

Directorate D - Health systems and products

D4 – Substances of Human Origin and Tobacco Control

Brussels,
SANTE. D4/ IH/ac ARES(2014)

SUMMARY OF THE 2014 ANNUAL REPORTING OF SERIOUS ADVERSE EVENTS AND REACTIONS (SARE) FOR BLOOD AND BLOOD COMPONENTS (DATA COLLECTED FROM 01/01/2013 TO 31/12/2013)
Units Issued per Blood Component 2013

*DK, ES and SK are units transfused

Red Blood Cells | Plasma | Platelets | Whole blood
Units Issued and Transfused

Issued and Transfused Units 2013

(in millions)
A total of 1,739 SAR with a ‘likely’ or ‘certain’ attribution to the blood or blood component transfused (Imputability 2 and 3) were reported by the 28 Member States, Liechtenstein and Norway.

For the 22 countries that provided data for both the number of SAR and units transfused per blood component, there were 9.8 SAR per 100,000 units transfused.
### SAR per Component

**Component** | **Units transfused**
--- | ---
Red blood cells | 13,118
Platelets | 4,428
Plasma | 9,319

**Imputability level 2-3**

- **Component**
  - Plasma: 15.62%
  - Whole blood: 0.06%
  - Platelets: 23.15%
  - More than one component: 2.28%
  - Red blood cells: 58.89%
22 deaths:

- immunological haemolysis (5)
- non-immunological haemolysis (1)
- bacterial infections (2)
- anaphylaxis (1)
- post-transfusion purpura (1)
- TRALI (5)
- TACO (6)
- Unclassifiable complication of transfusion (1)
26 EU Member States + Norway and Liechtenstein provided data regarding collections in 2013:

- **15,353,382 whole blood collections**
- **1,596,067 apheresis collections**

23 countries reported a total of **2,470 SAR** in donors (**14.6 SAR per 100,000 collections** for those countries which reported both SAR in donors and figures on collections)

Additional details: blood vessel injuries, nerve injuries, vasovagal episodes, or cardiovascular reactions.
Serious Adverse Events

2,972 SAE
(7 countries notified no reportable SAEs)
Denominators: 24.0 million units issued, reports for 16.6 million units transfused (roughly 75% RBCs, 15% plasma, 10% platelets and <1% WB).

SAR: 1,739 SAR (imputability levels 2-3) and 22 deaths.

SAE: 2,972 SAE reported. About 30% occur during WB collection but 20% still reported as ‘other’. Around 55% are reported to be the result of human error.
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<td>1831</td>
<td>30</td>
<td>1739</td>
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<td><strong>SAR death (2-3)</strong></td>
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<td>20</td>
<td>30</td>
<td>14</td>
<td>30</td>
<td>22</td>
<td>28</td>
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<td>4113</td>
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<td>2953</td>
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<td>2972</td>
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<td><strong>SAR in donors</strong></td>
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</table>
**Legal framework** –
Article 9 of Directive 2005/61/EC
"ensure that their competent authorities communicate to each other such information as is appropriate with regard to serious adverse reactions and events"

**RAB aims**
to connect Member States in the case of
- SARE with potential cross border impact
- Transmissible disease outbreaks
- Information notices, in case of problems with devices, tests, etc.

RAB should work alongside existing national alerting systems
Medical devices:
- Automated Blood Collection System (May 2013)
- Blood Group System Cassettes (July 2013)
- Blood Bags (Sept 2013)

Infectious diseases:
- Dengue (August 2013)
- West Nile Virus (August to October 2013)
- Chikungunya (July-August 2013) - official alert received Jan 2014
Rapid Alert for Tissues & Cells (RATC)
- Operational since the 1\textsuperscript{st} of February 2013

Rapid Alert for Blood and blood components (RAB)
- Operational since the 6\textsuperscript{th} of February 2014
- 35 Competent Authorities
- SOP and user manual available
- First training course 15/01/2014
- Thanks to the RAB working group
The Application

- An "administration" module available for restricted list of users within the official list of Competent Authorities (CA) and members of the European Commission (EC) in order to create, follow-up and consult alerts and final reports
- An alert form and notification process
- A set of notifications/reminders (based on deadlines and specific events)
- A search functionality
- An easy to use and user friendly interface
Main stakeholders

- **CA** (Competent authorities) [27 Member States, +/- 50 Competent Authorities]
- **EC** (Unit D4 - Substances of human origin and Tobacco control)

Other potential stakeholders

- Pharmaceutical sector (EMA)
- Epidemiological sector (ECDC/EWRS contact points)
- EC (Other SANCO business units: Medical devices, Pharmaceutical, Health threats)
- WHO
- Other Network (T&C, Organs)
### New Alert

#### B_ALERT details

<table>
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<th>B_Reference</th>
<th>EC-2013-DRAFT(134)</th>
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<td>16/04/2013</td>
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<td>*B_Type of alert</td>
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<td>*B_Product concerned</td>
<td>Red blood cell</td>
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#### B_Initiator Competent Authority

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<th>B_Initiator CA</th>
<th>EC</th>
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<tbody>
<tr>
<td>B_Contact person</td>
<td>Paolo CATALANI (SANCO.DDG1.D.4)</td>
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#### B_Network

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<th>B_Network</th>
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<td>B_Contact person details</td>
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#### B_Notified Competent Authorities

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<td>All</td>
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<td>DE</td>
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<td>GB</td>
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<td>LI</td>
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</table>
Epidemiological Notices:
38 alerts launched by 6 Member States on West Nile Virus (Austria, Greece, Hungary, Italy, Romania).
1 alert on Legionnaires disease (Portugal)

Information Notice:
1 alert on contamination during platelet transfusion (Greece)

No Quality and Safety Defect alerts and no Bilateral Communications
Rapid risk assessment: Zika virus disease epidemic: potential association with microcephaly and Guillain–Barré syndrome, third update

23 Feb 2016

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→ EN

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beyond the scope of this tool and the mandate of ECDC, to detail response actions to be taken by Member States or provide clinical guidance. The risk assessment tool uses information gathered through the surveillance mechanisms described to ascertain the level of risk for human transmission of West Nile virus (WNV) within an area.

RISK LEVELS

Seven possible levels of risk (level 0 – level 5) for transmission of WNV to humans are defined.

Definition of terms ECDC has proposed common terminology for defining areas where arthropod-borne diseases, such as WNV, are being transmitted:
## EU-funded projects Blood

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<th>Collection</th>
<th>Testing</th>
<th>Processing</th>
<th>Storage</th>
<th>Distribution</th>
<th>Optimal use</th>
<th>Hemovigilance</th>
<th>Clinica follow-up</th>
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2.2.4.2. Strengthening the Member States’ capacity of monitoring and control in the field of blood transfusion and tissue and cell transplantation (Point 4.5. of Annex I to the Programme Regulation)

Priorities of the year, objectives pursued and expected results

This action aims to support Member States in their efforts to improve the implementation of the EU requirements for the safety and quality of blood and blood components and tissue and cell products.

Description of the activities to be funded by a grant awarded without a call for proposals on the basis of Article 190(1)(d) of the Rules of Application

This action will promote further cooperation between Member States competent authorities in the area of blood transfusion and tissue and cell transplantation. The action, to be taken forward by national bodies mandated in this field, should build on the outcome of previous EU-funded projects (e.g. EUBIS, CATIE, EUSTITE, SOHO V&S, etc.) and should provide support in various aspects like managing national vigilance systems, traceability and implementation of the Single European Code for tissues and cells, and training of inspectors. Common practical concerns and best practices should be identified, allowing for cross-fertilisation between the transfusion and transplantation sectors.

Implementation

Implementation by the Agency
EU JOINT ACTION “VISTART”
Grant Agreement 676969

“Vigilance and Inspection for the Safety of Transfusion, Assisted Reproduction and Transplantation”

Kick-off Meeting
Luxembourg, October 12th and 13th, 2015

Dr Alessandro Nanni Costa
Director General - Project Coordinator
Italian National Transplant Centre
The key objectives of the action are to:

- promote **and** facilitate harmonisation of inspection, authorisation and vigilance systems for blood, tissues and cells **and**

- to **increase** inter-MS collaboration and confidence in each other’s inspection and vigilance programmes.
What do Health Authorities expect from haemovigilance

- **Information** on serious adverse events and reactions
  - Qualitative – what goes wrong?
  - Quantitative – how frequently?
  - Benchmarking – how does my Member State compare?
- **Trending** of that information
  - Are we improving?
- Good **investigations** and appropriate corrective and preventive actions – feeding standards and legislative provisions
- Good **communication** – particularly when urgent action is needed – limiting the damage
- High quality and timely **information on emerging risks** – actions to mitigate.
EU Haemovigilance Pyramid

Rapid alerts

Notification of adverse occurrences

Surveillance of Emerging Risks

RAB

SARE

ECDC – rapid and well informed
Thank you