Donor haemovigilance- highlights

SHOT symposium 2017

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12/07/2017

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Disclosure - none
Transfusion

100% voluntary non-remunerated donations
Total donations in 2016: n = 1,688,447

- Whole blood
- Apheresis
Gender distribution among donors

- Female
- Male
Donors and previous experience

■ New donors  □ Donors who have donated before

Apheresis donations

Whole blood donations

0%  10%  20%  30%  40%  50%  60%  70%  80%  90%  100%
>50% of donors who donated in 2016 were > 45 years of age.
Number of active donors recorded

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- Number of active donors

- 2012-2013: 129,8479
- 2013-2014: 125,6791
- 2014-2015: 89,9927
- 2015-2016: 87,3506
- 2016-2017: 84,6961
Ethnic minority communities

- 14% in 2011
- 20% in 2051
Only 4% of our blood donors who have donated blood in the last two years are from Black, Asian or Minority Ethnic communities.
360 degree donor safety appraisal

- Adverse events rate
- KPIs
- SAEDs rate
- SABRE reportable events

Donors

- Complaints
- Comments
- Compliments
- Surveys

Staff

- Surveys
- Walkarounds
- Briefings
- Observations

External

- Regulators reports:
  - MHRA
  - CQC

Metrics

- Adverse events rate
- KPIs
- SAEDs rate
- SABRE reportable events
Donor safety

Qualitative

Quantitative
Safety measures

Pre-donation

- Voluntary, no incentives
- Donor screening (DHC, Hb check) and consent
- Positive donor identification
- Donation interval
- Pre-donation advice
- Leaflets, information to donors - website, phone

During Donation

- Clinical Venue Assessment
- Clinical Waste Management
- Arm cleaning - chloraprep
- Aseptic technique
- Single use sterile sets

Post donation

- Mandatory tests
- Discretionary tests
- Blood not released till all testing is complete
- Automated bacterial screening of bacterial components
- Donors encouraged to report if any health issues up to 2 weeks post donation
Safety systems

Combination of all these strategies
Regulations mandating haemovigilance systems

- Blood Safety and Quality Regulations (BSQR) 2005
- Blood Safety and Quality (amendment) Regulations 2006/2013
Since 2015, a collated report from all UK Blood Services regarding serious adverse events of donation (SAEDs) has been included in the annual SHOT report.
Purpose

- Help monitor donor safety
- Identify risk factors
- Allow international benchmarking of donor adverse events
- Help evaluate success of interventions in further improving donor safety
- Help develop mitigating actions

Donor haemovigilance systems
Local: Vasovagal reactions
Generalised: Apheresis related
Allergic
Major cardiovascular event
Other

Adverse events of blood donation
Serious adverse events of donation (SAEDs)
01 Donor death within 7/7 of donation
02 Hospital admission within 24 hours of donation
03 Fracture post donation
04 Road traffic accident post donation
05 Problems relating to needle insertion lasting >12/12 post donation
Grading of imputability

Imputability is defined as the strength of the relationship between the donation and the event. Only cases where the imputability is ‘definite’, ‘probable’ or ‘possible’ are reported to SHOT.
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Excluded
Unlikely/Doubtful
Possible
Probable/likely
Definite or Certain
~1.7 million donations per year (whole blood and apheresis).

6% donors may have an adverse event of donation.

Only 1 in 47730 donations result in an SAED in UK.
Trends in donor adverse events related to blood donation (DAEDs) - NHSBT

Total DAEDs
rate per 1000 donations

Year
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Review of SAEDs reported in NHSBT from 2010-2016
Rate of SAEDs per 10,000 Donations

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<table>
<thead>
<tr>
<th>Year</th>
<th>Rate of SAEDs per 10,000 Donations</th>
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<tr>
<td>2010</td>
<td>0.18</td>
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<td>2015</td>
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<td>2016</td>
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SAED categories 2010-2016

- Donor Death within 7 days
- Hospital admission within 24 hours
- Fracture within 24 hours
- RTC within 24 hours
- Needle insertion <1 year
- ACS within 24 hrs
- Anaphylaxis
SAED 2010 to 2016 by Gender

MALE (36.82%)  FEMALE (63.18%)
SAED breakdown by donor age
Trends of SAEDs related to immediate VVR and delayed VVR

VVR = Vasovagal reactions
SAEDs are rare but do occur & can significantly impact donor’s quality of life and extremely rarely, result in mortality.

VVR & nerve injuries are the most frequent SAEDs. Delayed VVR is the single biggest cause of serious adverse events of donation and the least understood

SAEDs negatively impact donor satisfaction and retention and may not always be preventable.
Has recording donor adverse events made a difference?
DAEDs in Donors under 21

Overall DAED rate  1st time Donors

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Vasovagal event rates in under 21 year old donors
Bruising Rate
per 1000 donations

NHS
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Thus.....

Donor haemovigilance systems promote donor safety

Reporting provides transparency and allows benchmarking in UK and internationally.

Data for adverse events is also reassuring to donors as donating blood is largely a safe process.
Improving ethnicity mix in donor population

Addressing differential demands and falling donor base

Improved efficiency and productivity

Matching demand in hospitals
Push to Pull model

Further steps.....From good to great

Enhanced and Improved donor experience & donor safety

Further challenges

Improving ethnicity mix in donor population
Improving Donor Safety

Donor education

Research

Robust donor selection processes

Donor Haemovigilance - data collection, analysis, benchmarking

Audits

Education, training and competency assessment of staff
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Thank you!

Acknowledgements

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