DONOR SELECTION
PRINCIPLES

IPFA Workshop SPIER Stellenbosch
30th Nov – 2 Dec 2015
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Maintaining Safety of Blood Products by Managing Risk – Key Focus Area – Donor

**Donation**

- Regular donor
- Focus on recruiting (100% voluntary donors)
- Focus on education
- Stringent donor selection criteria
- Focus on clinical risk
- Measure, improve, investigate best methods

**Technical**

- Quality
  - State of art testing
    - Serology
    - NAT
  - Processing – closed systems
  - Managing the cold chain

**Blood Bank**

- Hierarchy - for release & manufacture of components
- Components – made from low risk donations
- Plasma – donor retested
- Inventory Management
- Appropriate clinical usage
- Haemovigilance programme

Accreditation

Risk Management
Introduction

• ‘Donor Criteria/ Selection should be based on a review of existing international guidelines, relevant literature and best practices

• Deferral criteria should be regularly reviewed

• Written consent for the donation procedure, testing of their samples and for the administration of such fluids and medications deemed necessary in the management of an untoward reaction, prior to each donation

• Apheresis donors shall also sign consent for the administration of necessary replacement fluids and additives and the re-infusion of their own blood components.
Blood service principles

• Target donors at low risk for TTIs
• Recruit only VNRBD – applies to South Africa not necessarily practice in other countries for plasma donors
• Retain as many regular donors as possible
• Conduct Public Health Education re
  – Importance of blood donation
  – Risk factors for TTIs & High Risk behaviour
• Rigorous donor selection & screening protocols
• Perform safe blood collection techniques
• Test all donated blood every time
• Strive to get the right product to the right patient @ right time
Purposes of donor deferral guidelines

**WHO Blood Donor Selection Guidelines (2012)**
- Protection of donor’s health and safety
- Ensure recipient’s safety
- Identification of factors that make an individual unsuitable as a donor
- Reduce the unnecessary deferral of safe and healthy donors
- Ensure the highest quality of blood and blood products
- Minimise wastage of resources by collection of unsuitable donations

**Council of Europe & EDQM (2015)**—European Directorate for the Quality of Medicines & Healthcare

**British Pharmacopeia** which references the “Guide to the preparation and use of the blood and blood components”

**Country Standards**
Ultimately a balance needs to be made between ensuring that the blood service has a sufficient number of donors to meet blood supply needs, but at the same time providing the safest blood and blood products possible through deferring donors who are at risk of compromising this.

It may be necessary to make compromises regarding overly cautious deferral criteria for the sake of increasing the donor base.
Blood & Plasma Donation: not exactly a Win-Win for the Donor

• Give something for nothing
• Give up half an hour to two & a half hours of your time

In return we will

• Prick your finger (gently)
• Interrogate you on your sex life
• Put an even bigger needle in your arm
• Give you cookies & juice

And that’s on a Good Day, with no deferral & no donor reaction
National deferral guidelines

• WHO advises every country to have their own blood policy
• Deferral criteria should consider
  – The profile of the donor population
  – Epidemiology of prevailing infections and disease
  – Local culture
  – Available resources
• South Africa uses principles outlined in the Standards of Practice for Blood Transfusion (6th Edition 2013)
• At each visit, FBC pre and post donation and the results shall be within acceptable limits for apheresis donation
• Annual protein levels
• Donors with blood counts outside the acceptable limits may be accepted at the Medical Director’s/Medical Officer’s discretion.
Blood donor selection
Standards of Practice for Blood Transfusion in South Africa (2013)

- Blood donations must be voluntary and non-remunerated
- Donor must give informed consent prior to donating
- Donor age
  - Over 16 years
  - Under 65 years for first time allogeneic donors
- Donor weight must be over 50kg
- Positive identification of the donor must take place prior to donation
- Donation interval
  - Whole blood donations shall not be less than 56 days unless authorised
  - Plasma donors not more than once in 14 days
Strategies to encourage repeat blood donation

• **Good treatment of donors promotes retention:**
  – Thanks, rewards and recognition
  – Giving more bedside care to first-time donors.
  – A professional and organised "medical" environment
  – Important for first time donors to have good experience
  – Bad experiences, such as failed venepuncture, put off donors.

• **Continued reinforcement keeps donors involved:**
  - Constantly made to feel good about belonging to a select group of people

• Repeat blood donors perceive that there is a constant need for blood and approach blood donation with feelings of duty, responsibility and pride.
Blood donor selection
Standards of Practice for Blood Transfusion in South Africa (2013)

• General health and medication use
  – Careful documentation of donor illnesses, medication use and potential exposure to transmissible diseases
  – Donors under the influence of alcohol or drugs cannot donate

• Pre-donation haemoglobin screening (Hb >12.5 g/dl)
  – WPBTS criteria:  
    Hb > 12.5 g/dl for females
    Hb > 13.5 g/dl for males
Blood donor selection
Standards of Practice for Blood Transfusion in South Africa (2013)

- Pulse and blood pressure measurements
  - Regular pulse (50-100 beats per minute)
  - Systolic blood pressure 90-180 mmHg and diastolic blood pressure 50-100 mmHg

- Pregnancy
  - Cannot donate until 3 months after conclusion of pregnancy

- Max extracorporeal of 15% should not be exceeded (EU 20%)

- Specific protocols for anti D, Rabies Donors & other hyperimmune plasma donors
Reasons for deferral

• In summary, donors are deferred if
  – They do not adhere to specifications for age, weight, blood pressure, pulse or appropriate donation interval
  – They fail haemoglobin screening procedures
  – They have medical conditions that potentially pose a risk to themselves or the recipient
  – They have engaged in behaviour that is viewed as high risk for transfusion transmissible disease
  – They are not fit for donation on the day
Deferral of donor for medical reasons

- Reasons for deferral
  - Protection of donor from the donation procedure
  - Protection of recipient from acquiring infection or disease through the blood product
- Definite risk of transmitting infection from donor to patient
- No evidence of transmission of disease cancer from blood transfusions
  - Danish/Swedish Study (2007)\(^1\)
Deferral of donor for medication use

• Reasons for deferral
  – Certain drugs are **teratogenic**
  – **Chemotherapeutic** drugs can damage active cells
  – **Antibiotic usage** implies underlying infection
  – Specific drug usage indicates an underlying disease that would prevent the person from donating
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<thead>
<tr>
<th>Criteria</th>
<th>SANBS</th>
<th>WPBTS</th>
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<tbody>
<tr>
<td>Autoimmune disease</td>
<td>Accept if only one organ involved</td>
<td>Permanent deferral</td>
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<tr>
<td>Insulin-dependent diabetes</td>
<td>Accept if glucose level performed on day of donation</td>
<td>Permanent deferral</td>
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<tr>
<td>Melanoma-in-situ</td>
<td>Accept 5 years after complete excision of lesion</td>
<td>Permanent deferral</td>
</tr>
<tr>
<td>Chemotherapy</td>
<td>Accept if in remission for at least 5 years</td>
<td>Permanent deferral</td>
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Importance of the donor questionnaire

• **Key tool** in donor selection and appropriate deferral
• Questions should be simple, unambiguous and culturally acceptable
• Forms the basis of the one-on-one confidential interview at the donor’s first donation
• Questionnaires are updated at regular intervals
• Donor education regarding reasons for deferrals is also important
Current donor questionnaire

CONFIDENTIAL DONOR QUESTIONNAIRE

Please make sure that you complete all required sections carefully and honestly.

SECTION 1
Lifestyle Questionnaire:
Though important, these questions don’t aim to offend, but rather to identify potential risks to the recipient.

SECTION 2
Health Questionnaire:
Your safety is as important to us as the safety of the recipient. Therefore, you might not be allowed to donate if you answer yes to any of these questions. The qualified nurse will discuss your answers with you.

SECTION 3
Contact Details and Donor Enrolment Form:
New donors must complete all sections of the questionnaire.

PLEASE DO NOT DONATE BLOOD IF YOU MAY HAVE BEEN EXPOSED TO HIV/AIDS.

Thank you for donating blood today!

Your donation could save at least three lives. Remarkable, isn’t it? As a Service, we provide help to those in need. Continue to make a difference by remaining a regular blood donor.
Changes to SABTS questionnaire

• Notable changes in the past five years
  – Malaria deferral criteria
  – Men who have Sex with Men (MSM) criteria
Donor deferrals and returns

How does temporary deferral effect a donor returning to the Blood Service?

• Temporary donor deferral has a definite negative effect on future donations \(^2\)
• Return rate for first time, deferred donors
  – Zou \textit{et al} (2008): 7.5-21.6\% \(^3\)
  – Custer \textit{et al} (2007): 25\% (compared to first time, non-deferred donor rate of 49\%) \(^4\)
Summary

- The Blood Services are responsible for providing a safe and sufficient supply of blood for all patients & plasma to NBI in South Africa
- Deferral criteria exist to ensure both the safety of the blood donor and recipient
- Country specific policies should be developed
- Deferral criteria should be regularly reviewed to remove unnecessary reasons for donor loss
- The donor questionnaire plays a vital part in identification of deferral issues
- Imported Plasma - Criteria by country in place
Thank you for your attention

References
6. Tessa Hillgrove et al. The impact of temporary deferral due to low haemoglobin: future return, time to return, and frequency of subsequent donation. Transfusion 2011; 51:539-547