BEST PRACTICES IN NEONATAL TRANSFUSIONS

Jacque Tagliere, MT(ASCP)SBB
Neonatal Transfusion

- Component Choices
- Component Considerations
- Neonatal Aliquots
- Transfusion Considerations
Component Choices

- Red Blood Cells
- Fresh Frozen Plasma
- Platelets
Red Blood Cells

- Iatrogenic transfusion
  - 35 days
  - 42 days
- CPDA-1
- Additives
  - AS-1 and AS-5 Have Mannitol
  - AS-3 Lacks Mannitol
- Potassium
  - Surgery or exchanges
  - Irradiation
Component Considerations

- ALL ROUTINE TESTING REQUIRED
- ADDITIONAL TESTING
  - CLINICALLY SIGNIFICANT ANTIBODY, USE ANTIGEN NEGATIVE UNITS
  - HEMOGLOBIN S NEGATIVE
    * EXCHANGE OR MASSIVE TRANSFUSION OF HYPOXIC OR ACIDOTIC INFANTS
- IRRADIATION
• PROVIDE SMALL VOLUMES
• CONSERVE BLOOD PRODUCTS
• \(\uparrow\) LEVELS OF 2,3 DPG
• \(\downarrow\) MULTIPLE DONOR EXPOSURE
• \(\downarrow\) CMV EXPOSURE
• \(\downarrow\) COST
• QUAD PACKS/MULTIPORTION - closed
  – ASSIGNED UNIT INVENTORY
  – DECREASED DONOR EXPOSURE
• MULTIPORTION - open system
  – INCREASED DONOR EXPOSURE
• HALF UNIT/ FREQUENT DONATION
  – DECREASED DONOR EXPOSURE
  – DONOR COMMITMENT
Pediatric Blood Filters

PDF-20 PEDIATRIC FILTER
FENWAL
Advances in Aliquoting

- Neonatal/Pediatric Syringe with filter
- Sterile Connecting Device
Neonatal Syringe with Filter
Sterile Connecting Device
Sterile Connection
Sterile Connection
Sterile Connection
Sterile Connection
Accurate Blood Center
Anywhere, USA
FDA Registration Number 123456

Properly Identify Intended Recipient
See Circular of Information for indications, contraindications, cautions and methods of infusion.
May transmit infectious agents
Rx Only

VOLUNTEER DONOR

RED BLOOD CELLS
ADENINE-SALINE (AS-1) ADDED

From 450 mL CPD Whole Blood
Store at 1 to 6 C

US License Number 123

Rh POSITIVE

Expiration Date
31 JAN 2006

Negative for antibodies to CMV
Dividing ISBT Product Codes

1st Bag

W141606000555 E0226VB0

2nd Bag

W141606000555 E0226VA0

W141606000555 E0226VAb

3rd Bag

W141606000555 E0226VA0

W141606000555 E0226VAb
### ISBT Splits

#### ABO/Rh: A Pos

- **MR No:** [Field]
- **Order ID:** [Field]
- **Service Provider:** [Field]
- **Issue Date:** [Field] To: [Field]

#### No of Pregnancies

- **Components**
  - **Component Status**
    - [ ] All
    - [ ] Work in Progress
    - [ ] Issued
    - [ ] Issued Transfused
    - [ ] Wasted
    - [ ] Ready to Issue
    - [ ] Transfused

#### Components

<table>
<thead>
<tr>
<th>Status</th>
<th>Product Code</th>
<th>Donation Type</th>
<th>Unit No</th>
<th>ABO/Rh</th>
<th>Expiration Date/Time</th>
<th>Order</th>
<th>Loc</th>
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<tr>
<td>Transfused</td>
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<td>Allogeneic</td>
<td>W070007001033</td>
<td>O Pos</td>
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<td>O Pos</td>
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<td>3756</td>
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</table>
Zebra Printer
ISBT Labels on Demand
PROPERLY IDENTIFY INTENDED RECIPIENT
See Circular of Information for Indications,
contraindications, cautions and methods of infusion.
This product may transmit infectious agents.
Rx ONLY.

VOLUNTEER DONOR

RED BLOOD CELLS
IRRADIATED
LEUKOCYTES REDUCED
DIVIDED
40 mL from 55 mL CPDA – 1 Whole Blood.
Store at 1 to 6°C.
Part Ab

Rh POSITIVE

Expiry Date
0072910430
18 OCT 2007 04:30
Component Label Verify

Bar Code:  

Component Information
Product Code: E0710V00  FFP IRR
Unit No:  W070007001488
ABO/Rh: AB Pos  V N N

Special Testing:

Information: GT151

Label and component information match.

OK
Detail >>
<table>
<thead>
<tr>
<th><strong>Report of Transfusion Reaction</strong></th>
</tr>
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<tbody>
<tr>
<td><strong>Amount Transfused prior to stopping transfusion:</strong></td>
</tr>
<tr>
<td><strong>Transfused:</strong></td>
</tr>
<tr>
<td><strong>Transfused by:</strong></td>
</tr>
<tr>
<td><strong>Date/Time:</strong></td>
</tr>
<tr>
<td><strong>Notified Physician:</strong></td>
</tr>
<tr>
<td><strong>Physician Name:</strong></td>
</tr>
<tr>
<td><strong>Date/Time:</strong></td>
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<tr>
<td><strong>Notified Blood Bank:</strong></td>
</tr>
<tr>
<td><strong>Tech Notified:</strong></td>
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<td><strong>Date/Time:</strong></td>
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<table>
<thead>
<tr>
<th><strong>Transfusion Reaction Symptoms</strong></th>
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<tbody>
<tr>
<td><strong>Urticaria, rash and/or hives:</strong></td>
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<tr>
<td><strong>Fever:</strong></td>
</tr>
<tr>
<td><strong>Chills:</strong></td>
</tr>
<tr>
<td><strong>BP:</strong></td>
</tr>
<tr>
<td><strong>Nausea or vomiting:</strong></td>
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</table>

**Transfusion Record**

The transfusion record indicates that the product was tagged with the recipient label and the recipient’s wristband and all identifications were performed.

**Recipient ID confirmed by:**
Decisions: ISBT or both Codabar and ISBT

- ISBT Modifications
  - Dividing: ISBT divide suffix V00 → VA0, VAa etc...
  - Pooling: Generate a new ISBT pooled number
  - Regular modifications: Irradiation, thawing, washing, freezing, deglycning

- Frozen products
- Suppliers ISBT
• Modifying Units
  – Pre-printed 2x2’s
  – Stand alone software
• Hema-Trax.LPS™ ISBT-128: Microsoft Windows-95/98/NT 4.0/2000/XP operating system platforms.
## Tracking Supplies

**Find Accessory Lot No**

<table>
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<tr>
<th>Accessory ID</th>
<th>Manufacturer ID</th>
<th>Lot Number</th>
<th>Status</th>
<th>Expiration Date</th>
<th>Location</th>
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<td>ISP</td>
<td>P169A17U25</td>
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<td>10/31/2008</td>
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<tr>
<td>SCD-WAFER</td>
<td>TERUMO</td>
<td>061220</td>
<td>OK for use</td>
<td>CHLABB</td>
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<td>SCD-WAFER</td>
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<td>070223</td>
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<td>SCD-WAFER</td>
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<td>070309</td>
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<tr>
<td>SYRINGE-LG</td>
<td>CHARTER</td>
<td>114003</td>
<td>OK for use</td>
<td>04/30/2011</td>
<td>CHLABB</td>
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<td>SYRINGE-MD</td>
<td>CHARTER</td>
<td>113952</td>
<td>OK for use</td>
<td>03/31/2011</td>
<td>CHLABB</td>
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</tbody>
</table>
• PLATELETS from WB
  – Not available in So Cal
• PHERESIS
  – Aliquot as needed
  – Volume reduced - 4 hr expiration
FRESH FROZEN PLASMA

- ABO COMPATIBLE
- THAW
  - ISSUE
  - ALIQUOT AND ISSUE
- FREEZE IN SMALL ALIQUOTS
Pediatric Blood Pumps
Pediatric Blood Pumps
References

• Standards for Blood Banks and Transfusion Services 24th Edition
• http://www.iccbba.org
• http://www.aabb.org/Documents/Members_Area/Labeling/ISBT_128/isbt128plan0906.pdf