Blood component traceability and blood transfusion safety

A tool for managing risk

Birgit Fleurent, Senior Group Product Manager
Lyn Sharman, Director Business Development
Existing transfusion regulations

  - Applies to all European countries since February 2005
  - Ensures health protection by setting standards of quality and safety for the collection, testing, processing, storage and distribution of blood
  - Article 10 – Personnel
  - Article 11 – Quality control
  - Article 12 – Documentation and training
  - Article 14 – **Vein-to-vein traceability**
  - Article 15 – Reporting
  - Article 22 – Storage

**Article 14 requires vein-to-vein traceability**, which will be subject to regular audits. Data must be kept for **30 years**.
Current Blood Transfusion Challenges

- Lack of equipment and tools for staff to comply
- Difficult to collect the required data
- Difficult to keep records for 30 years
- Difficult to maintain accurate documentation on training
- Difficult to provide data for mandatory reporting
- Difficult to collect data on blood storage at remote sites
Current Blood Transfusion Challenges

- Right Patient?
- Right Blood Product?
- Right Compliance?
- Right Time?
- Right Condition?

- Operating Room 1
- ICU
- Hematology
- Patient Floors
- Emergency Dept
- Blood Bank
The solution

- Provide tools to the hospital staff to comply
- Automate the collection of required data to comply
- Electronic collection of data for easy storage and retrieval of records for 30 years
- Provide accurate training and competency documentation on staff training
- Provide easy retrieval of data for mandatory reporting
- Provide accurate data on the movement and blood storage at remote sites
Traceability: what does it offer

- Ability to monitor blood stocks
  - In the hospital
  - In a region
  - To the donor centre
- Availability to locate specific units
- Ability to monitor expiry dates
  - Reduce wastage
- Ability to monitor blood condition
  - Length of time out of a refrigerator
  - Knowledge of condition of blood
Solutions for transfusion challenges

Challenges

- Patient safety / Clinical outcomes
- Product quality
- Regulations / Traceability / Reporting
- Delay of treatment / Length of stay (LOS)
- Blood inventory / Waste / Rework
- Staff shortage / Staff efficiency

BloodTrack Solution

- Securing blood inventory
- Remote blood allocation/Electronic crossmatching
- Patient identification
- Transfusion verification
- Information management

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Control blood inventory at the point-of-care

**BloodTrack**

Remote blood inventory tracking and safety system for your existing refrigerators at the point-of-care

- Tracks, monitors, and controls access to blood outside the blood bank
- Improves patient safety by verifying right blood is removed for the right patient
- Helps reduce waste and ensure product quality by monitoring out-of-storage times
- Improves inventory distribution and availability
- Manages crossmatched and emergency products
- Works with your existing remote refrigerators
- 510(k) cleared
Provide blood just-in-time instead of just-in-case

**BloodTrack** OnDemand
**BloodTrack** HemoSafe
**BloodTrack** HemoNine

Automated remote electronic blood dispensing system at the point-of-care
- Reduces blood bank and clinical staff workload
- Provides blood directly at the point-of-care quickly and safely
- Remotely allocates blood in under 60 seconds
- Eliminates crossmatching, labeling and transporting blood just-in-case
- Dispenses cross-matched, emergency, and unallocated blood products
- Acts as a 24/7 virtual blood bank
Verify Right Blood, Right Patient

**BloodTrack® Tx**

**Bedside point-of-care transfusion verification system**

- Improves patient safety by electronically verifying right blood, right patient
- Efficiently guides clinical staff through hospital transfusion SOPs to help provide compliance
- Prints barcoded specimen collect labels
- Records transfusions, patient vitals, reactions and staff IDs for Hemovigilance compliance
- Integrates with BloodTrack inventory control modules
Monitor and verify the blood supply chain

BloodTrack AutoFate

Hospital Blood Bank Information System

BloodTrack Manager

BloodTrack Enquiry

BloodTrack Courier

BloodTrack Tx

BloodTrack HemoSafe

BloodTrack HemoNine

Information Management

Transfusion Workflow

Emergency Inventory

Crossmatch Inventory

Just-in-Time Inventory

Hospital

Blood Traceability

Hospital Blood Bank Information System

Emergent Inventory

Crossmatch Inventory

Just-in-Time Inventory

Information Management
Manage the hospital blood supply chain

**BloodTrack® Manager**

An extension of your blood bank information system for remote blood inventory and transfusion monitoring

- Provides a centralized view of transfusion and blood movement events
- Helps protect patients by providing real-time actionable alerts
- Alerts to low inventory levels, expirations, and out-of-storage times
- Generates reports on emergency blood use, blood unit disposition, temperature history, patient/staff history…
Trusted and proven Solution – overview *

- BloodTrack in clinical use since 2002
- Over 160 customers in 5 countries
- Over 1,000,000 units tracked annually
- 7 Awards won between 2007 and 2010

* Per January 2011
Trusted and proven solution – proven clinical results

• The clinical impact of the BloodTrack system has been documented in the peer-reviewed AABB Journal of Transfusion no less than 5 times and has been featured on the cover twice.*

• In addition our customers continue to receive considerable attention from public media in the form of newspaper articles, TV newscasts, and press releases for their focus on ensuring transfusion safety.

* Per January 2011
<table>
<thead>
<tr>
<th>BloodTrack OnDemand* in Operating Room</th>
<th>Before</th>
<th>After</th>
<th>Reduction</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crossmatch to Transfuse (CT) Ratio¹</td>
<td>2.5 : 1</td>
<td>1.6 : 1</td>
<td>-36%</td>
<td>Reduced Blood Bank Workload</td>
</tr>
<tr>
<td>Blood Issued from Blood Bank¹</td>
<td>407 units</td>
<td>197 units</td>
<td>-52%</td>
<td>Decreased Crossmatch and Transport</td>
</tr>
<tr>
<td>Blood Availability¹</td>
<td>24 min</td>
<td>1 min</td>
<td>-96%</td>
<td>Increased Safety &amp; Efficiency</td>
</tr>
<tr>
<td>Hospital Staff Time¹</td>
<td>115 min</td>
<td>34 min</td>
<td>-71%</td>
<td>Increased Labor Productivity</td>
</tr>
</tbody>
</table>


*Requires Hospital Blood Bank Information System with Electronic Crossmatching
**Trusted and proven solution – published cost savings**

Example of yearly savings with BloodTrack at 4 hospital customer*:

<table>
<thead>
<tr>
<th></th>
<th>Annual Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced blood use</td>
<td>468,000 €</td>
</tr>
<tr>
<td>Reduced blood waste</td>
<td>23,400 €</td>
</tr>
<tr>
<td>Reduced nursing time</td>
<td>585,000 €</td>
</tr>
<tr>
<td>Reduced laboratory staff time</td>
<td>23,400 €</td>
</tr>
<tr>
<td>Reduced consumable waste</td>
<td>1,170 €</td>
</tr>
<tr>
<td><strong>Total annual savings realized</strong></td>
<td><strong>1,100,970 €</strong></td>
</tr>
</tbody>
</table>

* Ca. 30000 units of RC transfused yearly, 1900 beds - BT Courier, Tx and 6 HemoNine implemented.
*Quality and Productivity 2009: Oxford Radcliffe Hospitals, Electronic blood transfusion systems, [www.evidence.nhs.uk/qualityandproductivity](http://www.evidence.nhs.uk/qualityandproductivity) (Values converted from £ to € at exchange rate = 1.17)
Haemonetics’ approach

Our unique approach to optimizing blood management:

1. Collect data
2. Assess your current blood management methods
3. Recommend solutions that will help
   - Improve staff efficiency
   - Decrease inventory
   - Decrease waste
   - Improve traceability
4. Implement solutions
5. Demonstrate success through quantitative evaluation
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Thank You

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Lyn Sharman, Director Business Development