Tackling red blood cell (RBC) waste in Victoria

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RBC wasteage reduction pilot background

- NBA Wastage strategy
- Victorian Government set RBC wasteage rate targets for 2014-15 (3-5%)
- AHMC – National Stewardship statement
- ACSQHC - National standards – Standard 7
- BloodNet – Fate module (discard rates/reasons)
- Blood Moves project – South Australia
Vic RBC wastage before project
Project aim

To assist health services and pathology providers reduce avoidable RBC waste and meet targets (3-5%)
Wastage can be defined as loss resulting from carelessness, inefficiencies or even inappropriate use.
Initially

- Working with health/pathology services that have RBC wastage rates above the targets
- Regional focus
- Also looking at number of RBCs discarded ($346.86 per unit) not just % lost
- Top ten RBC losses Nationally
- Visited public and private sites ALL very engaged and eager to reduce waste
Site visit

- Introduction letter to key stakeholders
  Meet with all the people (individually or group)
- Overall picture of health service (# beds, ICU, surgery, blood use)
- Assessment Standard 7
- Discards As a Percentage of Inventory (DAPI) and wastage reports
- Blood fridges
- Supply of blood potentially to a number of providers
- Transport of blood
- BloodNet
- Inventory

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Site visit understanding wastage

- Exploring through communication to understand where waste occurs
- The type / reasons for waste
- Ordering practice of local physicians
- Inventory management
- RBC rotation/transfer RBCs
- Fridge compliance
What we found?

- Non-compliant blood fridges
- Maintenance data not being shared when blood fridge is shared
- Irradiated blood only ordered
- Blood taken into operating theatre (just in case)
- Rotation of blood at 7 days or less to expiry
- Over ordering Maximum Blood Ordering Schedule (MBOS) not used
- Non acceptance of other blood groups
- No electronic crossmatch, all segments used
Victorian complexities

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Victorian complexities

Diagram showing the complex network of blood transport between public hospitals, private hospitals, laboratories, and private pathology services.

Two-way blood transport

One-way blood transport

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Victorian complexities
Where blood fridges are present

These could be owned and serviced by the hospital

Owned by the hospital and serviced by a single private pathology provider

Owned and serviced by a single private pathology provider

This complexity has resulted in RBC wastage where fridge compliance data is not readily available to all private pathology providers
Currently 268 potential transfusion sites and still counting
Some success

- Many Health services have reduced wastage rates
- Risks identified caused initial increase waste
- Education in red cell compatibility
- Strategies appropriate for that service have been formulated and implemented
- Australian Health Provider Blood and Blood Products Charter to be signed
Health service blue

Units Distributed and Fate

- Jul-2014: 68 units distributed, 29.4% loss rate
- Aug-2014: 52 units distributed, 19.2% loss rate
- Sep-2014: 54 units distributed, 14.8% loss rate
- Oct-2014: 71 units distributed, 23.9% loss rate
- Nov-2014: 52 units distributed, 15.4% loss rate
- Dec-2014: 73 units distributed, 13.7% loss rate
- Jan-2015: 69 units distributed, 11.6% loss rate
- Feb-2015: 69 units distributed, 5.3% loss rate
- Mar-2015: 75 units distributed, 5.3% loss rate
- Apr-2015: 55 units distributed, 5.3% loss rate

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Health service purple

Units Distributed and Fate

- Units Distributed
- Loss Rate

- Jul-2014: 56, 17.9%
- Aug-2014: 64, 12.5%
- Sep-2014: 91, 12.1%
- Oct-2014: 81, 12.3%
- Nov-2014: 66, 10.6%
- Dec-2014: 104, 2.9%
- Jan-2015: 94, 7.5%
- Feb-2015: 67, 2.2%
- Mar-2015: 92, 9.6%
- Apr-2015: 94, 9.6%

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What is being done?

• Every site visited has contacted Blood Service to have an inventory assessment

• Rotation of stock at 14 days (within own network)

• Addressing compliancy of non-compliant fridges progressing

• Improving data sharing between laboratories that use a common fridge

• Auditing crossmatch/transfusion ratio
What is being done?

- Implementation of electronic crossmatching
- Visual prompts for blood fridges
- Ongoing collaboration health/pathology services
- Collaboration with the BloodNet fridge module
Things still to tackle

- Blood movement time-frames
- Correct transportation of blood
- Use of MBOS
- Inventory management
- Reducing crossmatch holding time
Current RBC wastage Vic

Units Distributed and Fate

- Units Distributed
  - Jul-2014: 16,534
  - Aug-2014: 15,828
  - Sep-2014: 15,988
  - Oct-2014: 16,933
  - Nov-2014: 14,922
  - Dec-2014: 15,455
  - Jan-2015: 14,775
  - Feb-2015: 14,020
  - Mar-2015: 15,858
  - Apr-2015: 15,198

- Loss Rate
  - Jul-2014: 5.7%
  - Aug-2014: 4.8%
  - Sep-2014: 4.1%
  - Oct-2014: 5.0%
  - Nov-2014: 4.4%
  - Dec-2014: 5.1%
  - Jan-2015: 5.7%
  - Feb-2015: 5.2%
  - Mar-2015: 5.2%
  - Apr-2015: 4.2%

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Acknowledgments

- To the health/pathology services for their collaboration and willingness to be involved in the project. Australian Governments, Australian Red Cross Blood Service, South Australian Blood Moves project/ BloodSafe and the NBA for their support.
Questions