


ISQua CLINICAL EXCELLENCE COMMISSION

Improving Fresh Blood Product Transfusion In NSW

ISQua 2009: 26th International Conference, Dublin


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 BLOOD WATCH every drop counts

CLINICAL EXCELLENCE COMMISSION

Blood Watch is a state-wide transfusion medicine improvement program

Vision: To achieve excellence in transfusion medicine

ISQua  BLOOD WATCH every drop counts


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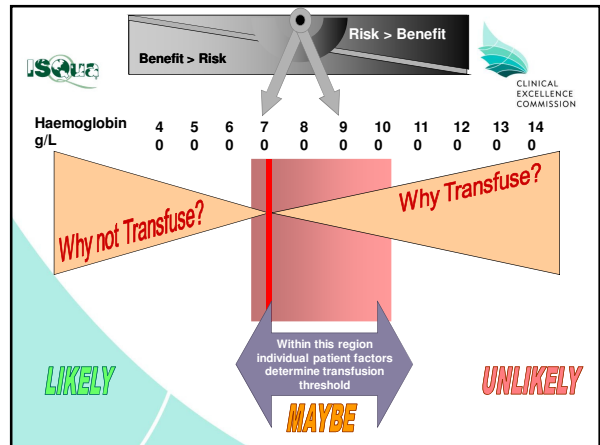
NSW Blood Budget 2008-2009

NSW's total projected Blood Budget for this year 08-09 is **\$257,519,200**

This is made up as follows:

- State contribution (37%) \$95,282,113
- Commonwealth contribution (63%) \$162,237,087


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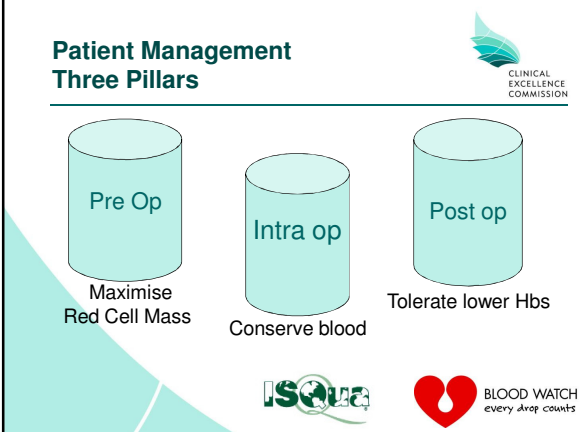
The Issues allogeneic transfusions “a tissue transplant”

- Scarce and precious resource
- Responsibility to the donor
- Immunomodulation
- Adverse events eg TRALI, GAVHD, febrile reactions, bacterial contamination etc
- Mismatch transfusion = error
- Cost
- Viral risk
- CJD and Dengue Fever
- Lack of evidence of efficacy in stable patients

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Patient Management Three Pillars



Pre Op: Maximise Red Cell Mass

Intra op: Conserve blood

Post op: Tolerate lower Hbs

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Diagnostics



Data

- Red Cell audit in March 2007
- Data linkage- Red Cell Utilisation Database

Qualitative Research

- Market research into prescribing behaviours of senior clinicians

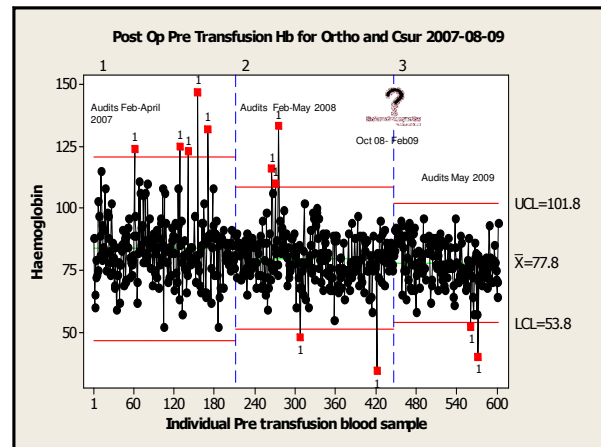
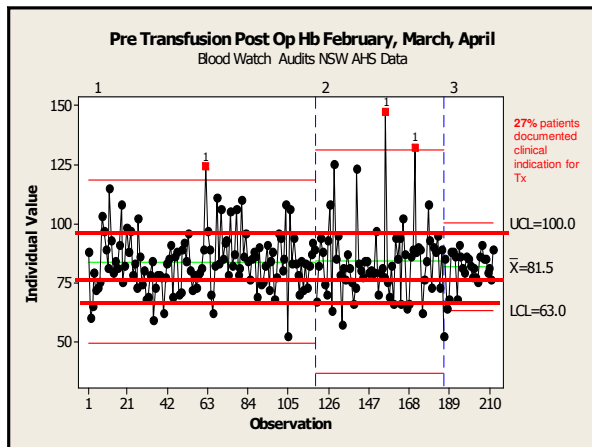
Literature Review- emerging evidence



Red Cell Audit Results 2007



- 12.7% pts anaemic & had surgery with Hb's under 105g/L
- 4% received transfusion with Hb's over 100g/L
- 95% had post-op transfusion with Hb's over 70g/L
- Standard dose 2 units

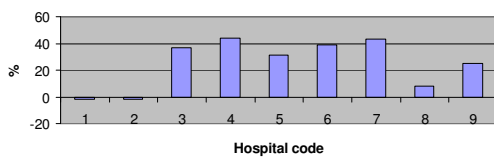


Relative Use Database Metropolitan Hospitals



Proportion of red cell transfusions occurring in metropolitan teaching hospitals which are either above or below the state average (2005-2006)

(calculated as casemix adjusted relative use index; source data CEC red cell data linkage project NSW)

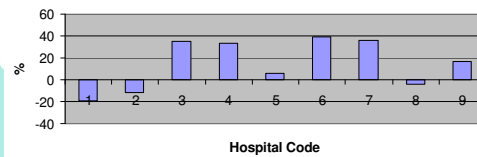


Relative Use Database Metropolitan Hospitals



Proportion of red cell units (dose) transfused in Metropolitan Teaching Hospitals which are either above or below the state average (2005 - 2006)

(calculated as casemix adjusted relative use index; source data CEC red cell data linkage project NSW)



Overall % of Reduction in Red Cell usage in NSW Teaching Hospitals for in Patients 2007-2008

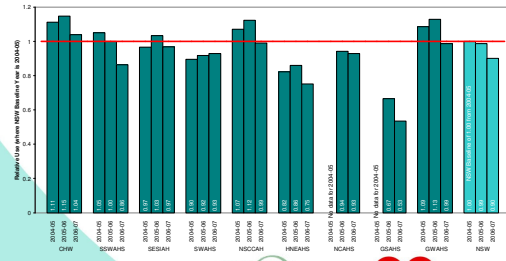


2006-2007 performance	Teaching Hospital	% improvement by hospital to previous year*
Highest	A	-19%
	Relative use	B
Intermediate	C	-5%
	D	2%
	E	2%
Lowest	F	-14%
	G	-8%

*Overall hospital activity increased during 2007-2008



Red Cell Utilisation Rate: Relative rate of red cell transfusion occurring in NSW public hospitals: calculated as case mix adjusted relative use index, for overnight separations where the benchmark is NSW 2005/06 baseline



- The relative use graph shows an overall 10% reduction in-patient red cell usage between 2005-2007.
- This figure is an underestimate due to only hospital overnight admissions being included,
- 9168 units were saved.
- Equates to a direct product cost of approximately **\$2,383,855** savings across the State (based on AUD\$260 per unit). This figure is inclusive of Commonwealth Government's 63% contribution to the States blood budget.



www.bloodsafelearning.org.au




Blood Myths & the Evidence




Patient Information Brochure



Available to download in 10 languages at www.mhcs.health.nsw.gov.au

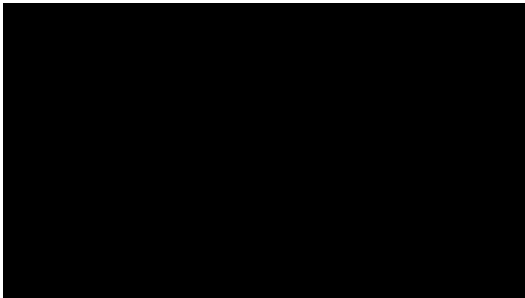


Diagnostic

- Market Research into prescribing practice of surgeons
- Co-sponsored by National Blood Authority
- In-depth interviews with 21 senior surgeons and physicians, rural & metro
- "Senior doctors had a high personal confidence in prescribing habits, with a general assumption that they represent best practice. This is often incorrect, yet there is a reluctance to recognise this even when presented with the guidelines"



www.thetransfusionquestion.com.au



www.thetransfusionquestion.com.au

<http://www.thetransfusionquestion.com.au/Exhibit2.aspx>

22/10/2008 8:57:19 PM
James Isbister Said
Thanks Bruce and Richard, your comments should be broadcast from the medical blogs, where ever they may be. Perhaps Google may do the job and they will rise to the top of page one!

21/10/2008 3:23:35 PM
Bruce D. Speiss, MD, FAHA Said
The use of 2 units is an old practice that dies hard. Each unit of blood is precious and if one unit is enough to restore adequate oxygen carrying content then that is what a patient should get. This out dated practice does result from the 1960's when people first started to think about oxygen carrying capacity and calculate oxygen content by the equation. As such it was clear that if you were dealing with a 70kg person to give just one unit would only add about 5.7% of increased Hgb and the thought was that it simply was not a big enough boost. Since we rarely know why we are transfusing to begin with (in the 1-2 unit dosages) then having an old rule of thumb like this only sentences patients to twice the risk and creates twice the shortage. The whole goal of re-focusing on transfusion today is to say do we really know what we are doing? And further, in this particular patient do we really have a solid idea of risk and benefit. I put it to the readership that most 1-2 unit transfusions are treating a physician anxiety (I need to do something, or well maybe a transfusion would help), rather than a real physiologic oxygen delivery analysis or a thoughtful risk/benefit ratio discussion.
Bruce Speiss, MD

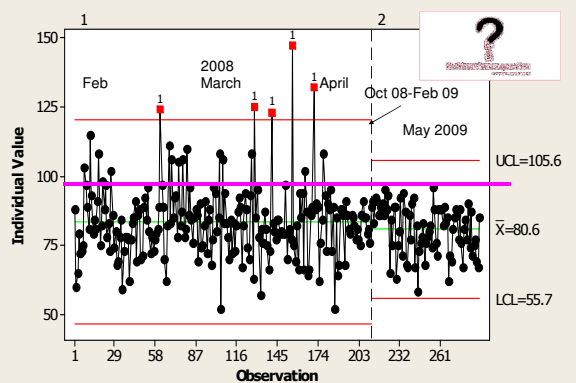
20/10/2008 11:38:34 PM
Richard Seigne, Anaesthetist Said
The appropriate amount of blood may be none, one or multiple units of blood depending on the patient and the clinical situation. Best practice is each transfusion decision should be a conscious one based

Results of the Campaign

- 2900 unique visitors between Oct 08- June 09
- Dwell time- approx 4mins
- Visitors from over 45 countries
- Over 60 debate posts
- Did it have any impact on clinical practice?



Post Op Pre transfusion Hb for orthopaedics and cardiac surgery 08/09



Next Steps 2009-2011



- Continue auditing performance
- Continue to spread system changes /strategies around all fresh blood products
- Extend communications initiative to all surgical groups
–www.thetransfusionquestion.com.au
- Improve haemovigilance and reporting
- Focus on education around Iron Deficiency Anaemia
- Ongoing research/ evaluation of current program

