

Blood Matters-better safer transfusion program



STIR- A state approach to haemovigilance

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STIR a state approach



http://travel.nationalgeographic.com/places/photos/photo_melbourne_melbourne.html



<http://www.streetsblog.org/2008/09/17/melbournes-complete-streets/>



Haemovigilance

- “A system of surveillance and alarm, which encompasses all steps of the transfusion process, from blood collection to the follow-up of recipients”
- Debeir J, Noel L, Aullen J, Frette C, Sari F, Mai MPV, Cosson A
- *Vox Sang* 1999; 77: 77-81

- “... to collect and assess information on unexpected or undesirable effects resulting from the therapeutic use of labile blood products, and to prevent their occurrence or recurrence”.
- European Haemovigilance Network 2006

Serious Transfusion Incident Reporting System (STIR) for Victoria

Purpose

- A state wide haemovigilance system
- Capture serious hospital transfusion incidents, including near-misses
- Data collated and reported with recommendations for better, safer transfusion practice

Serious Transfusion Incident Reporting System (STIR) for Victoria

Organisation

- Private and public hospitals
- Integrated with sentinel events program
- Maintenance of confidentiality – no patient identifiers kept by STIR
- Data reviewed by expert group – reports to Blood Matters advisory committee.

STIR a state approach

- Developed in 2005
- Pilot in 2006 with 14 public and private hospitals in Victoria
- Live since 2007

STIR a state approach

- Current participation covers 68% of Transfusion episodes for Victoria (Victorian Admissions Episode Data, VAED)
- Participation also from Tasmania, Australian Capital Territory and Northern Territory.

STIR: Scope

- FRESH blood products (red blood cells, fresh frozen plasma, platelets and cryoprecipitate)
- From volunteer (Australian Red Cross Blood Service), Directed donors or Autologous collections
- Pre transfusion samples

Process

Health service

- Two layered process to report an event to STIR:
 - Initial notification and then a follow up investigation form
 - The investigation form assists the health service with investigation of the incident
- Time frame of four weeks for health services to complete report following notification

Process

STIR

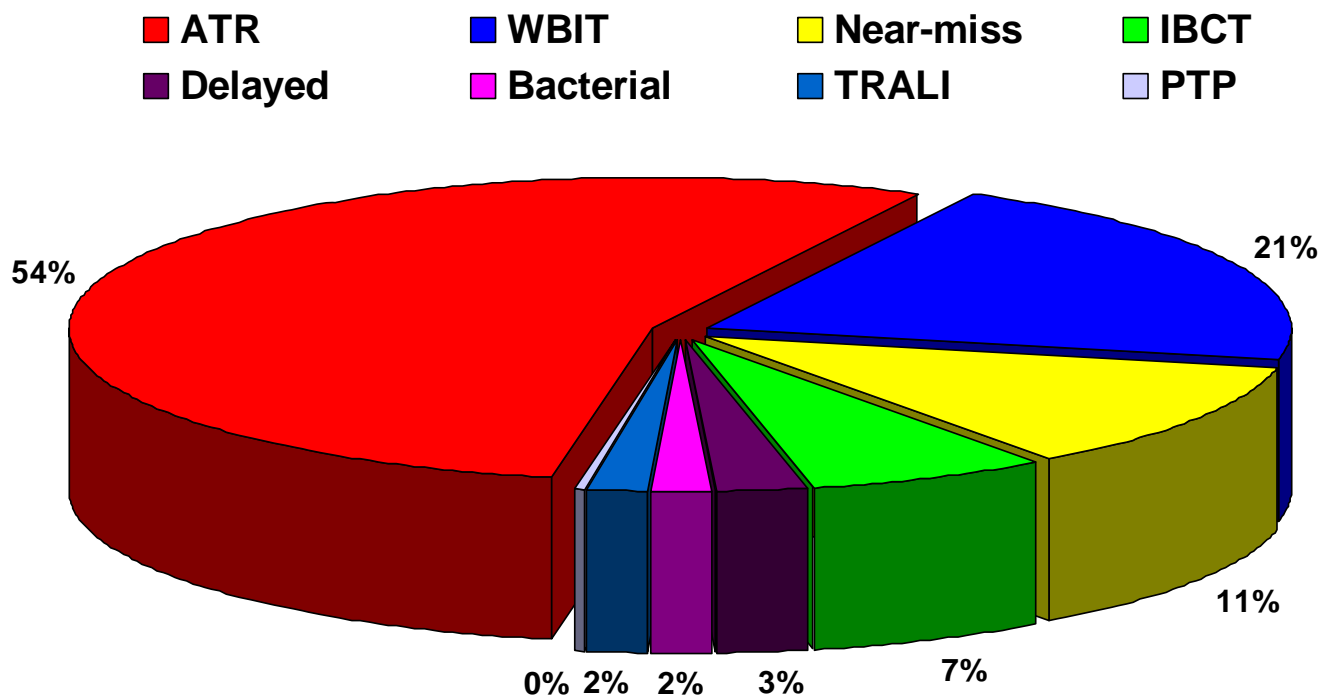
- receives no patient identification kept at parent hospital
- Voluntary reporting
- Review by expert group
- Determine causality and imputability
- Report nationally

Reportable STIR events

The following types of incidents are reportable:

- **Incorrect blood component transfused (IBCT)**
- Acute transfusion reaction (including anaphylaxis)
- Delayed transfusion reaction
- Transfusion-associated graft versus host disease
- Transfusion-related acute lung injury (TRALI)
- Transfusion-associated circulatory overload (TACO)
- Post-transfusion purpura
- Post-transfusion viral infection
- Bacterial/other infection
- **Wrong blood in tube (WBIT)**
- **Other near miss events**

STIR Initial notified adverse events 2006-10



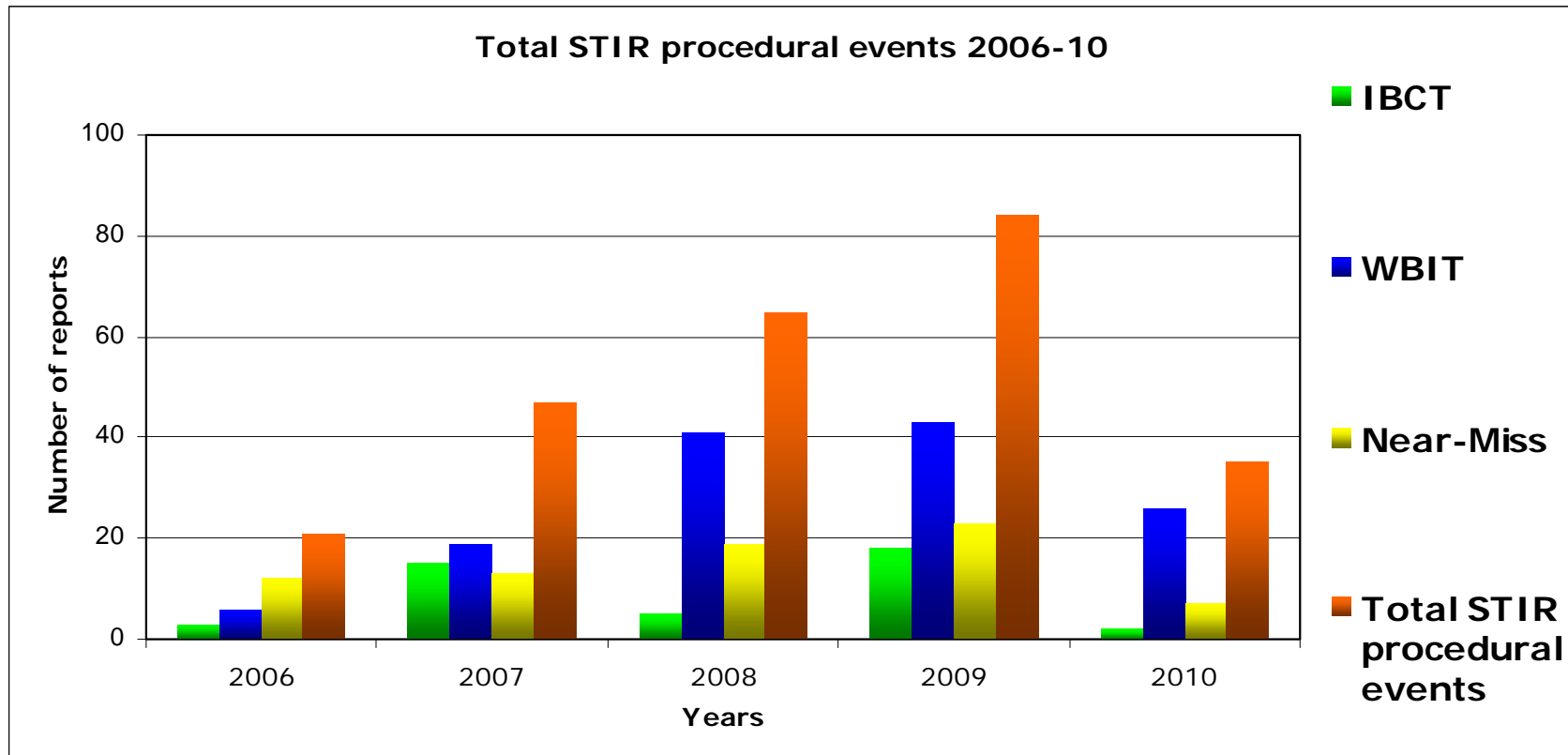
ATR	WBIT	Near-miss	IBCT	DTR	Bacterial	TRALI	PTP
352	135	74	43	17	10	11	2

STIR events for 2006-10

Demographics

- 292 Male / 342 female
- 151 reports related to patients under 18 years
- 47 years mean age
- 273 initially reported as suspected
- 365 initially reported as confirmed

Procedural events 2006-10



Procedural events accounts for 38% of all STIR reports

2010 data to May 2010

Case Study - ATR

- Post operative patient, with ongoing bleeding
- FFP prescribed
- oedema of face, tachycardia, significant hypotension and reduced oxygen saturation levels.
- ventricular fibrillation cardiac arrest
- resuscitated with direct cardioversion, IV adrenaline and oxygen
- successful recovery from both the anaphylaxis and surgery.

Case Study – suspected TRALI

- Patient presented with critical bleeding
- ICU post surgery for ongoing management
- Multiple blood products in first 24 hours, during emergency resuscitation and surgery
- Three hours following admission to ICU, prescribed eight units of cryoprecipitate
- next 24 hours patient respiratory status deteriorates, culminating in significant desaturation 24 hours post the cryoprecipitate administration
- ? TRALI, ? APO ? ARDS

Case Study - IBCT

- Retrieval of blood with incorrect ID
- Failure to check product at the bedside
- Failure to check patient identity
- Utilised accompanying paperwork with product as the check
- Reaction recognised but severity not initially noted as clerical recheck not done

Next steps

- Electronic investigation forms
- Semi-automation of the database
 - Reduce reporting burden
 - Back end data entry
- Update definitions
 - Include cell salvage

Thank you



Acknowledgments and thanks to:

STIR expert group

Blood Matters-better safer transfusion program

Department of Health and Australian Red Cross Blood Service

and the reporting hospitals of Victoria, Tasmania, Australian Capital Territory
and Northern Territory.

Further information on STIR

www.health.vic.gov.au/bloodmatters

Blood Matters-better safer transfusion program

STIR definition guide and
2006-07 Annual Report available
on the website
2008-09 report currently in development



Serious Transfusion Incident Report
Blood Matters - Better Safer Transfusion Program
2006-07

Better Safer Transfusion Program
Serious Transfusion Incident (STIR) Reporting
The STIR system is a central reporting system for serious incidents following transfusion of blood or components

STIR GUIDE

Use this guide to report

- Incorrect blood component transfused
- Acute transfusion reaction (including anaphylaxis)
- Delayed transfusion reaction
- Transfusion-associated graft versus host disease
- Transfusion-related acute lung injury (TRALI)
- Transfusion-associated circulatory overload (TACO)
- Post transfusion purpura
- Bacterial/other infection
- Post transfusion viral infection
- Wrong blood in tube (WBIT)
- Other near miss incident

Further information is available at www.health.vic.gov.au/best

blood matters
better safer transfusion program

Australia Red Cross
BLOOD SERVICE

A Victorian Government initiative
VICCOG

A Victorian Government initiative