

Highlights from the 2005 SHOT Report

SHOT/NBTC Annual Update
Meeting

20th November 2006

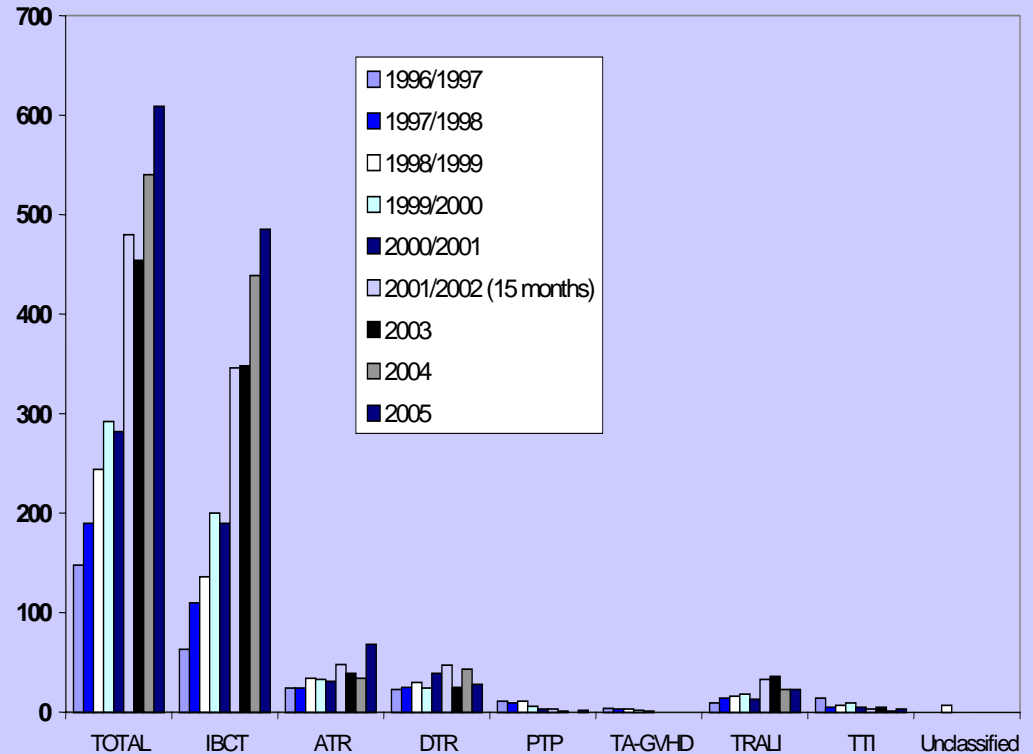
A decade of haemovigilance

- 9 Annual Reports
- 10 years of cumulative data
- Blood Safety and Quality Regulations
- SABRE
- Collaboration with NPSA
- Review of progress



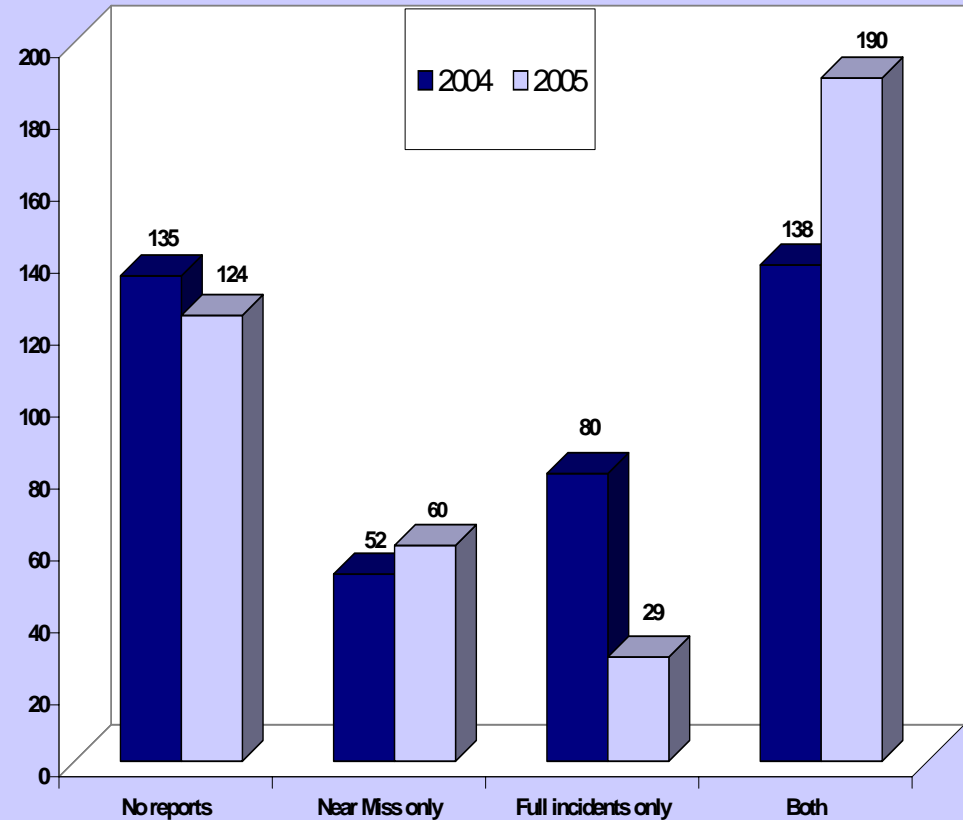
Continued increase in reports

- 609 cases
 - + 1 vCJD transmission
 - 9% increase in IBCT
- Reported by 54% of hospitals
- 69% reported an event or near miss
- Is there still under-reporting?



Participation

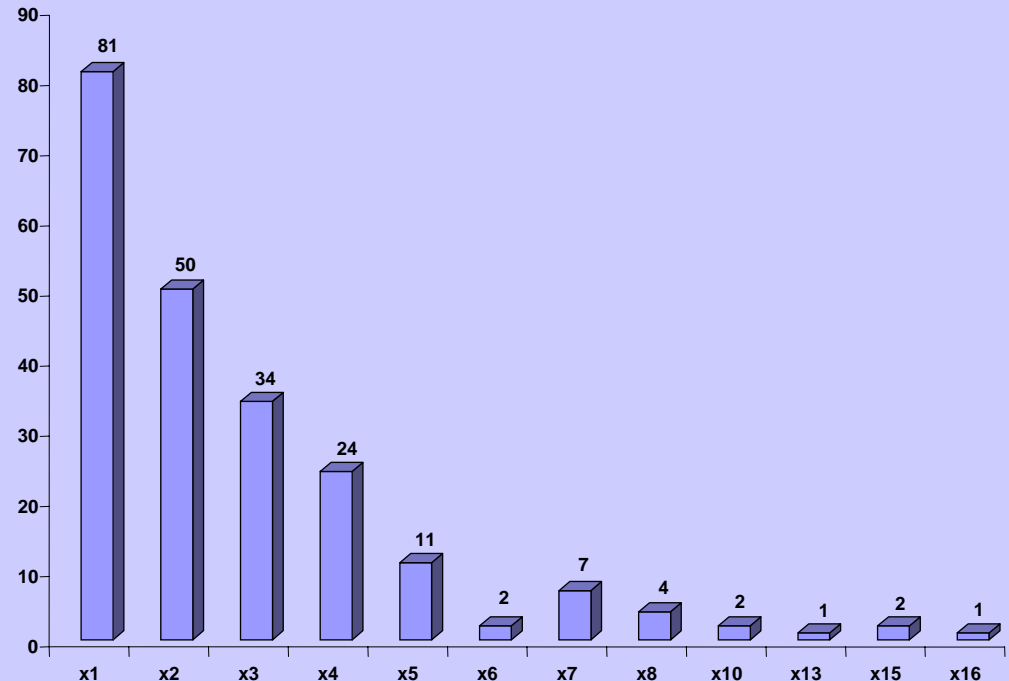
- 95% of NHS Trusts 'participate'
 - BBT2 survey
- 69% of hospitals reported in 2005
 - event or near miss
- 124 non-reporters
 - 8 high or moderate users
 - 67 low users
 - 49 no BSMS data



Benchmarking

- Feedback on 3 years participation data
- Comparison with BSMS data
- Benchmark against similar hospitals
- Look at factors affecting reporting

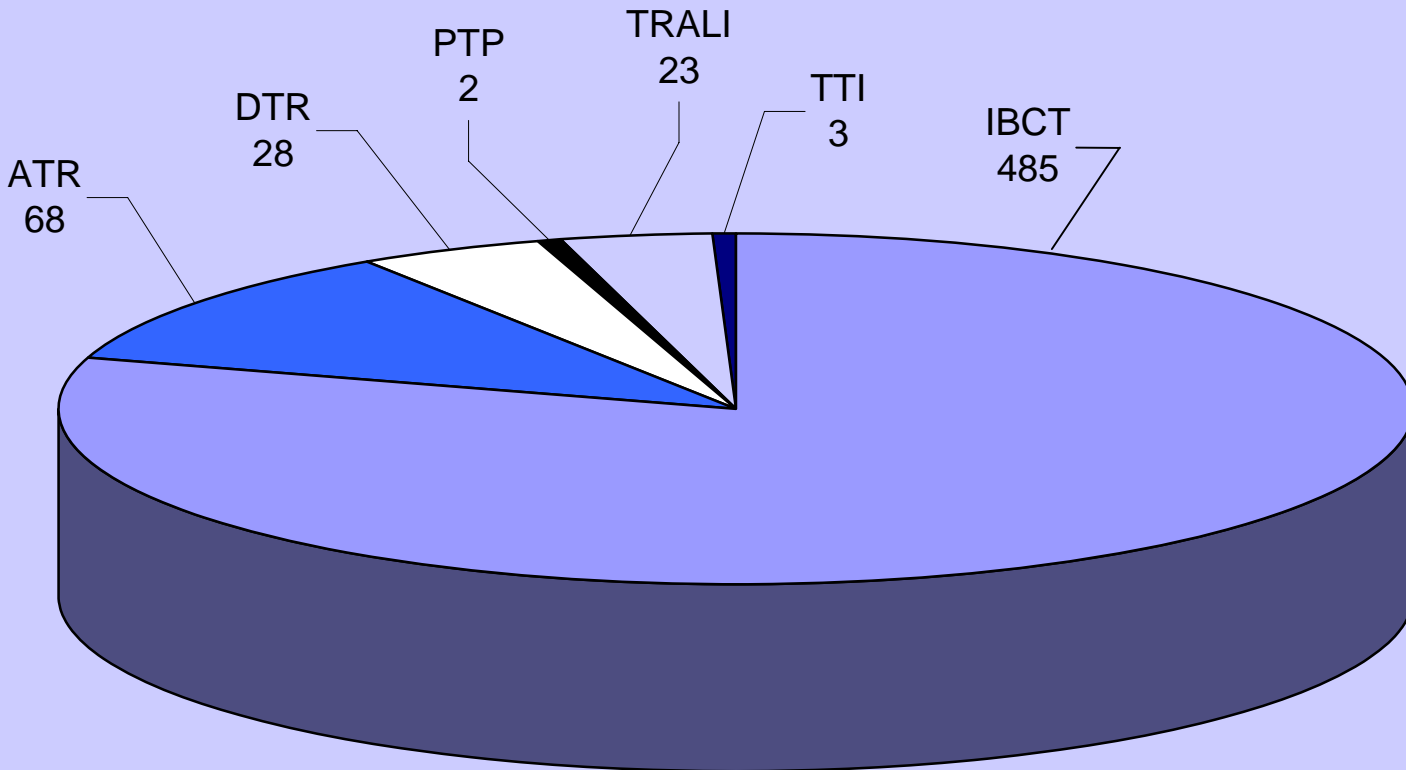
Incidents reported by hospitals



Mortality and morbidity 2005

- 5 transfusion related deaths
 - 1 ABO incompatible red cell transfusion
 - 1 over-transfusion
 - 1 anaphylactic reaction to FFP
 - 2 TRALI
- 30 major morbidity (all categories)
- 574 minor or no morbidity
 - includes 481 'no harm' IBCT events

Breakdown of reports 2005

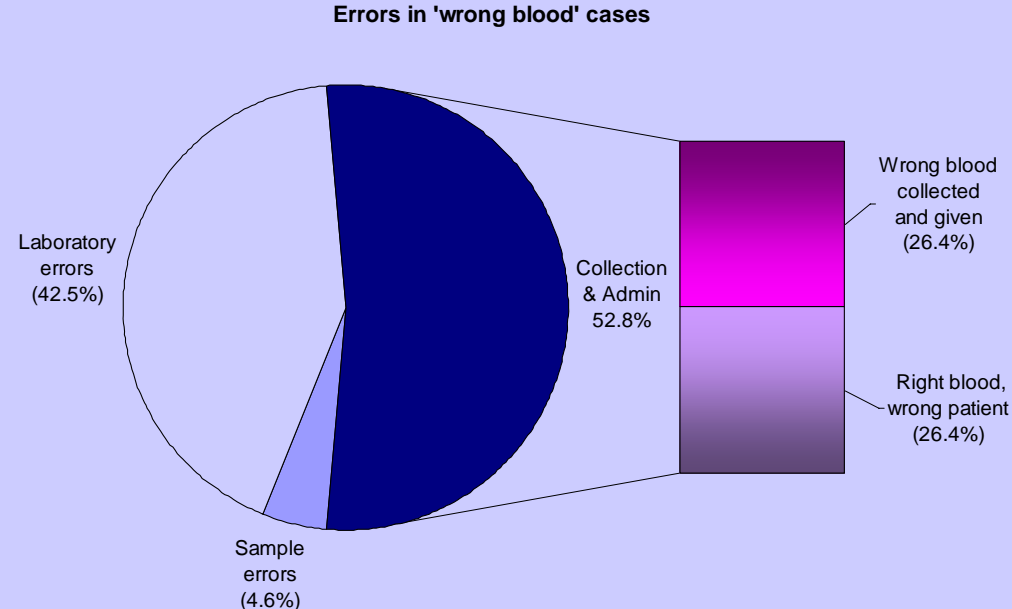


Incorrect blood component transfused (n=485)

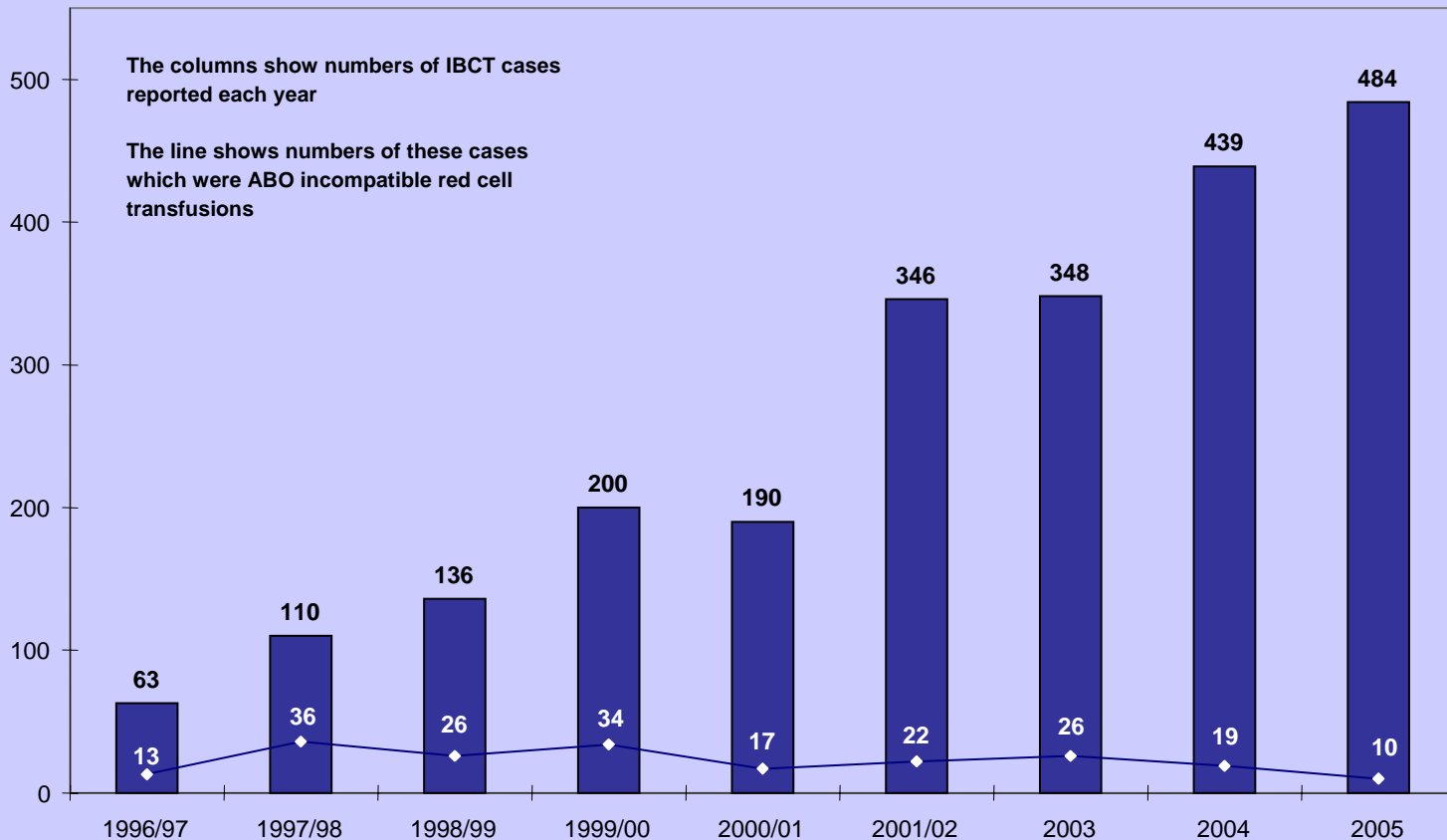
Type of event	Number (%)
'Wrong blood' events	87 (18%)
Other pre-transfusion testing errors	22 (4.5%)
Blood of wrong group to recipients of ABO mismatched stem cell transplant	2 (0.5%)
Failure to meet special requirements	141 (29%)
Inappropriate or unnecessary transfusions	67 (14)
'Unsafe' transfusions (handling/storage errors)	79 (16%)
Events relating to anti-D Ig	87 (18%)
Total	485

'Wrong blood' events (n = 87)

- Highest risk group
- 115 separate errors
 - 4 (5%) sampling errors
 - 38 (43%) laboratory errors
 - 23 (26%) blood collection errors
 - 50 (53%) bedside errors



ABO incompatible transfusions



Failure to provide special requirements (n=141)

Special requirement	Number
Irradiated components	89
CMV seronegative components	6
CMV seronegative + irradiated components	16
Antigen negative red cells	20
Antigen negative + irradiated red cells	1
HPA or HLA selected platelets	3
Red cells suitable for exchange transfusion	4
Viral inactivated non-UK FFP	1
Pre-deposit autologous red cells	1
Total	141

106 patients at risk of TA-GvHD

Inappropriate/unnecessary transfusions (n=67)

Cause	Number
Unsuitable FBC sample (e.g. dilute, wrong patient)	27
Analytical error (laboratory)	10
NPT error	5
FBC result misinterpreted/wrongly transcribed	5
Wrong component selected by transfusion lab	4
Wrong component collected by clinical staff	9
Overtransfusion due to clinical misjudgement	7
Total cases	67
(Total errors	95)

1 death due to over-transfusion

'Unsafe' transfusions

Type of error	Number
Blood out of temperature control	43
Component past expiry/suitability date	24
Transfused over excessive time period	9
Other	3
Total	79

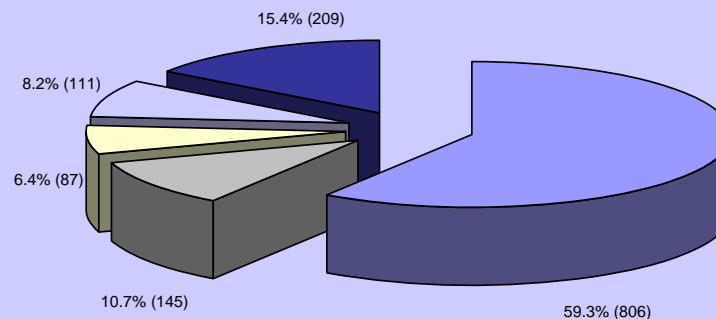
Anti-D Ig (n=87)

Type of event	Number
Omission or late administration	27
Given to D positive patient	23
Given to patient with immune anti-D	7
Given to patient with weak D	6
Given to mother with D neg infant	7
Given to wrong patient	6
Expired	9
Other	2
Total cases	87

2 cases of severe HDN - 1 fatal +1 exchange tx

Near miss

- 1358 reports (26% increase from 2004)
- 55% of hospitals report
- Highlight sample errors
- 40% errors detected by checking historical record
- 57% sampling errors involve doctors



- 1: Sample errors (806)
- 2: Request errors (145)
- 3: Lab sample handling &/or testing errors (87)
- 4: Lab component selection, handling, storage & issue errors (111)
- 5: Component collection, transportation, ward handling & administration errors (209)

Immune reactions

- 68 Acute reactions
- 28 Delayed reactions (all haemolytic)
- 23 TRALI
 - of which 6 were 'highly likely' or 'probable'
- 2 Post-transfusion purpura
- 0 TA-GvHD

Acute reactions

Reaction type	RBCs	Plts	FFP/cryo	Grans	Totals
Haemolytic	5	0	0	0	5
Anaphylactic	5	5	14	1	25
Severe allergic	8	11	9	0	28
Other	5	4	1	0	10
Totals	23	20	24	1	68
Components issued	2.5m	0.25m	0.4m		

Acute reactions

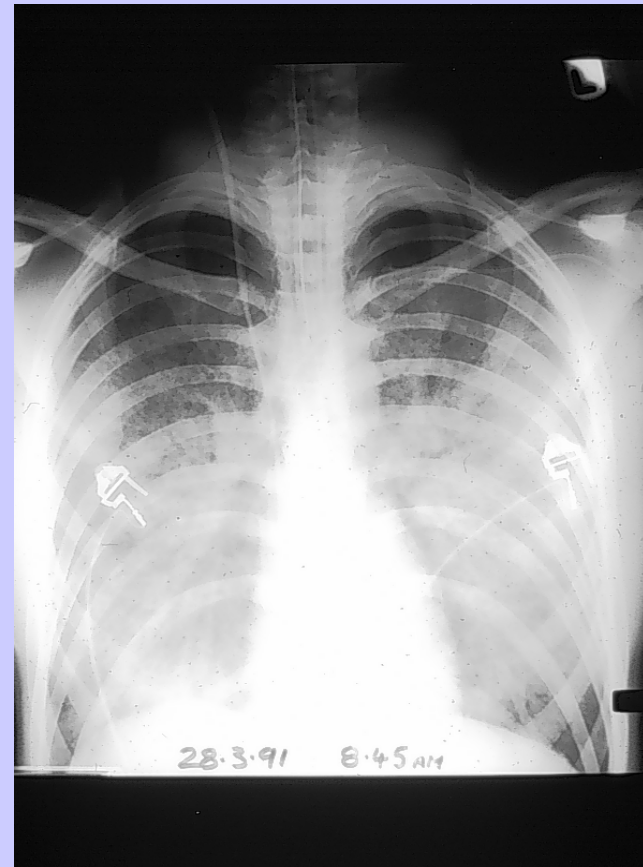
- 1 death
- 7 major morbidity
- 24 Reactions to FFP
 - in 8 FFP appeared not clinically indicated
 - included 1 fatal reaction

Delayed reactions (n=28)

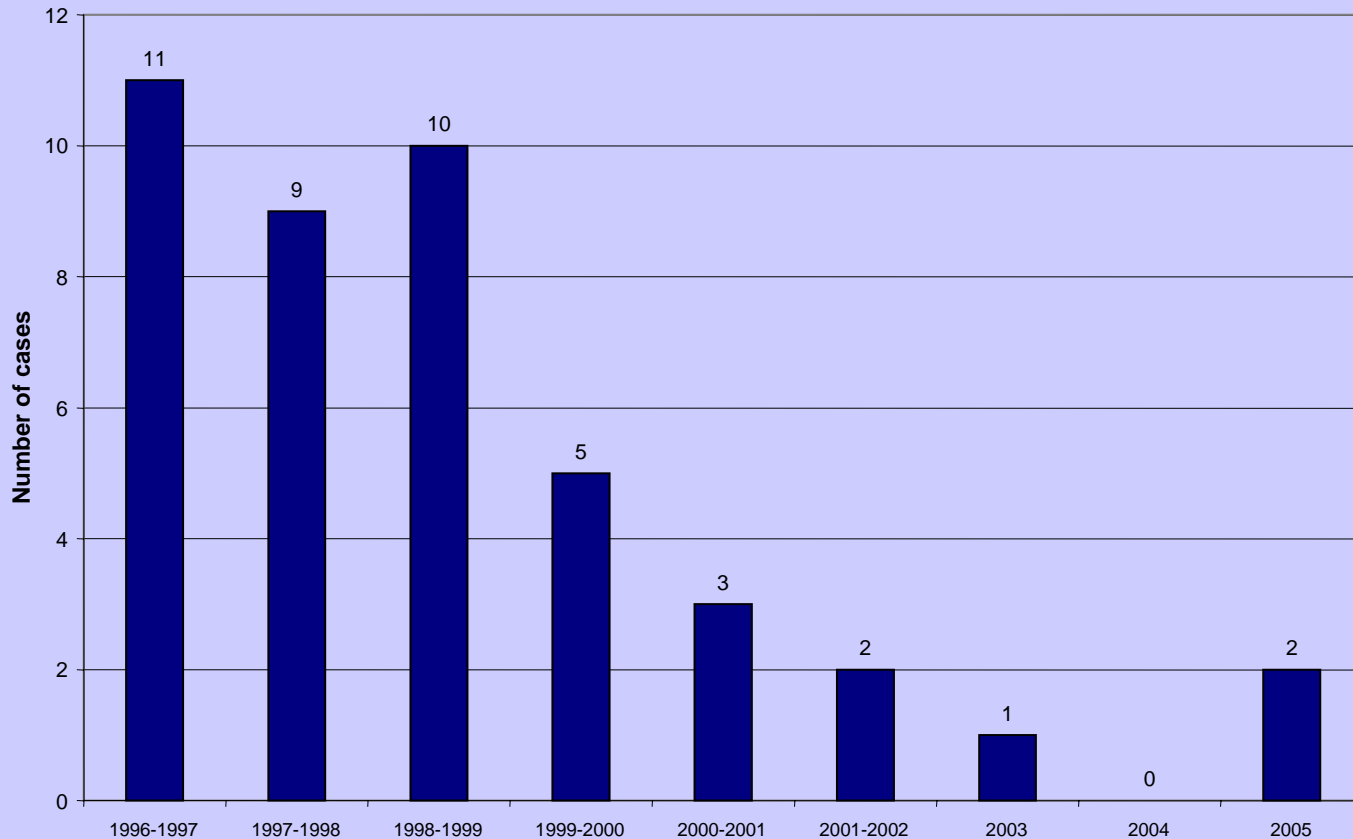
- All haemolytic reactions
- Red cell alloantibodies undetectable pre-tx
- 25/28 >72 hrs post transfusion
- 11/28 (39%) Kidd
- Investigations
 - 50% included eluate
 - 46% retrospective testing of pre-tx sample
 - 54% referred to reference laboratory
- No deaths, 1 was life-threatening.

TRALI

- 23 cases analysed
 - 6 highly likely or probable
 - None related to FFP
 - 2 deaths
 - none in 'highly likely/probable' group



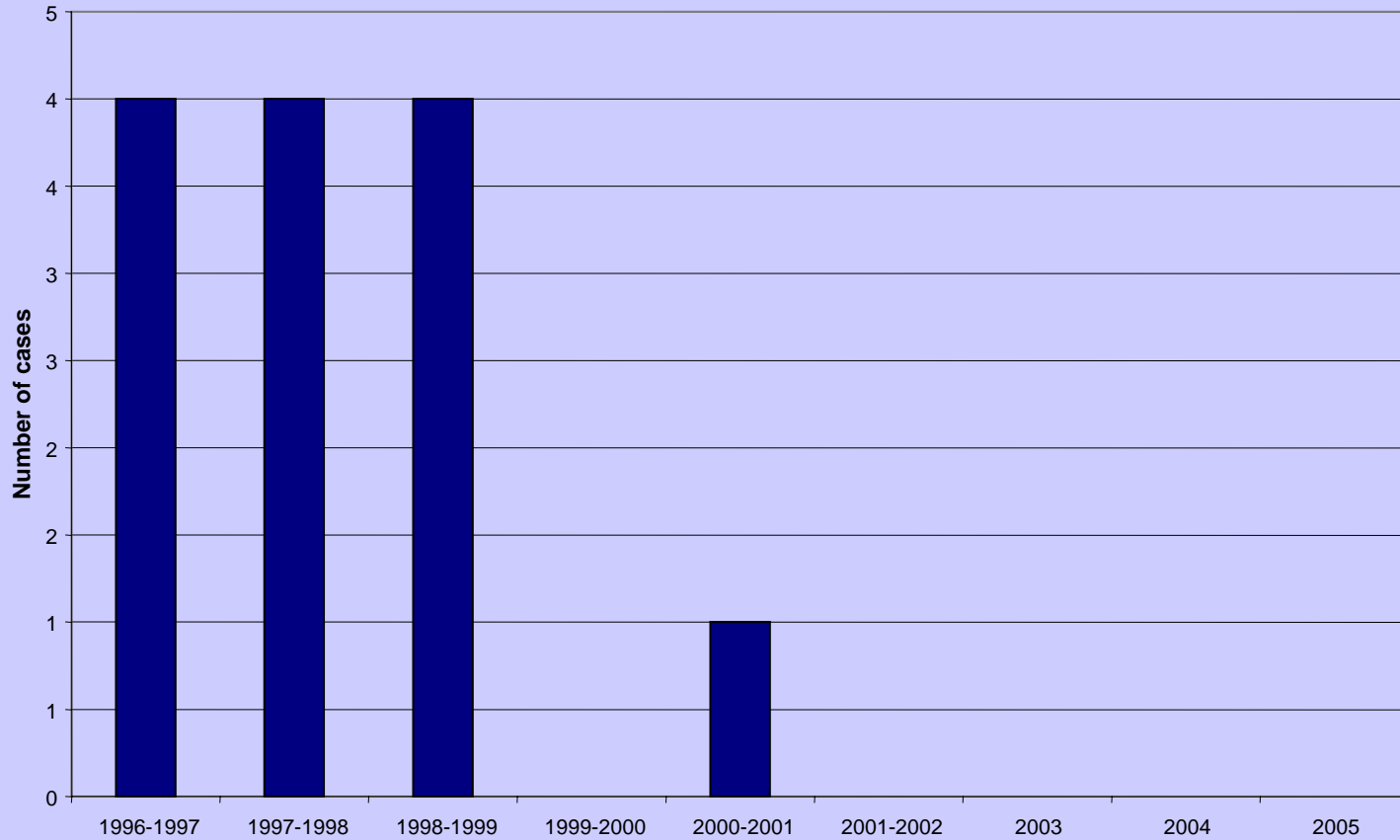
Post-transfusion purpura



Monday, December
11, 2006

Highlights of SHOT 2005 Report

TA-GvHD



Transfusion transmitted infections

- 46 cases referred for investigation
- 3 confirmed reports
 - 1 Hepatitis B (early acute phase of infection in regular donor)
 - 2 bacterial contamination of platelets
 - both were pooled platelets
 - both patients recovered
- + 1 report of vCJD received via surveillance scheme
- 2 cases of 'predicted' HAV

SHOT recommendations 2005

- ‘Right patient - right blood’
- Appropriate use of blood components
- Better laboratory practice
- Avoid transfusion out of core hours
- Investigation of serious reactions
- Communication of complex requirements
- Increase safety of RAADP
- Evaluation of further measures to reduce TRALI and bacterial contamination

For further development

- Blood transfusion outside the hospital setting
- Need for clinical studies
- Future development of haemovigilance

Acknowledgements

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- Dr Hannah Cohen, Steering Group Chair
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