

Las relaciones entre los centros de transfusión y los bancos de sangre hospitalarios

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Reorganización de Servicios de Transfusión

- **Concentración del número de Centros de Transfusión**
- **Tendencia a la desaparición de bancos de sangre de hospitales como sitios de colección**

Dir. UE 2002/98

Estados Miembros tomarán todas las medidas necesarias para asegurar que la sangre y los componentes de sangre colectada, sometida a screening, procesada, almacenada y distribuida en su territorio pueda ser rastreada del donante al receptor y viceversa.

Se hizo ley el 8.02.05, con 9 meses de gracia.

RU

- **NBS Inglés**
- **NBTS Escocés**
- **BTS Galés**
- **BTS Irlanda N.**

**Todos: donantes altruistas -
voluntarios**

NBS inglés

Población = > 50 millones

Donaciones de sangre /año: 1.9m (eran 2.5m)

Administración unificada funcional

Sistema de informática unificado:

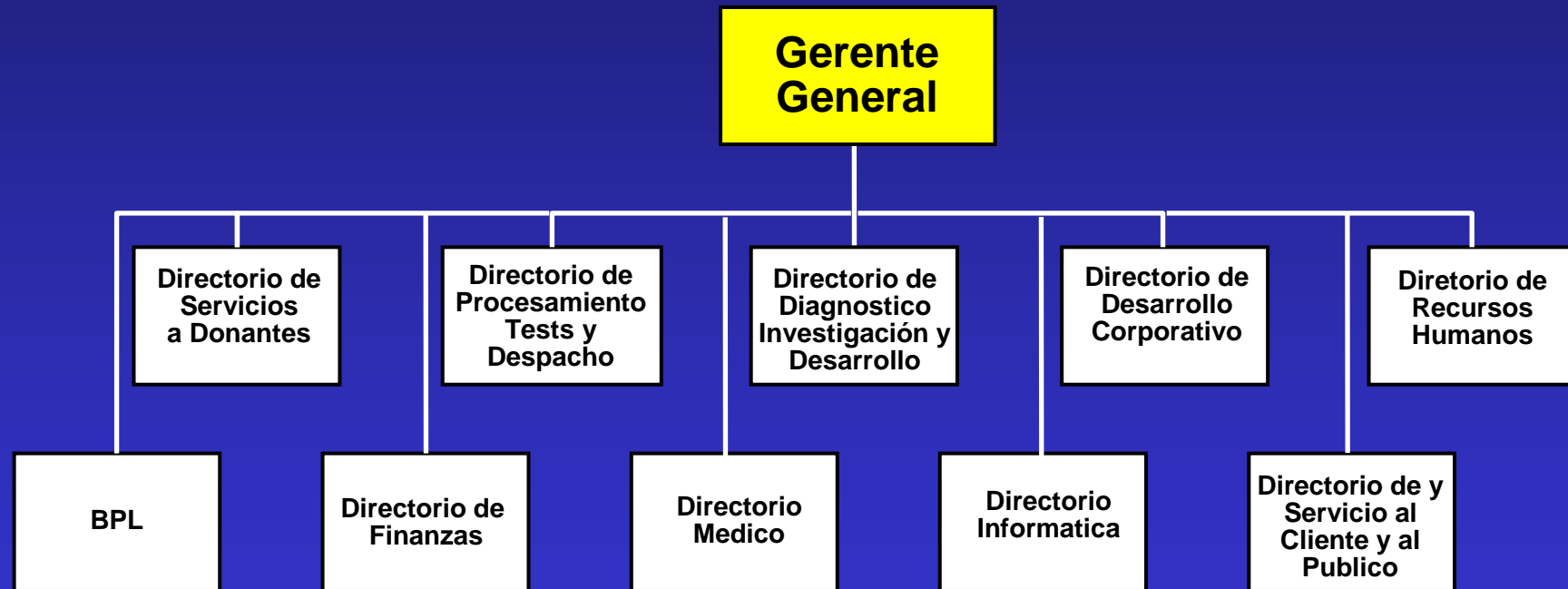
- **donantes “nacionales”**
- **mobilización de componentes**
- **estadísticas nacionales**

14 centros de transfusión

10 centros de procesamiento/tamizaje

Sólo 3 centros para NAT (PCR) para HCV

Ejecutivo del Servicio Nacional de Sangre



Sangre

- Glóbulos rojos, plaquetas, PFC, crio etc.

Productos de fraccionamiento, BPL

- FVIII, albumina, y anti-D etc.

Tejidos y células madre

- Hueso, piel, tendones, válvulas de corazón, PBSCs, sangre de cordón etc.

Servicios relacionados

- Inmunohematología de glóbulos rojos, Histocompatibilidad e Inmunogenética (H&I), Inmunología de plaquetas y granulocitos (IPG), Registro Británico de Médula Osea (RBMO), consultoría clínica/técnica, capacitación, investigación etc.

National Blood Service: colectas 12 meses a Marzo 2004

- Unidades de sangre total 2,295,869
- Pools de plaquetas (dosis ad.) 160,714
- Plaquetas - aferesis 96,116
- Plasma fresco congelado (PFC) 299,387
- PFC/A Met. ped 5,935
- Crioprecipitados 77,224
- Huesos, válvulas, tendones
- Donantes de médula, stem c. 40,000

NBS provee sangre a 350 hospitales. del SNS y privados; cada centro provee:

- Birmingham 39
- Brentwood 21
- Bristol 23
- East Anglia 11
- North London 36
- Lancaster 10
- Leeds 20
- Liverpool 23
- Manchester 25
- Newcastle 23
- Oxford 18
- Sheffield 28
- South Thames 53
- Southampton 20

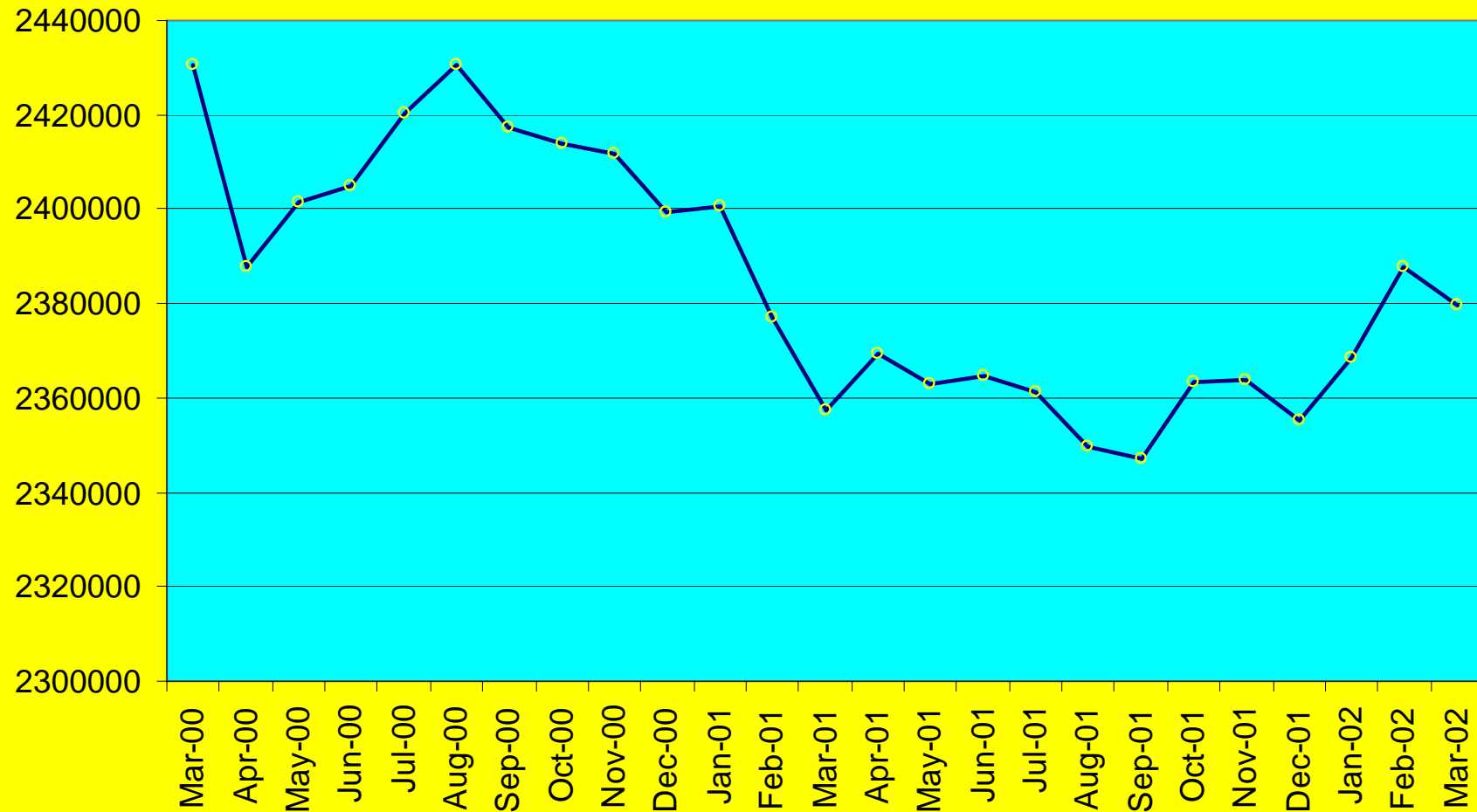
Costos del SNT en aumento

- Medidas para obtener “riesgo cero”, incluyendo “principio de precaución” para vCJD.
- Pérdida de donantes, mayores esfuerzos para reclutar
- Sistemas de calidad y necesidad de certificación, acreditación, auditoría, regulaciones y leyes (Directiva EU)
- Nuevas terapias → nuevos productos.
- Tecnología pero a qué costo!

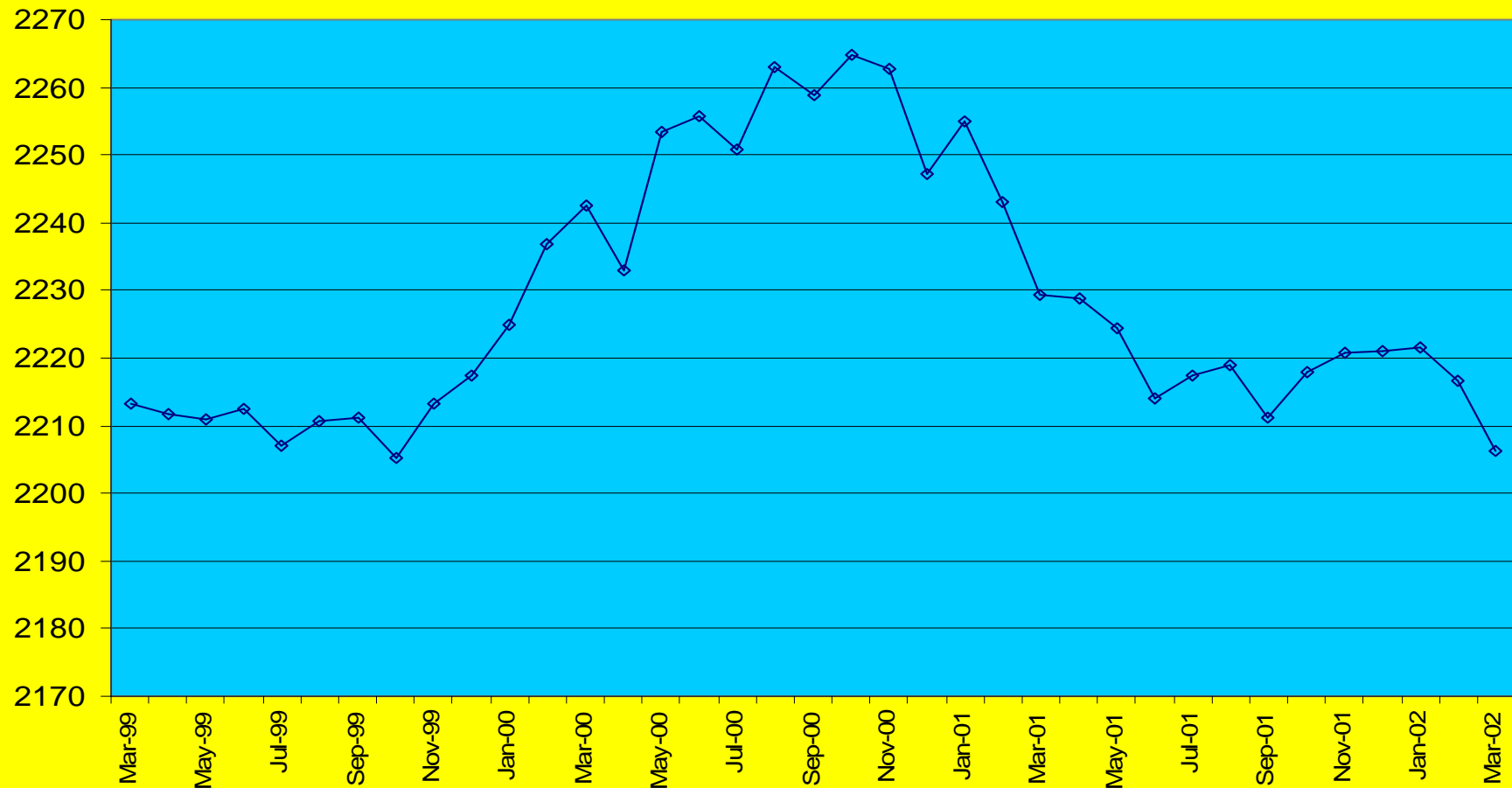
Objetivos corporativos del SNS

- Proveer **suficiente** sangre, derivados, tejidos y servicios relacionados a niveles de calidad apropiados
- Explorar oportunidades para mejoras continuas en **eficiencia** y **calidad**.
- Desarrollar productos y servicios **más seguros** y **más efectivos** a mejores niveles de calidad.
- Promover el **uso apropiado y eficaz** de sangre, productos de sangre, tejidos y servicios

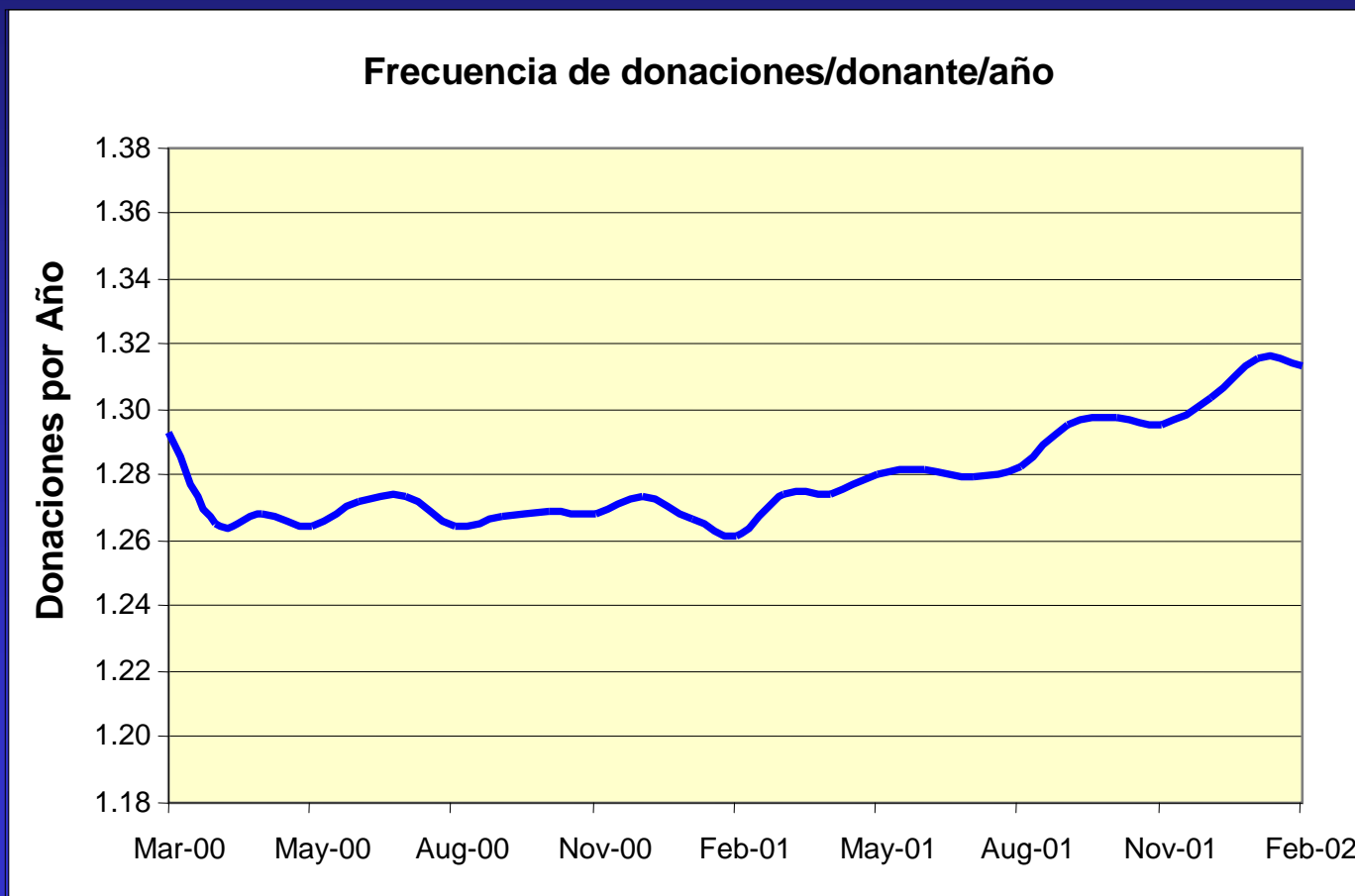
Total anual de donantes sangrados



Total anual de glób. rojos [equivalente a unidad completa] distribuidos a hospitales - miles



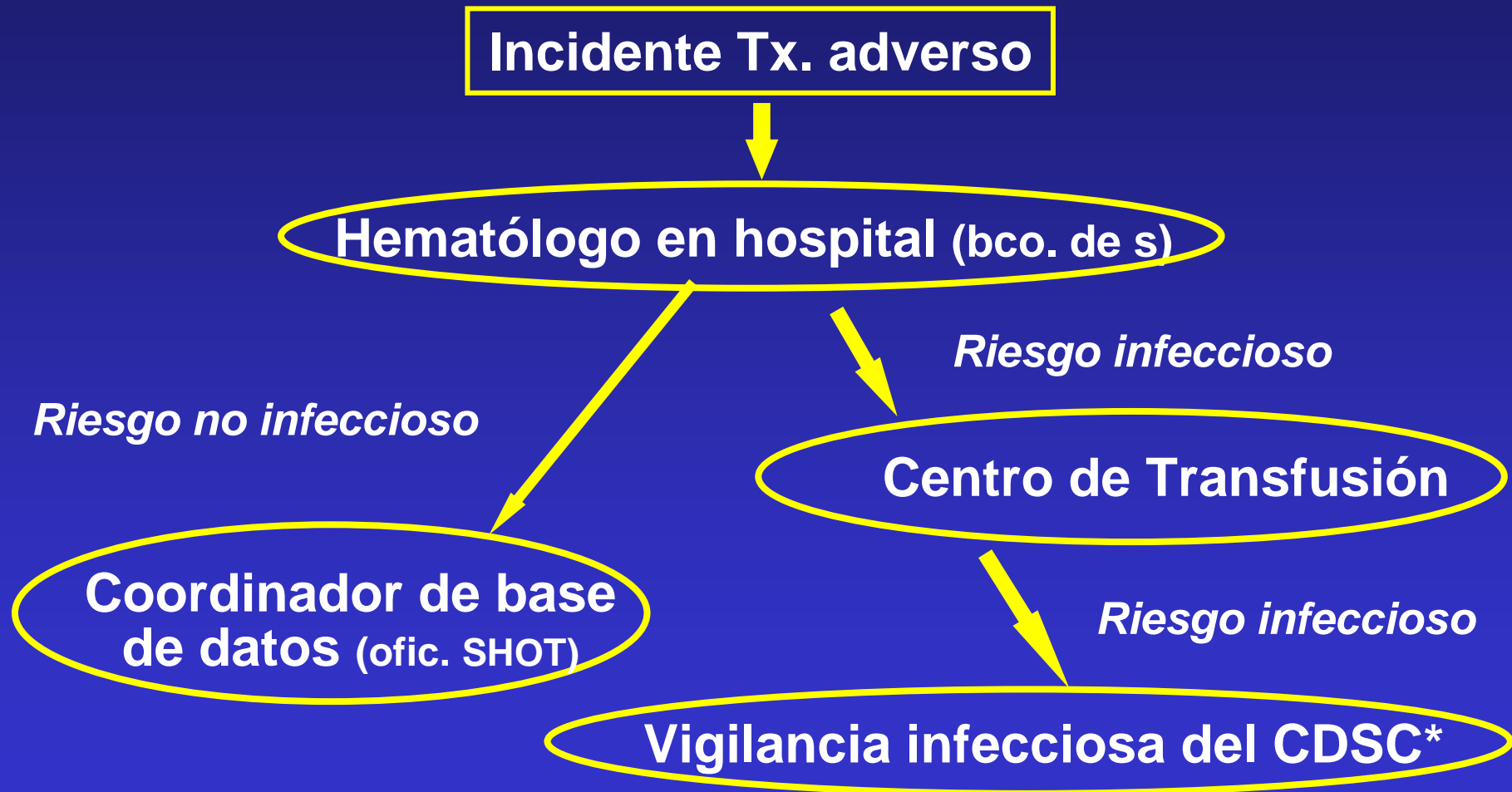
Frecuencia: 2.3m unidades donadas por 1.7m donantes activos



Eficiencia del NBS

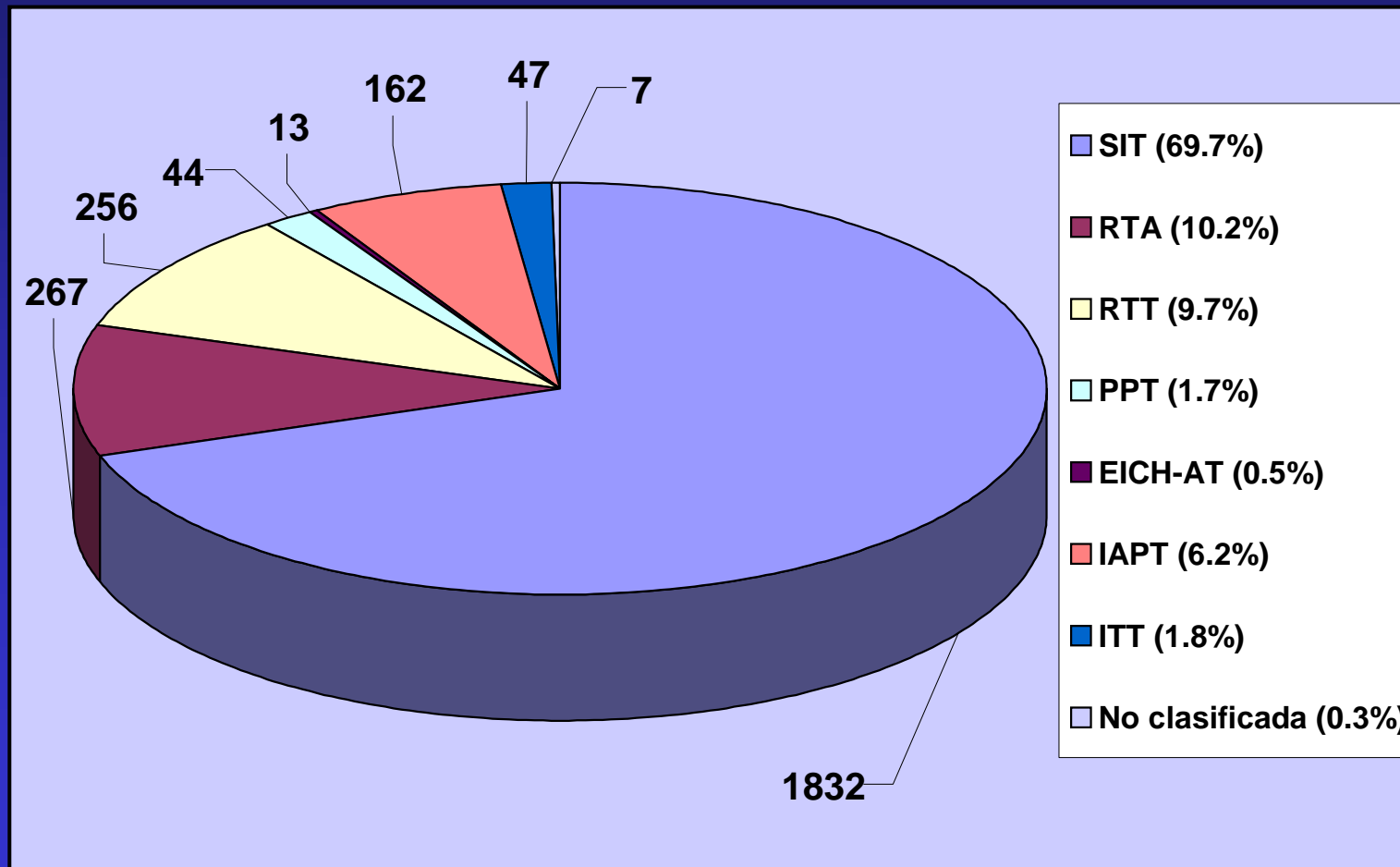
<i>2004/05</i>	Objetivo	Actual
En bco./colectada	94.40%	94.33%
GR despach./ped.	99.95%	99.98%
GR caducados	0.42%	0.89%
Plaquetas caduc.	8.32%	8.79%

SHOT: Hemovigilancia en GB



*CDSC: Centro de vigil. de enfermedades infecciosas

Cuestionarios por tipo de reacción 1996/97 - 2004 (n=2628)



Main SHOT recommendations: priorities for blood transfusion safety

General

- Encourage reporting and learning culture
- Training
- Adequate staffing of laboratories
- Procedures/systems
- Appropriate blood usage
- Overarching framework to assess and prioritise blood safety initiatives

Specific

- Hospitals should have transfusion policies
- Wristband for every transfused patient
- Improve bedside identification - IT solutions
- Bacterial contamination
- TRALI

All immunological adverse effects (e.g. HTR, DHTR, TRALI, TA-GVHD, PTP, etc) and all TTIs (HIV, HBV, HCV, malaria, bacteria, vCJD) are investigated in the dgn. labs of the NBS.

Blood transfusion error prevention: SHOT and the National Patient Safety Agency (NPSA)

- **NPSA established in 2001 ‘to improve the safety and quality of care through reporting, analysing and learning from adverse incidents and near misses in healthcare’**
- **SHOT and NPSA are working together to ensure that**
 - **Duplication of reporting is avoided**
 - **Lessons can be learnt from other clinical areas, and common solutions developed**

NPSA initiative to reduce ABO incompatible transfusions by 50%

- **Barcode technology**
- **'Tag and label' system**
- **Red label system**
- **Photo-identification of patients requiring regular transfusion**
- **Structured approach to education**



Health Service Circular

Series Number: HSC 2002/009
Issue Date: 04 July 2002
Review Date: 04 July 2005
Category: Public Health
Status: Action

sets out a specific action on the part of the recipient with a deadline where appropriate

Better Blood Transfusion

Appropriate Use of Blood

For action by:

Health Authorities (England) - Chief Executive

Health Authorities (England) - Directors of Public Health

NHS Trusts - Chief Executives

Primary Care Trusts - Chief Executives and Main Contacts

Uso Apropiado

- **Establecimiento de Comités Nacionales y Regionales Transfusión**
- **Apoyo continuo a los Comités Hospitalarios de Transfusión**
- **Nombramiento de puestos de médicos especialistas, jefes del “Team” de Transfusión**
- **Desarrollo de enlace con hospitales (“liaison”)**
- **Apoyo de iniciativas de Mejor Transfusión de Sangre del CMO**
- **Promover hemovigilancia y aprender de ella.**

Medicina transfusional (MT)

- **Comités de Tx: nacional, regionales, hospitalarios**
- **SN de Sangre (NBS): consultants en MT, científicos en lab. de ref., dgn y terapeutica.**
- **Unidades de Medicina Transfusional:**
 - **hematólogo: interés variable**
 - **especialista en MT: puestos compartidos**
 - **enfermeras especialistas en Tx (SPOT)**
 - **tecnólogos médicos**

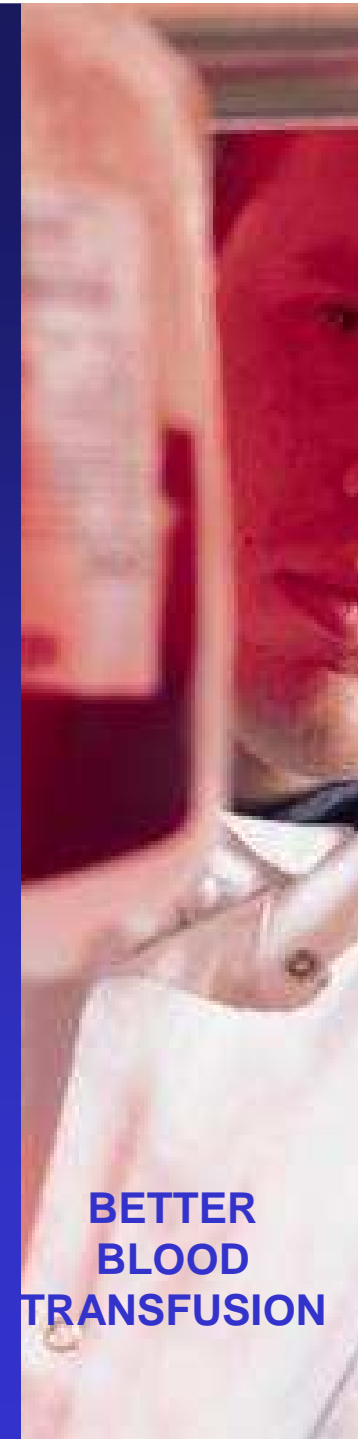
Comité Hospitalario de Tx

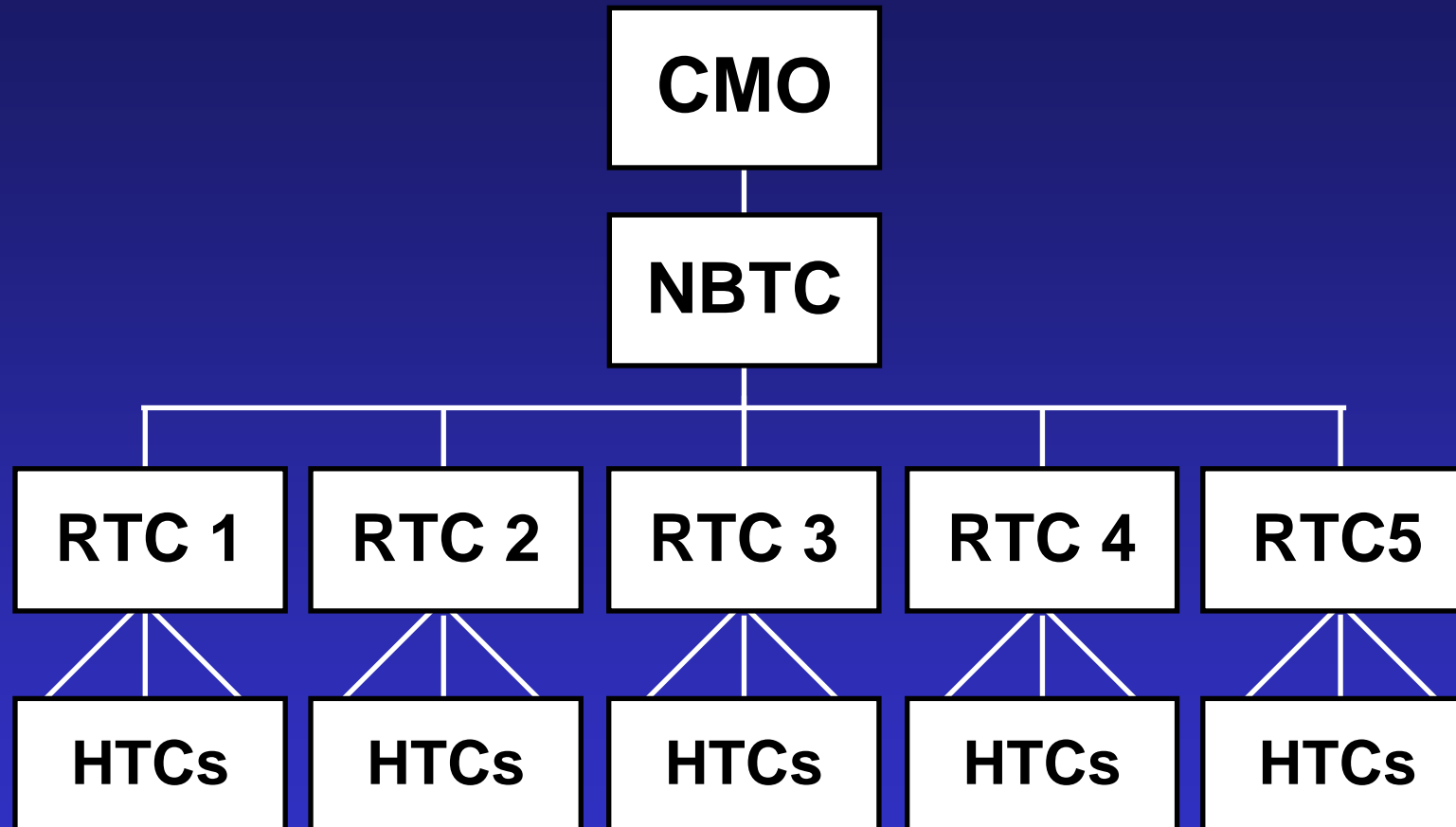
Debe revisar:

- **práctica transfusional clínica e incidentes**
- **rendimiento de la UMT**
- **rendimiento del Servicio de S (NBS) como proveedor de servicios y productos**
- **cumplimiento con la Directiva Europea**

Better Blood Transfusion' *Implementation at Hospital Level* (www.dh.gov.uk/)

- **Hospital Transfusion Committee (HTC) with authority, resources, senior trust management**
- **Hospital Transfusion Team (HTT) to include lead consultant in transfusion, transfusion practitioner and blood bank manager**
- **Training**
- **Local guidelines for good practice and standards**
- **Information for patients (new national leaflets)**





Implementing *“Better Blood Transfusion”*

CMO's National Blood Transfusion Committee (www.dh.gov.uk/)

- Potentially powerful framework for improving clinical transfusion practice
- Support the work of HTC's
- Oversee "Better Blood Transfusion" initiative
 - Develop 'toolkit' for good hospital practice
 - RCP/NBS National Comparative Audit
- Review SHOT findings and recommendations



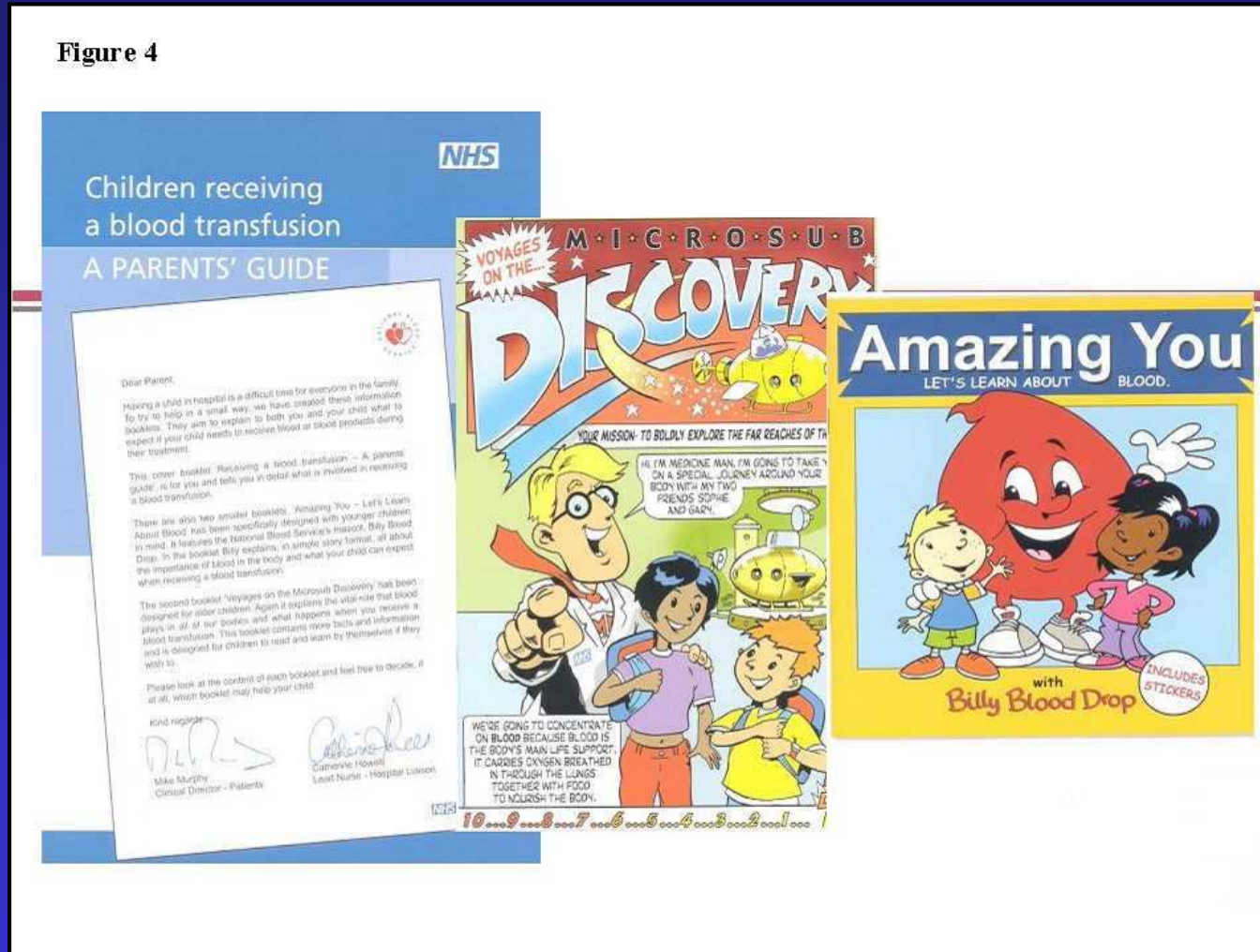
Receiving a blood transfusion



IMPORTANT PATIENT INFORMATION

Examples of patient information leaflets

Figure 4



Education and training

Education

- Undergraduate medical and nursing education
- Postgraduate training

Training of all staff handling blood

- Regular (annual) documented training
- Supported by CPD programmes and multidisciplinary audit

Staff training

- In the past, no clear responsibility for overseeing the performance of transfusion outside the laboratory
- This is now being rectified by the development of the role of *'Transfusion Safety Officer'*, *'Transfusion Nurse'*, *'Haemovigilance correspondent'*, *'Specialist Practitioner of Transfusion'*

Activities of 'Specialist Practitioners of Transfusion'

- Education and training
- Observational audit of the transfusion process
- Audit of blood use
- Initiatives to improve the use of blood and its alternatives

Training materials and guidelines

- **RCN: competencies for administering blood**
- **E-learning packages:
www.learnbloodtransfusion.org.uk**
- **Handbook of Transfusion Medicine of UK BTS
(available on www.transfusionguidelines.org.uk)**
- **“The Strange Case of Penny Allison” NBS video**
- **British Committee for Standards in Haematology
guidelines (www.bcshguidelines.org)**
- **User guides for Diagnostic Services**
- **User guide for Stem Cell Services**

National Comparative Audits in Tx:

- **Appropriate use:**
 - in hip surgery
 - in management of GI bleed
 - of platelets
- **Bedside transfusion practice**

Main findings

- 10% transfused patients did not have wristband
- 70% patients not correctly monitored
- Documentation often poor

GUIDELINES

The administration of blood and blood components and the management of transfused patients

British Committee for Standards in Haematology, Blood Transfusion Task Force (Chairman P. Kelsey) in collaboration with the Royal College of Nursing and the Royal College of Surgeons of England. Working Party: M. F. Murphy (Convenor), C. L. J. Atterbury, J. F. Chapman, J. S. Lumley, D. B. L. McClelland, R. Stockley, D. Thomas and J. Wilkinson. Membership of Task Force: M. Bruce, J. F. Chapman, J. Duguid, P. Kelsey, S. M. Knowles, M. F. Murphy, and L. M. Williamson

Errors in the requesting, supply and administration of blood lead to significant risks to patients. A survey of hospital blood transfusion laboratories in the UK in 1993 revealed 111 instances of blood being transfused to the wrong patient in an 18-month period (an incidence of 1 in 30 000 units transfused); 6 patients died and another 6 had serious morbidity associated with ABO-incompatible transfusions (McClelland & Phillips, 1994). A similar

survey in 1995 revealed a similar incidence of errors and a single authoritative and comprehensive source supported by medical and nursing professional opinion.

This is a document produced by the BCSH in collaboration with the Royal College of Nursing and the Royal College of Surgeons of England to set out the principles from which local policies and written procedures can be developed for:

- requests for blood transfusion and the collection of

UK Blood Transfusion & Tissue Transplantation Guidelines

www.transfusionguidelines.org.uk



General Information



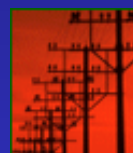
Guidelines for the Blood Transfusion Services in the UK



New Regulations Implementation



Document Library



Donor Selection Guidelines



Better Blood Transfusion

DH Department of Health **Toolkit**



JPAC Resources Members Area



Handbook of Transfusion Medicine



Systematic Review Initiative

NHS



National Blood Service
Blood Transfusion Service

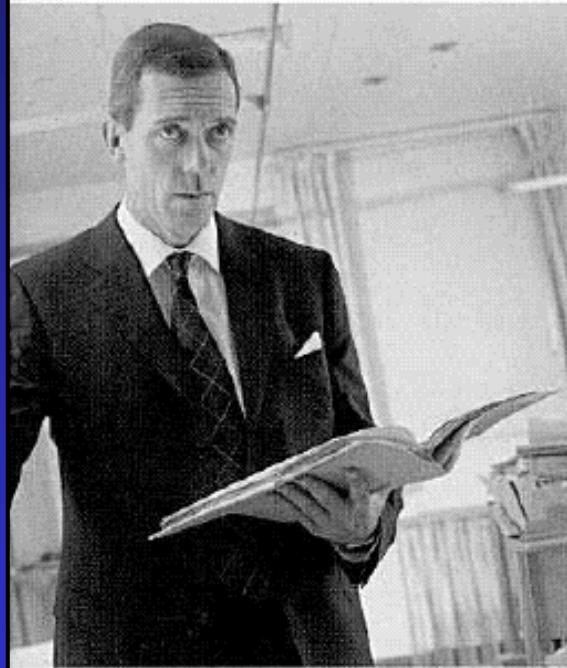


National Blood Service
Greater Manchester & Cheshire

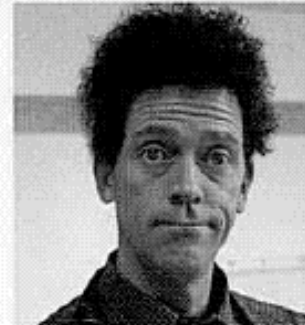
NIBSC



**Hugh
Laurie**



**&
Imelda
Staunton**



The Strange Case



2004 survey of implementation of *“Better Blood Transfusion”*

- > hospitals with HTC's
- Improved training in Tx Medicine
- Increased number of SPOTs
- Increased number of protocols for blood use
- Increased audit activity
- Progress varied in different regions
- Improved training for doctors and nurses, but more is needed
- > blood banks accredited

Two national activities to improve clinical research in Tx Medicina:

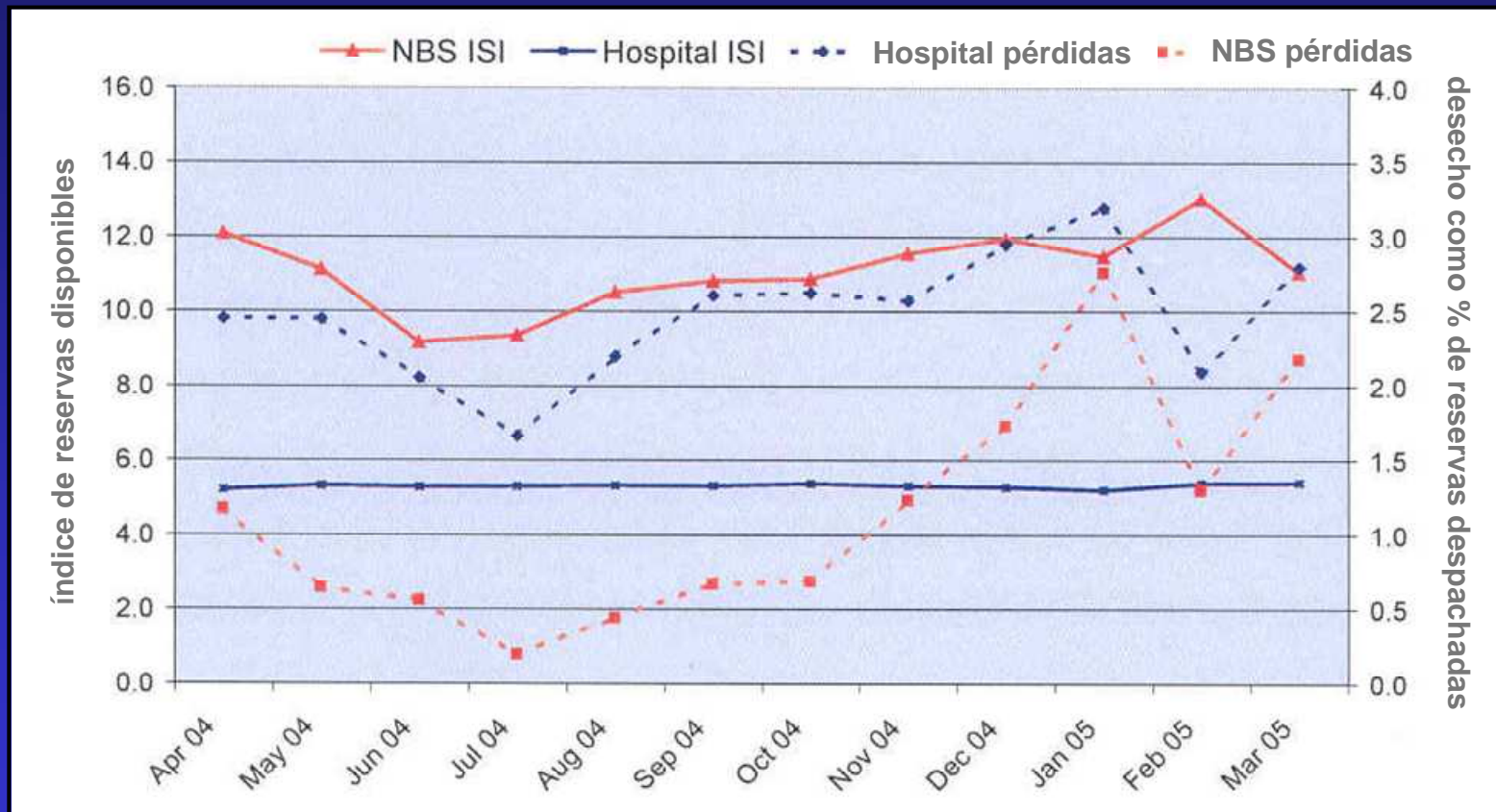
- **Clinical Studies Unit**
- **Systematic Reviews Initiative**

Proyecto nacional de manejo de estocs de sangre (BSMS)

Objetivo: observar los procesos que gobiernan el manejo de estocs y desperdicio de sangre en el SN de Sangre. Gran potencial para promover cambio para mejorar el manejo de recursos.

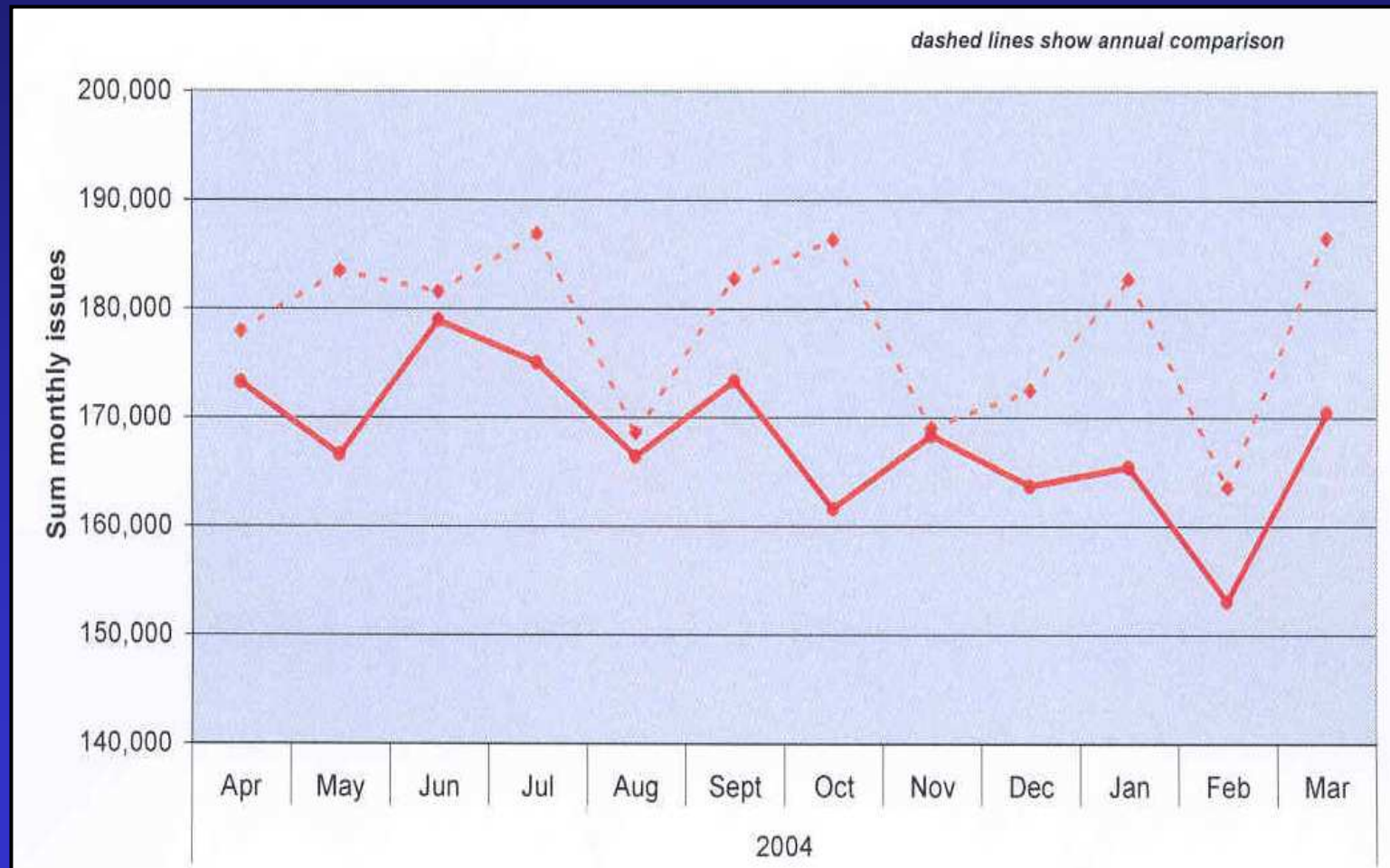
2004: 274 hospitales registrados (98% de todos los G.R. distribuidos). Desperdicio de GR por caducidad en el NBS

Estoc total de glóbulos rojos (ISI) almacenados en todos los hospitales del BSMS y en el NBS y el desperdicio total para todos los hospitales del BSMS y NBS

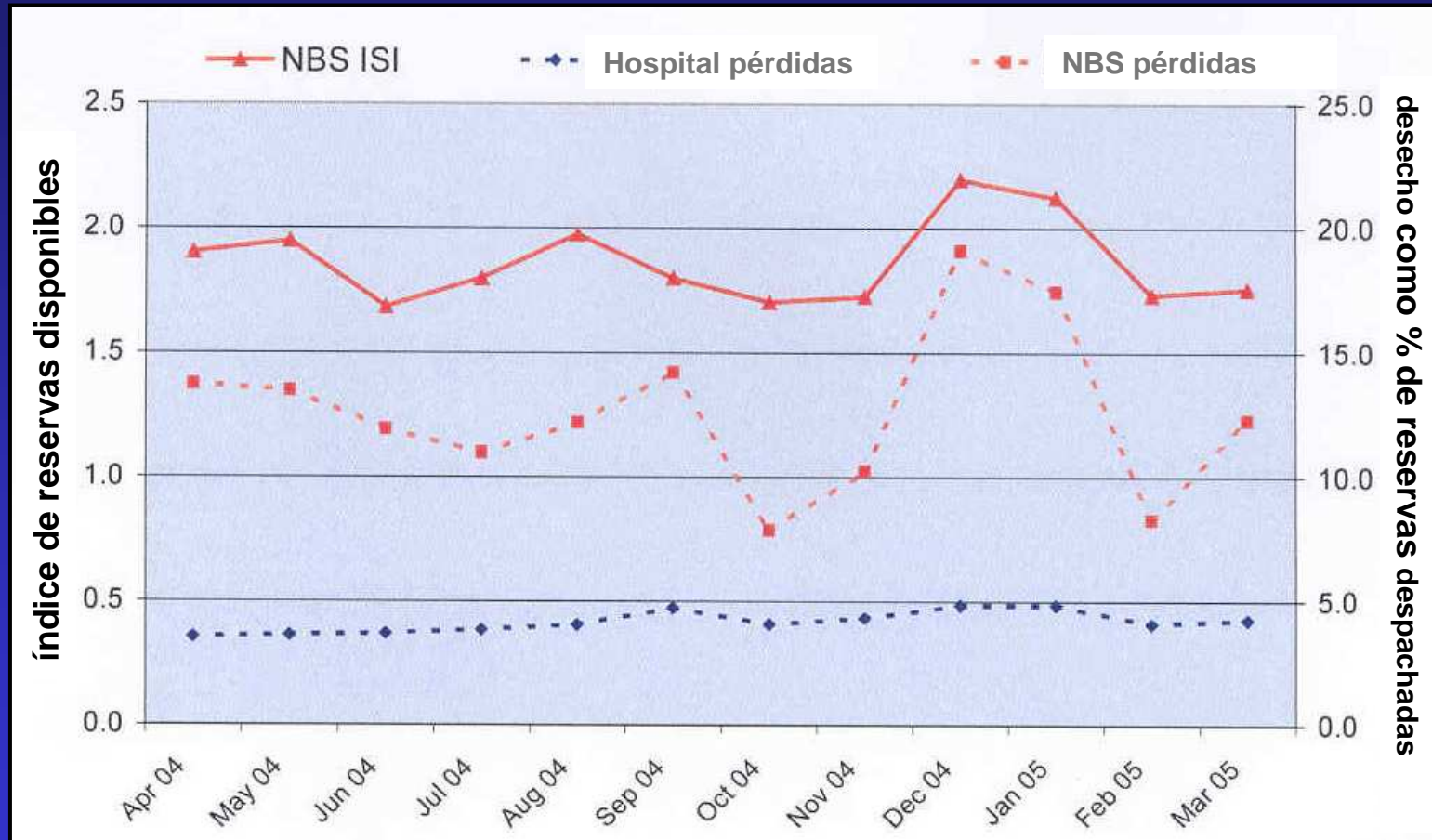


Mas o menos 80.000 unidades de glóbulos rojos son almacenados en el sistema de provisión de sangre, 50.000 en el NBS y 30.000 en hospitales

Total red cell monthly issues with annual comparison

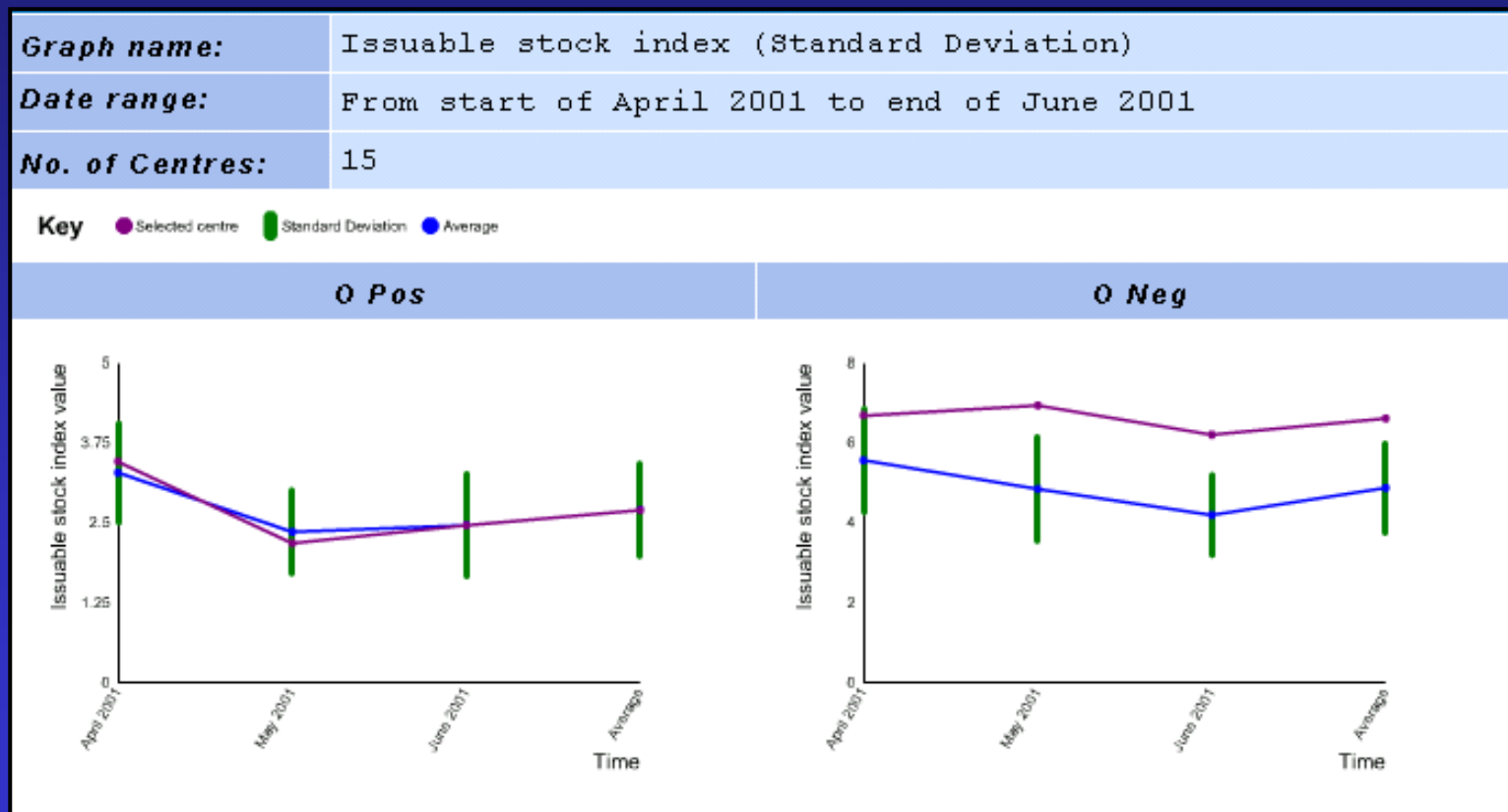


Estoc total de plaquetas (ISI) almacenadas en el NBS y el WAPI total para todos los hospitales del BSMS en el NBS

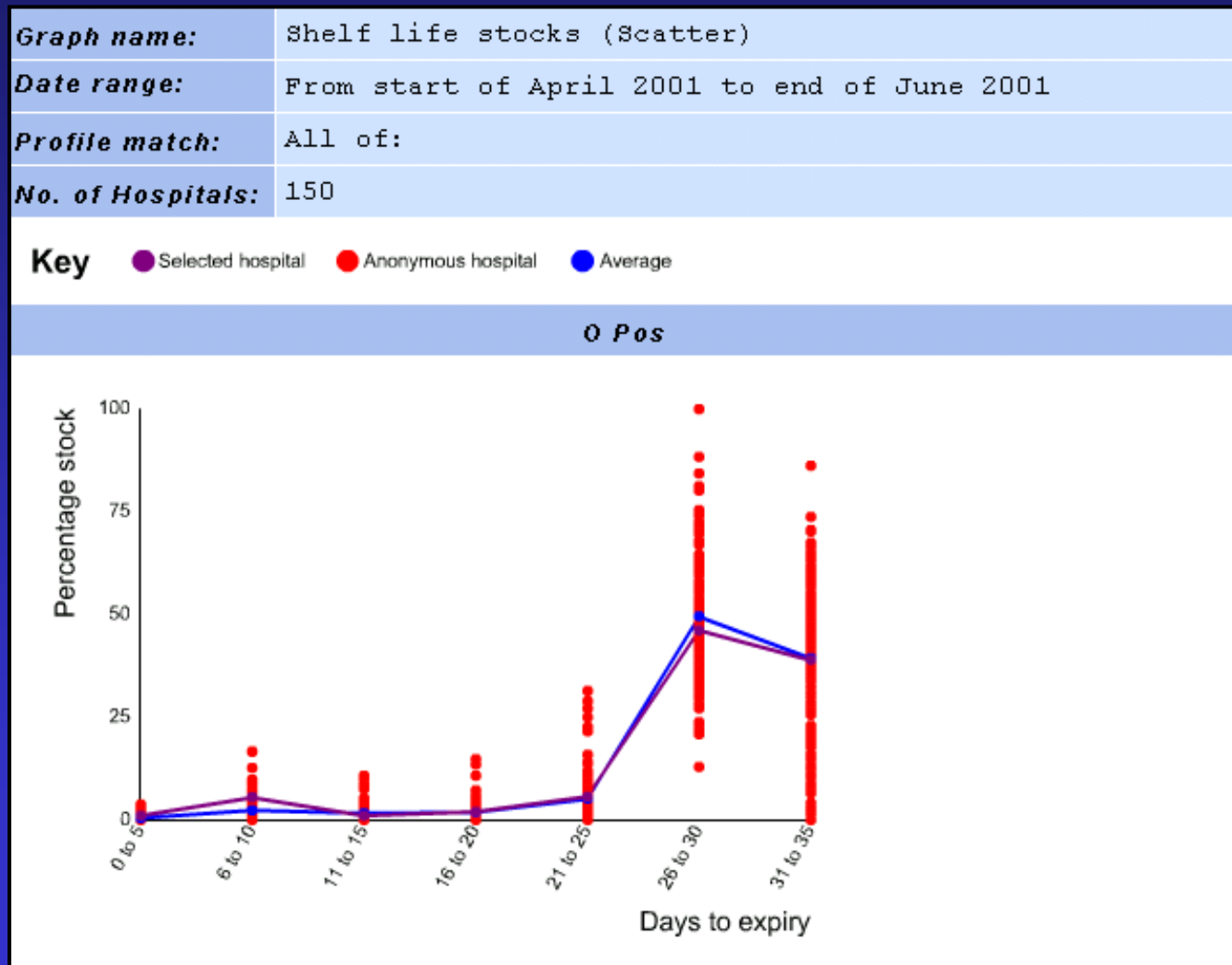


El NBS distribuyó 215, 591 dosis de plaquetas de adultos en abril '04 - marzo '05. Promedio total de pérdidas como % de reservas emitidas era 13%

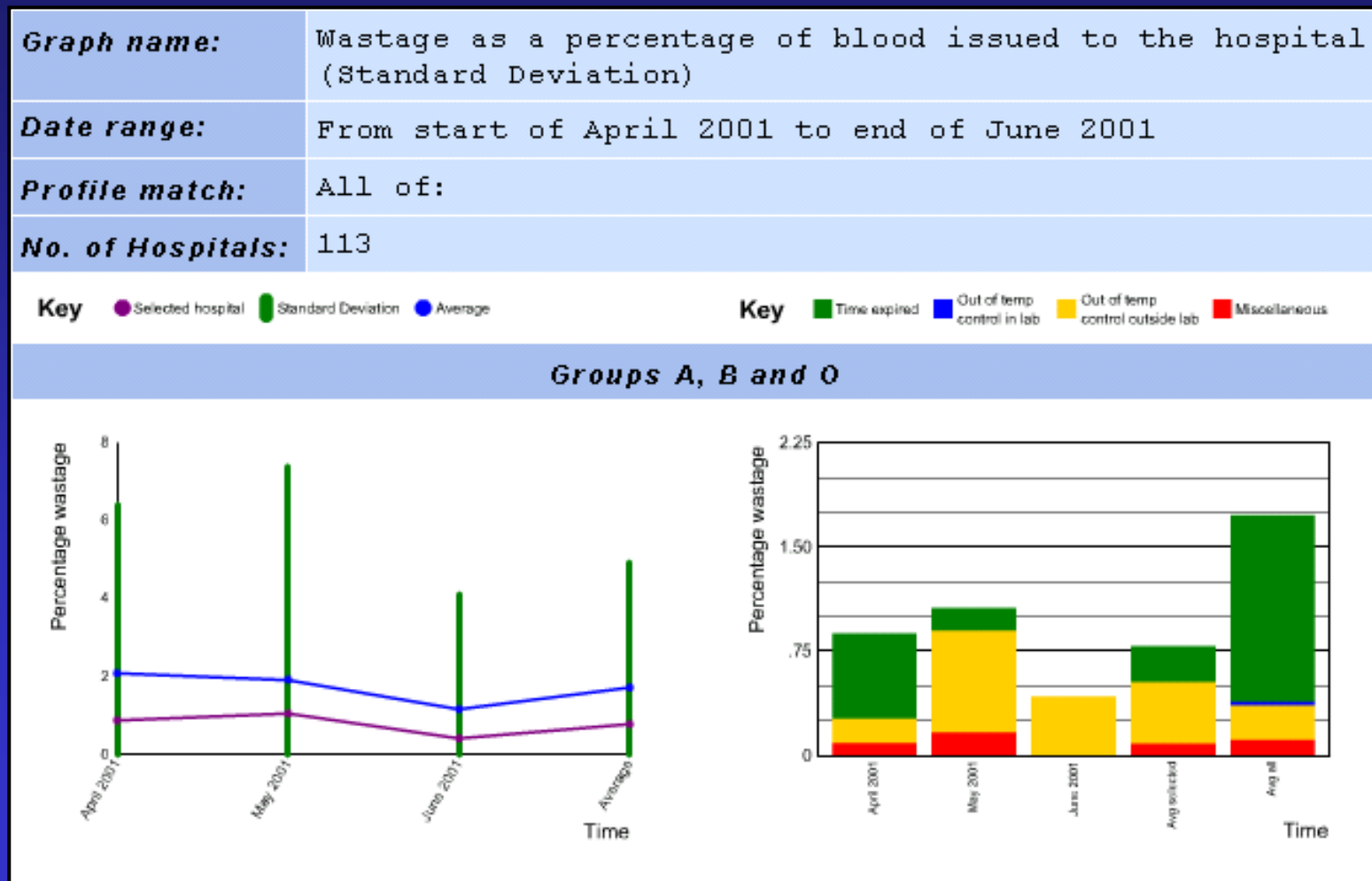
Centro seleccionado: indice de estoc apto para despachar



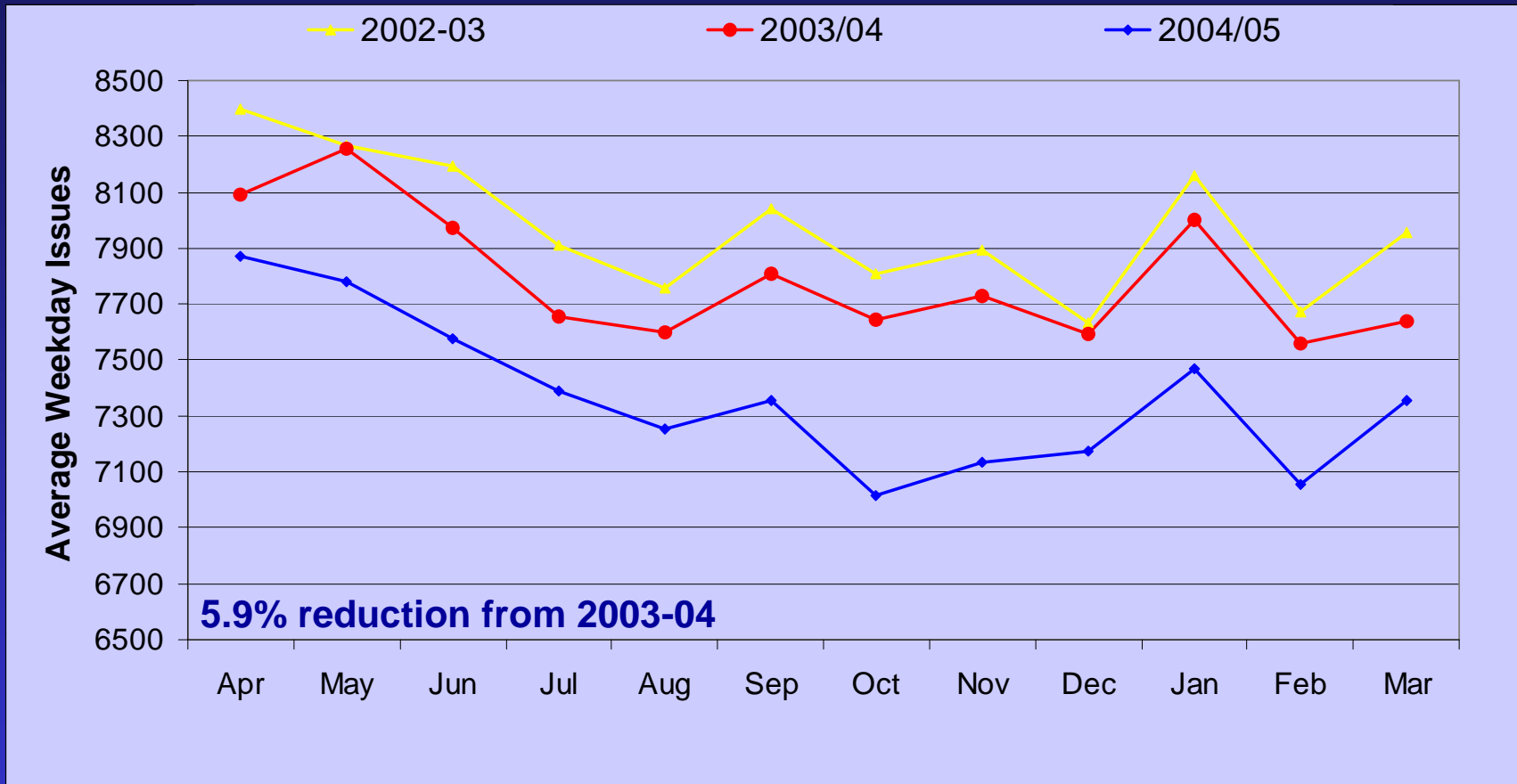
Hospital: tiempo de vida del estoc



Hospital seleccionado: desperdicio



Average Weekday Issues April - March



Red cell issues 2004-05 = 2.030M
Red cell issues 2003- 04 = 2.157M
Red cell issues 2002- 03 = 2.186M
Red cell issues 2001- 02 = 2.206M

The Blood Stocks Management Scheme

- Ensures proper monitoring of a freely given resource
- Improves the interface between supply and demand
- Increases awareness of blood inventory management
- Facilitates a better understanding between hospitals and blood services
- Facilitates benchmarking for hospitals against hospitals of a similar size and type
- Facilitates benchmarking for Blood Services/Centres against Blood Services/Centres of a similar size and type

BSMS Driving Changes in Practice

Hospitals

- Reducing inventory levels
- Improved management of satellite fridges
- Introduction of stock rotation
- Introduction of training in stock management

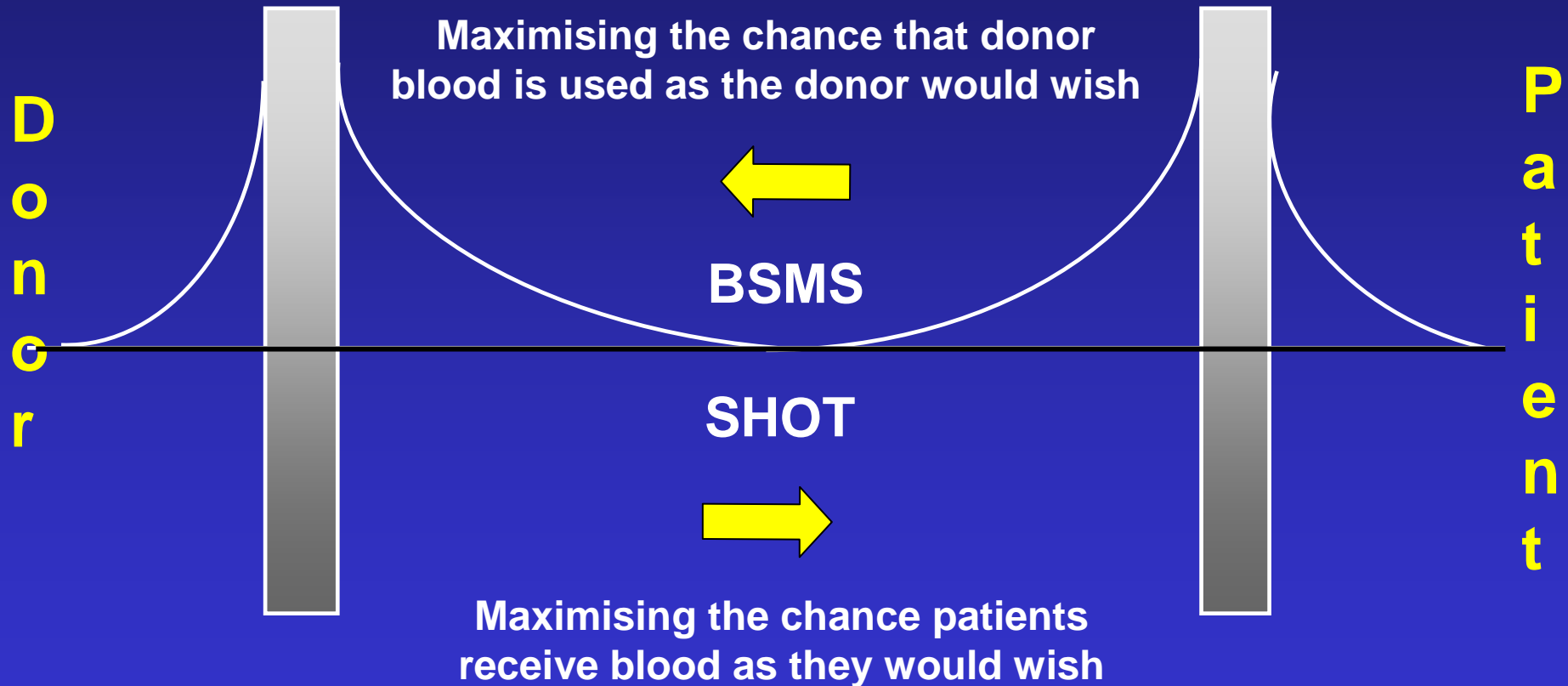
NBS

- Improved stock rotation
- Review of Issue policy
- Review of reporting stock cover

BSMS Developments

- **Fate of donation**
 - **Electronic download of BSMS information to include donation number and age and gender of transfused patients, further phases will include patient clinical information**
- **Benchmarking for contingency planning**
 - **Data input on use of blood for 6 identified surgical procedures with benchmarking facilities**

BSMS and SHOT



J Chapman

Performance measures - future

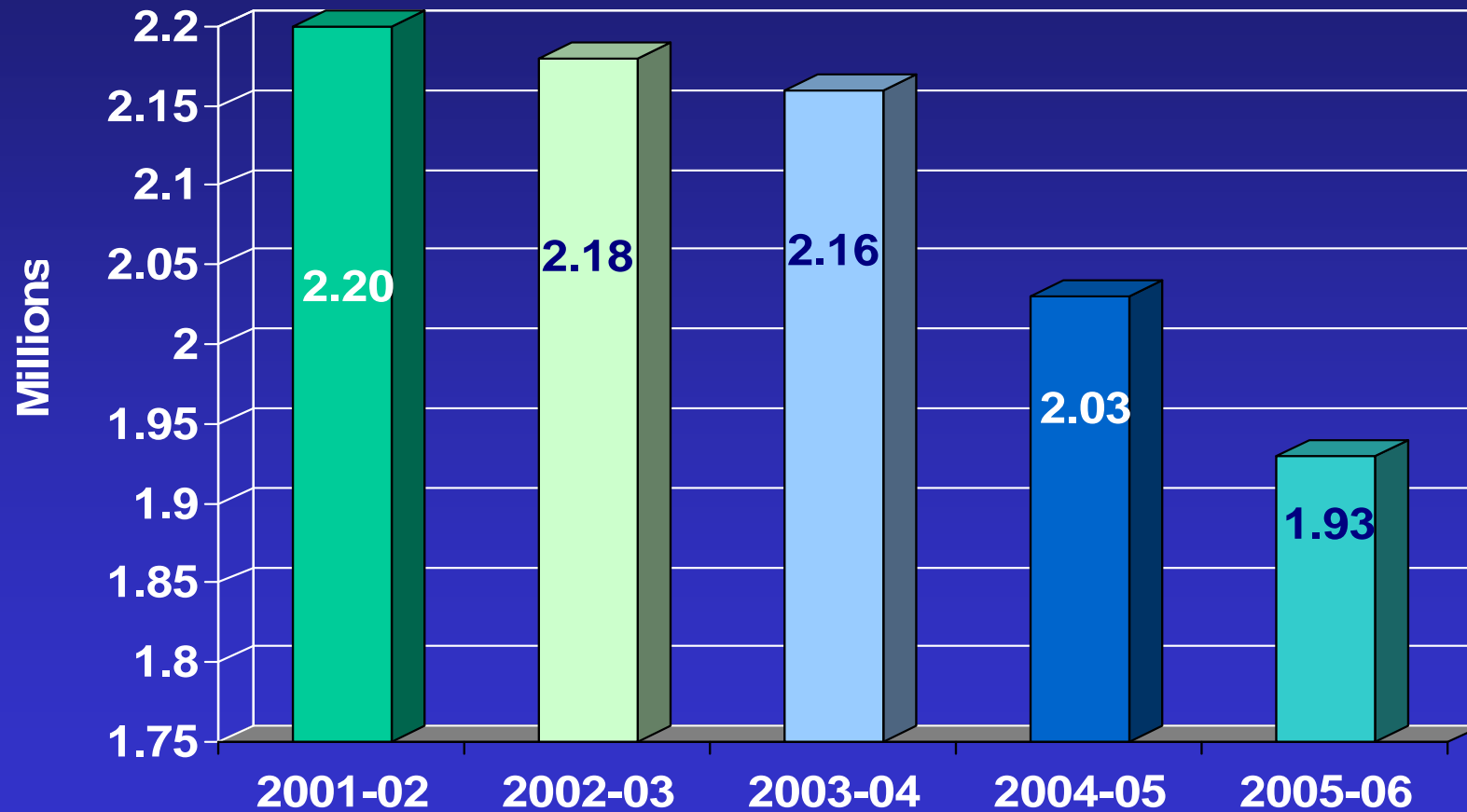
*More direct measures of “Better BT”
agreed with hospitals*

- Reduction in numbers of ABO incompatible transfusions
- Improved compliance with guidelines for the use of blood (resulting in reduced use of blood)
- Reduced wastage of blood & components
- Improved knowledge about transfusion amongst clinical staff and patients

The use of a handheld computer and barcode patient identification for safe bedside transfusion



The reduction in red cell demand



Change in the issues of red cell, platelet and FFP units in England from 2003/04 to 2005/06

Figure 5

Issues of units of red cells, platelets and FFP in England from 2003/04 to 2005/06

