

# A Sample of Unsuitable Samples

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IBTS

# A Sample of unsuitable Samples

## Introduction

- Every opportunity is worthwhile to remind the importance of the appropriateness of blood samples for testing
- It is shown in worldwide experience that the majority of errors in clinical laboratories involves specimen collection and handling
- Detection and management of unsuitable samples is necessary to overcome this source of errors

# Introduction: NHO Experience 2008/2009

## IBCT/SAE Table 17: Adverse events by stage in the Transfusion process flow

(N=122 Total Red Cells units issued: 144,383 in 2008 and 146,584 in 2009)

- Sampling 3
- Prescription Request 44
- Laboratory Processing - Other 3
- Laboratory Processing - Blood Transfusion 35
- Storage 3
- Collection 9
- Distribution 1
- Administration 20
- Supply Centre 1
- Other 3

# Introduction: SHOT Experience 2010

## Numbers of near misses according to category of incident

(N= 863; Total Red Cells units issued 2,180,781)

- Sample errors 409
- Request errors 44
- Laboratory procedural or testing errors 119
- Laboratory component selection errors 100
- Component collection/administration errors 50
- Expired components available 29
- Cold chain events 97
- Others 15

# Introduction: SHOT Experience 2010

## 409 Sample errors

- 386 WBIT In all but 4 cases these events could have been prevented by ID of the patient at the bedside at the time of blood sampling.
- 23 related to samples being labelled incorrectly (omissions or errors in patient identifiers), which were not rejected at booking but were detected at a later stage in the process.

# Introduction: SHOT Experience 2010

## Examples of Practices leading to WBIT

- Sample labelled by a second person away from the bedside.
- Incorrect patient record selected in A&E.
- Sample labelled with information from the incorrect prescription chart.
- Sample labelled with information from the incorrect request form.
- Another patient's addressograph labels were filed in the notes that were used to identify the patient.

**All of them could have been prevented by  
ID of the patient at the bedside**

# Introduction: SHOT Experience 2010

## Recommendations

- All Trusts must ensure that medical staff are trained and competency assessed for taking blood samples in accordance with the requirements of NPSA SPN 14.1

(NPSA Safer Practice Notice 14, Right Patient Right Blood November 2006: advice for safer Transfusions

<http://www.nrls.npsa.nhs.uk/resources/collections/right-patient-right-blood/>)

# Introduction

Review: Recommendations for detection and management of unsuitable samples in clinical laboratories. G. Lippi et al\*.

- The large majority of laboratory errors occur in manually intensive and poorly standardized preanalytical processes.
- In particular, preanalytical mistakes account for up to 70% of the total laboratory errors and produce clinical, economic and legal consequences comparable to those associated with medical errors

\*for the Italian Intersociety SIBioC-SIMeL-CISMEL Study Group on Extra-analytical Variability. Clin Chem Lab Med 2007;45(6):728-736

# Introduction: Italian Experience

Review: Recommendations for detection and management of unsuitable samples in clinical laboratories. G. Lippi et al\*.

Grade A Recommendations at Laboratory level

- Education of and acceptance of responsibility by laboratory personnel to limit the burden of errors in the preanalytical phase
- Implementation of objective and standardized criteria for detection of unsuitable specimens
- Systematic procedure for detection and monitoring of unsuitable specimens
- Management of unsuitable specimens by documenting the type of unsuitable specimens and procedures used for their identification

\*for the Italian Intersociety SIBioC-SIMeL-CISMEL Study Group on Extra-analytical Variability. Clin Chem Lab Med 2007;45(6):728-736

# OUR EXPERIENCE IN MRTC

## Our Practice is based on

- Guidelines: Guidelines for compatibility procedures in blood transfusion Laboratories. Working Party of the British Committee for Standards in Haematology Blood Transfusion Task Force. Transfusion Medicine, 2004, 14, 59-73.
- IBTS Primary Specimen Manual ([www.giveblood.ie](http://www.giveblood.ie))
- IBTS Standard Operation Procedures
- Hospitals Standard Operation Procedures

# Our Practice is based on

## BCSH Guidelines: SECTION 4 SAMPLES/DOCUMENTATION

4.1 Introduction Errors in patient identification and sample labelling may lead to ABO-incompatible transfusions. Evidence for this is well documented in the annual reports of the SHOT steering group Williamson et al. (1998, 1999), Love et al. (2001, 2002) and Szama (1976).

### 4.2 Written/electronic requests

4.2.1 There must be written policies for generating blood transfusion requests and for the collection of blood samples for pretransfusion compatibility testing. This should specify grades of staff authorized to request blood and to take samples for pretransfusion testing.

4.2.2 It is essential that the request form and sample contain the following minimum patient identification (PIN) as described in BCSH Guidelines for the administration of blood and blood components and management of transfused patients (BCSH, 1999).

- (i) surname/family name (correctly spelt);
- (ii) first name (s) in full;
- (iii) date of birth (not age or year of birth);
- (iv) hospital number/accident and emergency number/NHS number/major incident number. The sample should be dated, labelled and signed by the person taking it. The request form should also include the patient's location and the location where blood units should be sent and the signature/name of the person making the request.

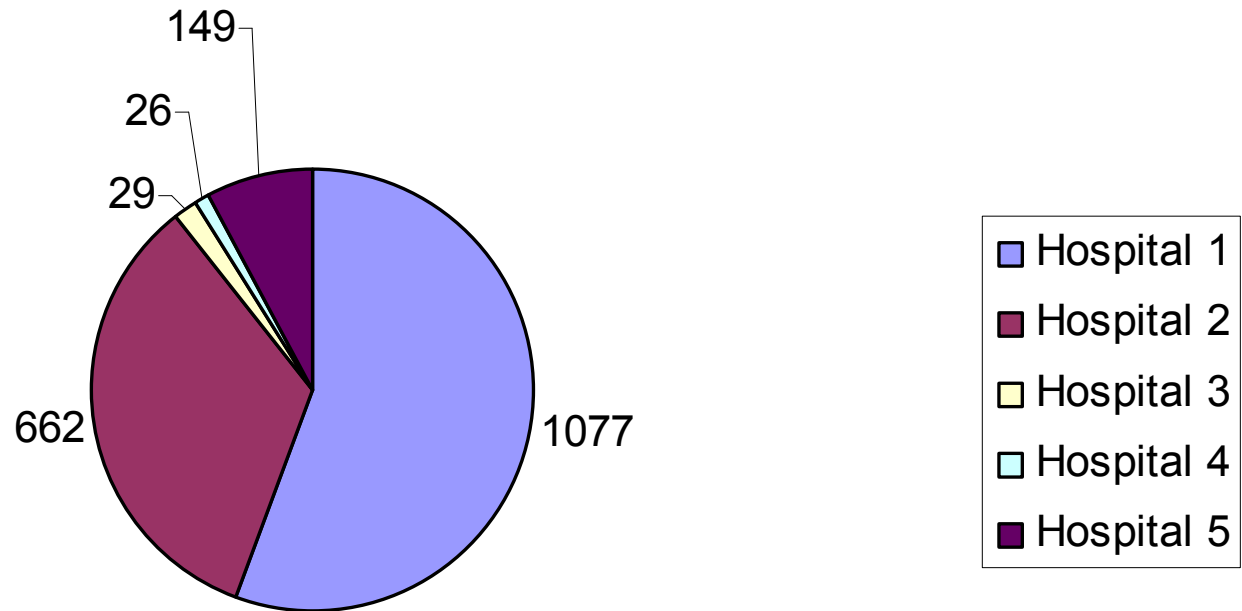
**A local SOP should be in place for the procedure for dealing with inadequately labelled samples.**

# OUR EXPERIENCE IN MRTC

- ANALYSIS INVALID SAMPLES FROM THE 5 HOSPITALS MRTC CROSS MATCH FOR

# Our Experience

N Red cells issued from January to September 2011:  
**1943**



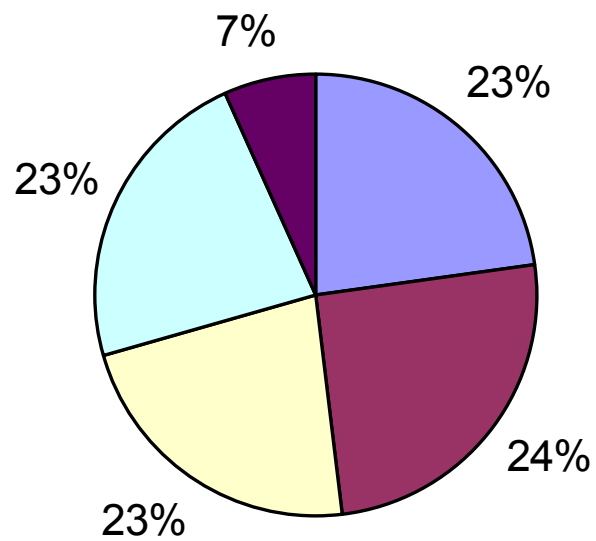
# Our Experience: Unsuitable samples

N Samples received from January to September 2011:  
2145

	Total Samples	Invalid Samples	%
Hospital 1	1326	75	5.6
Hospital 2	524	6	1.1
Hospital 3	149	4	2.7
Hospital 4	21	0	0
Hospital 5	125	2	1.6

# Our Experience Hospital 1

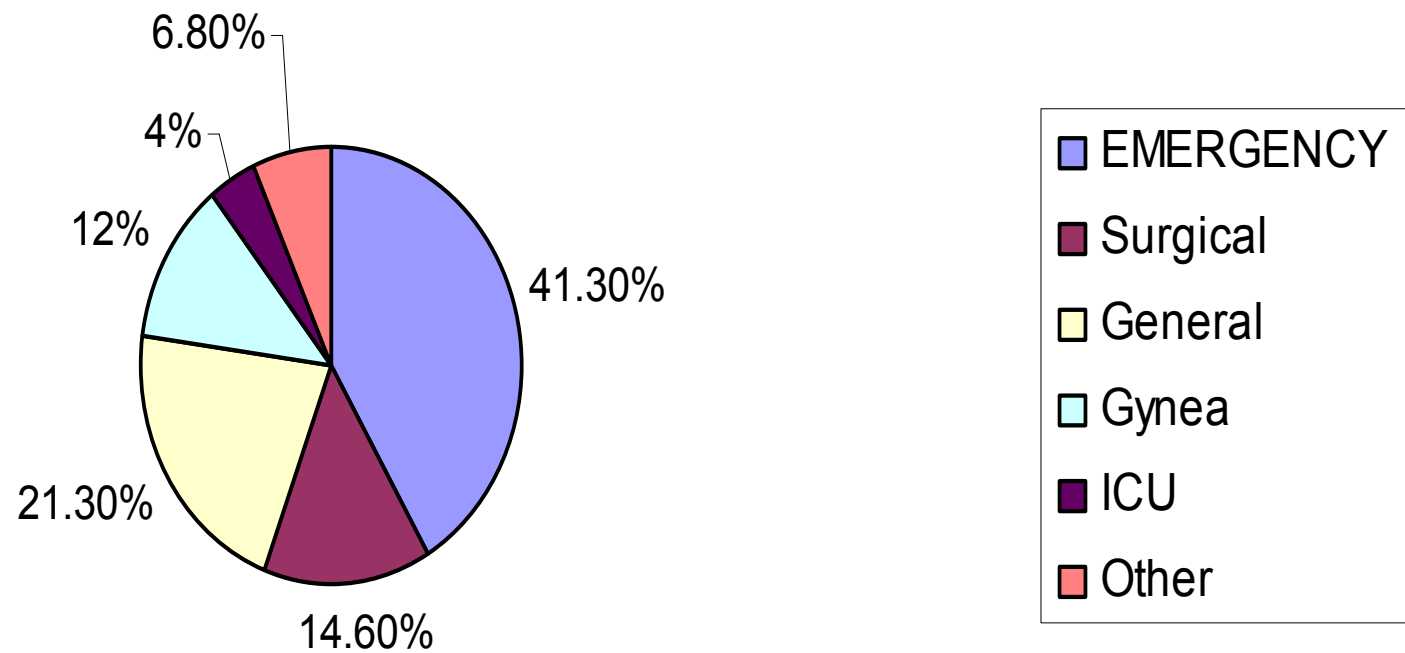
**TYPE OF ERROR**



- DOB
- NAME
- MRN
- NO PRESCRIBER NAME
- OTHER

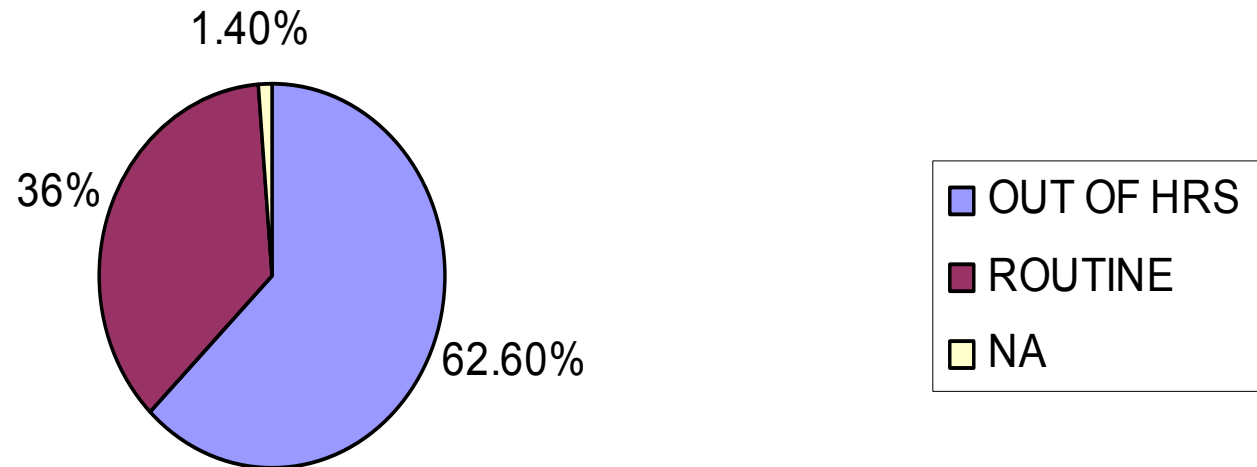
# Our Experience Hospital 1

## By Ward



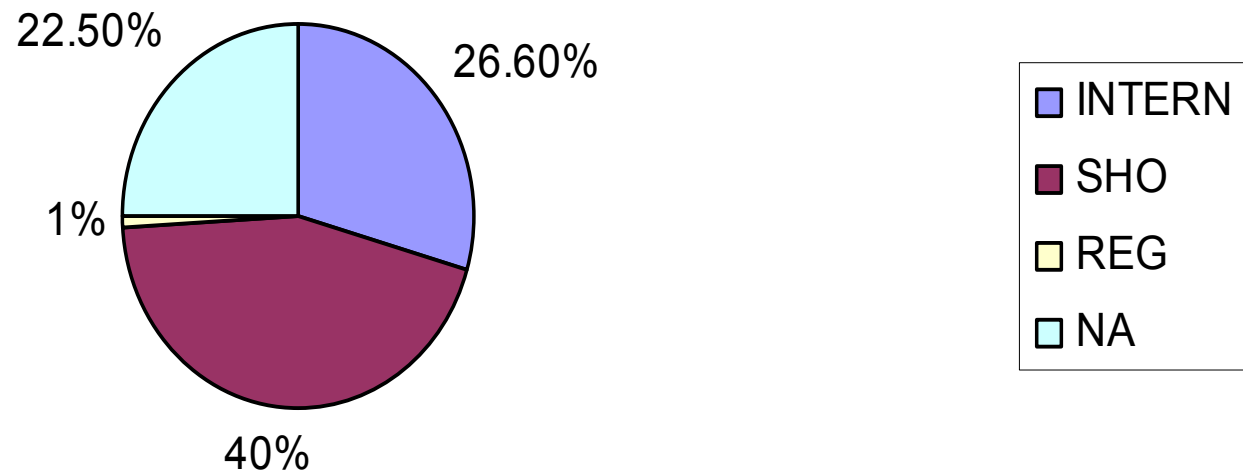
# Our Experience Hospital 1

**Routine / Out of hours**



# Our Experience Hospital 1

## Doctor Grade

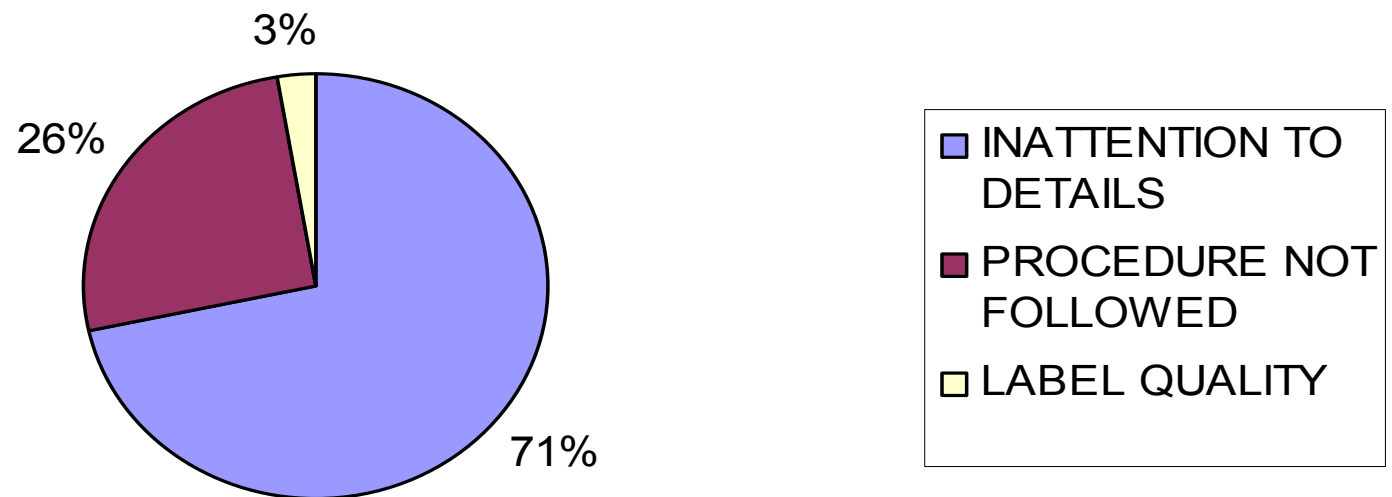


# Our Experience Hospital 1

MEDICAL GRADE	ONCE	TWICE	THREE TIMES	FOUR TIMES	FIVE TIMES	TOT N
REG N=4	2	1		1		8
SHO N=21	14	5	2			30
INTERN N=12	9	1		1	1	20
NOT KNOWN	17	NO PRESCRIBER'S NAME/ 2 OF THEM WERE PHELBOSTIMISTS				17

# Our Experience Hospital 1

Route Cause



# Actions taken Hospital 1

## E Learning Learn Pro NHS

### **Module 1- Safe Transfusion Practice**

- Haemovigilance in the UK and ROI
- Blood Group Serology
- Requesting Procedure
- Sampling Procedures
- Collection Procedure
- Administration Procedure
- Management of Transfused Patient
- **Module 1 Safe Transfusion Practice in the Lab (optional)**

### **Module 2- Blood Components and Indications for Use**

- Safe and Appropriate Transfusion Practice
- Blood Group Serology
- Red Blood Cells
- Platelets
- Plasma Components
- Massive Transfusion
- Plasma Derivatives
- Adverse Effects of Transfusion

# Actions taken Hospital 1

## **Death by Transfusion – pulling back from the precipice!**



Dr. Joan Power  
Irish Blood Transfusion Service

## Other examples

# **KEEP ME SAFE**

## **"ASK MY NAME BEFORE YOU TAKE MY BLOOD"**



The three steps to safe blood sampling;

1. Ask my name and date of birth
2. Check my hospital bracelet
3. Label my sample at my bedside

If you notice any staff member not following the three steps please remind them.

Please report all such incidents to the Ward Manager.

Your Health is important to us.

Issued by Hospital Management  
Mid-West Hospital Group  
June 2010

# Learning points – patient identification

- No wristband – no transfusion
- Patient must be physically present when the ID check is carried out. Any other check is not a patient ID check.
- Electronic devices are an aid to correctly reading and matching long barcodes, but staff using them must understand that the IT in itself cannot prevent errors.
- Patient ID is absolutely fundamental part of the delivery of healthcare in any discipline, and should be second nature to all staff.

# Learning points – patient identification

- Crucial that the content and principles contained in any training and competency package are fully appreciated and understood if errors are to be avoided
- Essential to have positive patient identification using the patient's wristband to label the sample tube at the bedside.
- Doctors responsible for disproportionate number of sample errors must be educated in the critical importance of patient ID for every medical intervention

# Conclusion

There have to be a system in place for the recognition, analysis of route causes and effective preventative actions of these errors as they are a sentinel of the appropriateness of blood sampling procedure

# WORKING TEAM

Dr Nuala Moore

Dr Michael Thomas

Dr Joan Power

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Patricia Bowens

Aileen Griffin

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Catherine Roche

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Leona Dolan

Maria O'Sullivan

# Thank you

