Dotting the ‘i’, Crossing the ‘t’

H.G. WAKELING
Department of Anaesthesia
Western Sussex Hospitals NHS Trust

howard.wakeling@wsht.nhs.uk

The problem of sloppy practice

- Waste of time
  - Clinical Staff
  - Laboratory Staff
- Waste of resources
- Unnecessary needles for patients

Serious problems..

- Delay in achieving safe transfusion
  - Inconvenient
  - Push transfusion into the night
  - Can be life threatening
- Serious incompatibility reactions
  - Can be fatal

Western Sussex figures

- Worthing Hospital
  - 22757 samples per annum
  - 8404 rejected as second sample not reqd.
  - 3730 rejected for identification issues
  - 2 Wrong blood in tube

Blood Transfusion Committee

Blood Transfusion Committee

Scary Nurse Practitioner!

Scary Nurse Practitioner!

Accident and Emergency

Scary Nurse Practitioner!

Maternity Department

Impact?

Impact?

None!

Further audit – Standards:

- Patient Identification
  - Ask patient first name, surname and dob
  - Check details match wristband
  - Check wristband details match request form
- Sample labelling
  - Label sample before leaving patient
  - Sign tube as person drawing sample
  - Bleed one patient at a time
  - Never pre-label tubes
- Competency - has the individual passed?

Results

Staff	Doctors	Midwives	Phlebotomists
Pat. Id	23%	15%	100%
Labelling	57%	77%	100%

Blood Transfusion Committee

Blood Transfusion Committee

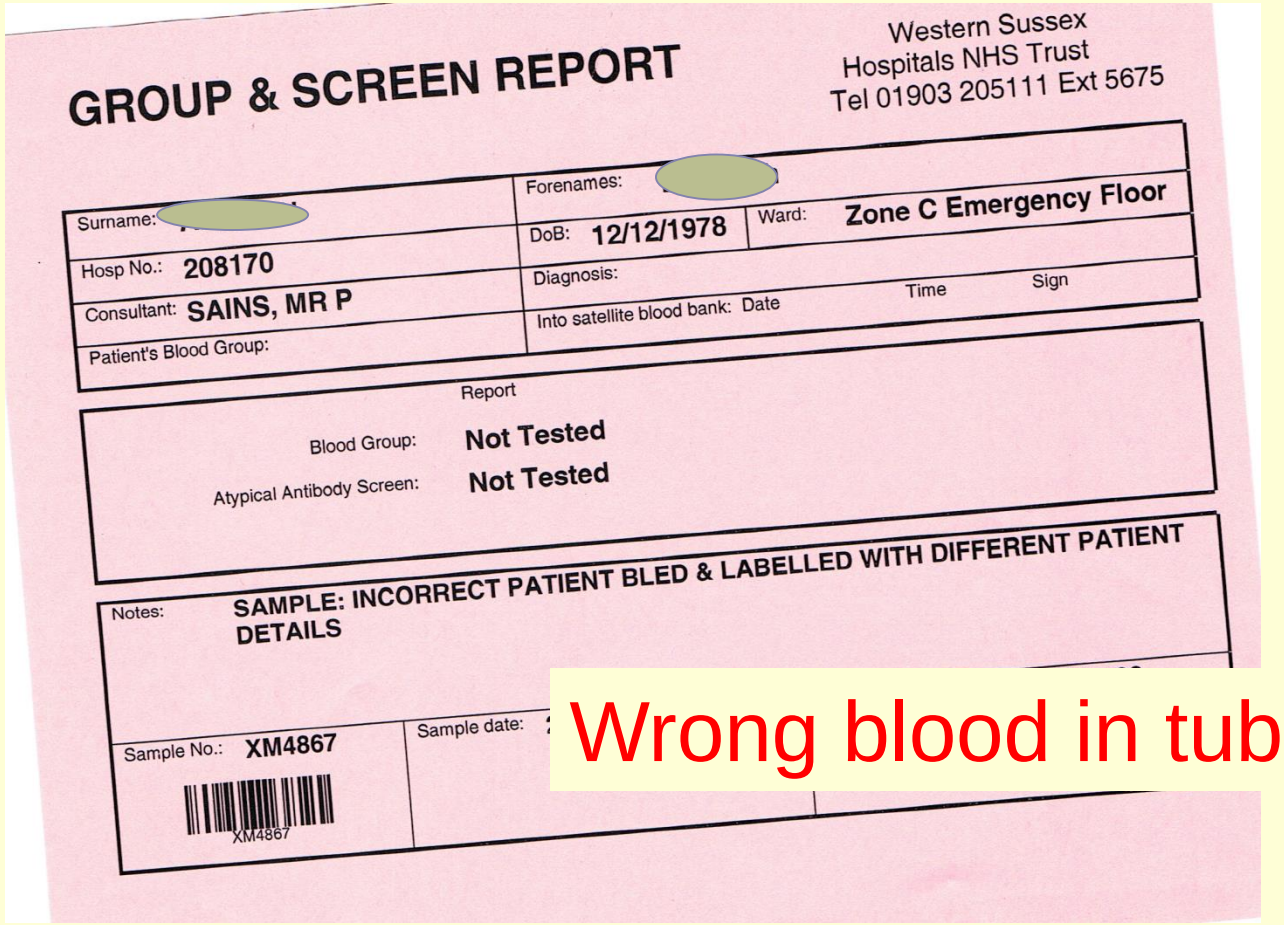
Share results with global e-mail -
-Give standards
-Share audit results
-Warn of potential mortality
-Very clear threat of consequences of poor practice.

Impact?

Impact?

None!

Despite our efforts……



GROUP & SCREEN REPORT

Western Sussex
Hospitals NHS Trust
Tel 01903 205111 Ext 5675

Surname: [redacted]
Forenames: [redacted]
Hosp No.: 208170
DoB: 12/12/1978
Ward: Zone C Emergency Floor
Consultant: SAINS, MR P
Diagnosis:
Patient's Blood Group:
Into satellite blood bank: Date Time Sign

Report

Blood Group: Not Tested
Atypical Antibody Screen: Not Tested

Notes: SAMPLE: INCORRECT PATIENT BLED & LABELLED WITH DIFFERENT PATIENT DETAILS

Sample No.: XM4867
XM4867
Sample date:

Wrong blood in tube!

Blood Transfusion Committee

STOP!

Before transfusion, carry out these checks

Ask the patient to state their forename, surname, date of birth (if not possible, use wristband)
Then Check:

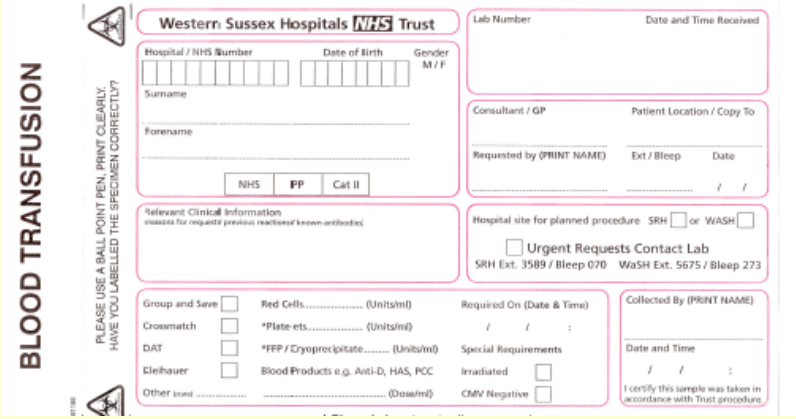
1. Forename, surname, date of birth, NHS/hospital No. match wristband & prescription.
2. All patient details on this tag match wristband.
3. Donor number on tag matches donor number on component.
4. Patient blood group on tag matches blood group on component. Lab must inform you of any differences between donor and patient groups.
5. Expiry date (& time) on component.
6. Component meets special requirements on prescription.

Do not transfuse unless the component is faultless and all details on wristband, tag and component match. If not, inform lab, and return component.

If you suspect a reaction STOP the transfusion, and seek medical advice.

Transfer Tape

So……



BLOOD TRANSFUSION

PLEASE USE A BALL POINT PEN, PRINT CLEARLY.
HAVE YOU LABELLED THE SPECIMEN CORRECTLY?

Western Sussex Hospitals NHS Trust

Hospital / NHS Number | Date of Birth | Gender M / F

Surname

Forename

NHS | IP | Cat II

Relevant Clinical Information
(reasons for request/ previous reactions/ known antibodies)

Lab Number | Date and Time Received

Consultant / GP | Patient Location / Copy To

Requested by (PRINT NAME) | Ext / Bleep | Date

Hospital site for planned procedure SRH ☐ or WASH ☐

☐ Urgent Requests Contact Lab
SRH Ext. 3589 / Bleep 070 WaSH Ext. 5675 / Bleep 273

Group and Save ☐ | Red Cells..... (Units/ml)
Crossmatch ☐ | *Platelets..... (Units/ml)
DAT ☐ | *FFP / Cryoprecipitate..... (Units/ml)
Eleihauer ☐ | Blood Products e.g. Anti-D, HAS, PCC
Other (specify) ..... (Dose/ml)

Required On (Date & Time) / / :

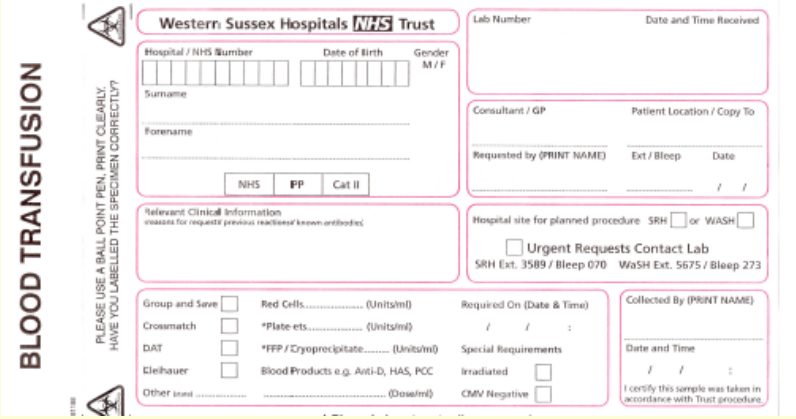
Special Requirements
Irradiated ☐
CMV Negative ☐

Collected By (PRINT NAME)

Date and Time / / :

I certify this sample was taken in accordance with Trust procedure.

So……



BLOOD TRANSFUSION

PLEASE USE A BALL POINT PEN, PRINT CLEARLY.
HAVE YOU LABELLED THE SPECIMEN CORRECTLY?

Western Sussex Hospitals NHS Trust

Hospital / NHS Number | Date of Birth | Gender M / F

Surname

Forename

NHS | IP | Cat II

Relevant Clinical Information
(reasons for request/ previous reactions/ known antibodies)

Lab Number | Date and Time Received

Consultant / GP | Patient Location / Copy To

Requested by (PRINT NAME) | Ext / Bleep | Date

Hospital site for planned procedure SRH ☐ or WASH ☐

☐ Urgent Requests Contact Lab
SRH Ext. 3589 / Bleep 070 WaSH Ext. 5675 / Bleep 273

Group and Save ☐ | Red Cells..... (Units/ml)
Crossmatch ☐ | *Plate ets..... (Units/ml)
DAT ☐ | *FFP / Cryoprecipitate..... (Units/ml)
Elelhauer ☐ | Blood Products e.g. Anti-D, HAS, PCC
Other .... (Dose/ml)

Required On (Date & Time)
/ / :

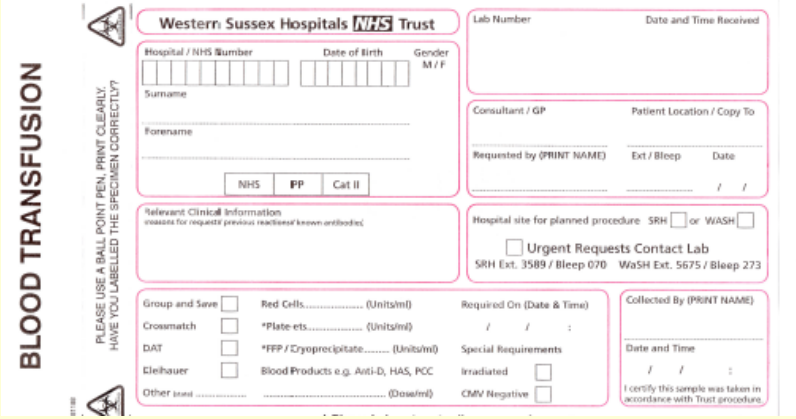
Special Requirements
Irradiated ☐
CMV Negative ☐

Collected By (PRINT NAME)

Date and Time
/ / :

I certify this sample was taken in accordance with Trust procedure.

So……



BLOOD TRANSFUSION

PLEASE USE A BALL POINT PEN, PRINT CLEARLY.
HAVE YOU LABELLED THE SPECIMEN CORRECTLY?

Western Sussex Hospitals NHS Trust

Hospital / NHS Number | Date of Birth | Gender M / F

Surname

Forename

NHS | IP | Cat II

Lab Number | Date and Time Received

Consultant / GP | Patient Location / Copy To

Requested by (PRINT NAME) | Ext / Bleep | Date

Relevant Clinical Information
reasons for request/ previous reactions/ known antibodies

Hospital site for planned procedure SRH ☐ or WASH ☐

☐ Urgent Requests Contact Lab
SRH Ext. 3589 / Bleep 070 WaSH Ext. 5675 / Bleep 273

Group and Save ☐ | Red Cells..... (Units/ml)
Crossmatch ☐ | *Plate ets..... (Units/ml)
DAT ☐ | *FFP / Cryoprecipitate..... (Units/ml)
Eleihauer ☐ | Blood Products e.g. Anti-D, HAS, PCC
Other ☐ ..... (Dose/ml)

Required On (Date & Time)
/ / :

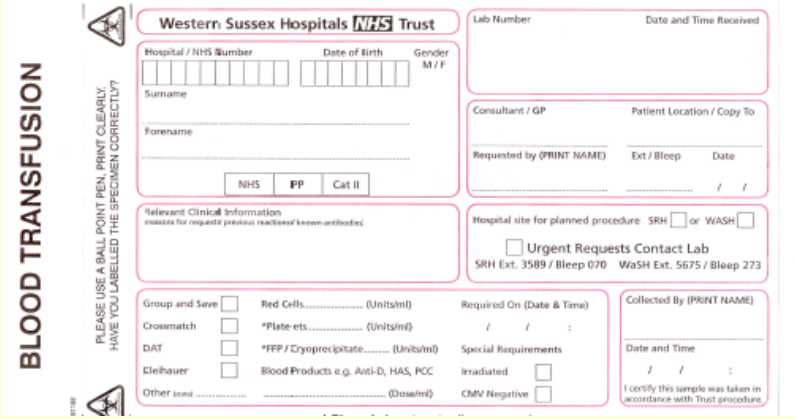
Special Requirements
Irradiated ☐
CMV Negative ☐

Collected By (PRINT NAME)

Date and Time
/ / :

I certify this sample was taken in accordance with Trust procedure.

So……



BLOOD TRANSFUSION

PLEASE USE A BALL POINT PEN, PRINT CLEARLY.
HAVE YOU LABELLED THE SPECIMEN CORRECTLY?

Western Sussex Hospitals NHS Trust

Hospital / NHS Number | Date of Birth | Gender M / F

Surname

Forename

NHS | IPP | Cat II

Lab Number | Date and Time Received

Consultant / GP | Patient Location / Copy To

Requested by (PRINT NAME) | Ext / Bleep | Date

Relevant Clinical Information
(reasons for request/ previous reactions/ known antibodies)

Hospital site for planned procedure SRH or WASH

Urgent Requests Contact Lab
SRH Ext. 3589 / Bleep 070 WaSH Ext. 5675 / Bleep 273

Group and Save | Red Cells..... (Units/ml)
Crossmatch | *Plate ets..... (Units/ml)
DAT | *FFP / Cryoprecipitate..... (Units/ml)
Elelhauer | Blood Products e.g. Anti-D, HAS, PCC
Other ..... (Dose/ml)

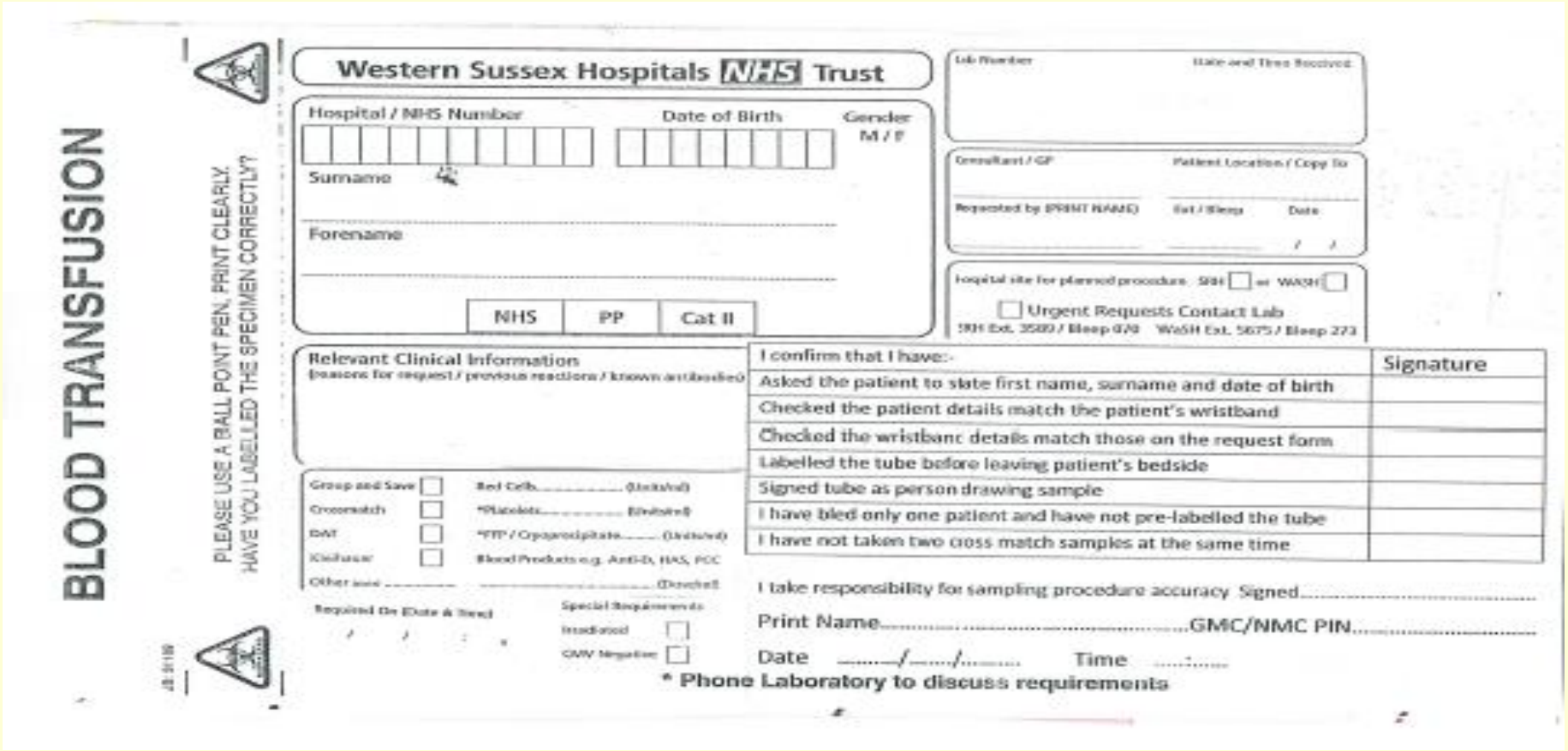
Required On (Date & Time)
/ / :

Special Requirements
Irradiated
CMV Negative

Collected By (PRINT NAME)

Date and Time
/ / :

I certify this sample was taken in accordance with Trust procedure.



BLOOD TRANSFUSION

PLEASE USE A BALL POINT PEN. PRINT CLEARLY.
HAVE YOU LABELLED THE SPECIMEN CORRECTLY?

Western Sussex Hospitals NHS Trust

Hospital / NHS Number | Date of Birth | Gender M / F

Surname

Forename

NHS | PP | Cat II

Lab Number | Date and Time Received

Consultant / GP | Patient Location / Copy To

Requested by (PRINT NAME) | Ext / Bleep | Date

Hospital site for planned procedure: SRH ☐ or WASH ☐

☐ Urgent Requests Contact Lab
SRH Ext. 3589 / Bleep 678 WaSH Ext. 5675 / Bleep 273

Relevant Clinical Information
(reasons for request / previous reactions / known antibodies)

I confirm that I have:-	Signature
Asked the patient to state first name, surname and date of birth	
Checked the patient details match the patient's wristband	
Checked the wristband details match those on the request form	
Labelled the tube before leaving patient's bedside	
Signed tube as person drawing sample	
I have bled only one patient and have not pre-labelled the tube	
I have not taken two cross match samples at the same time	

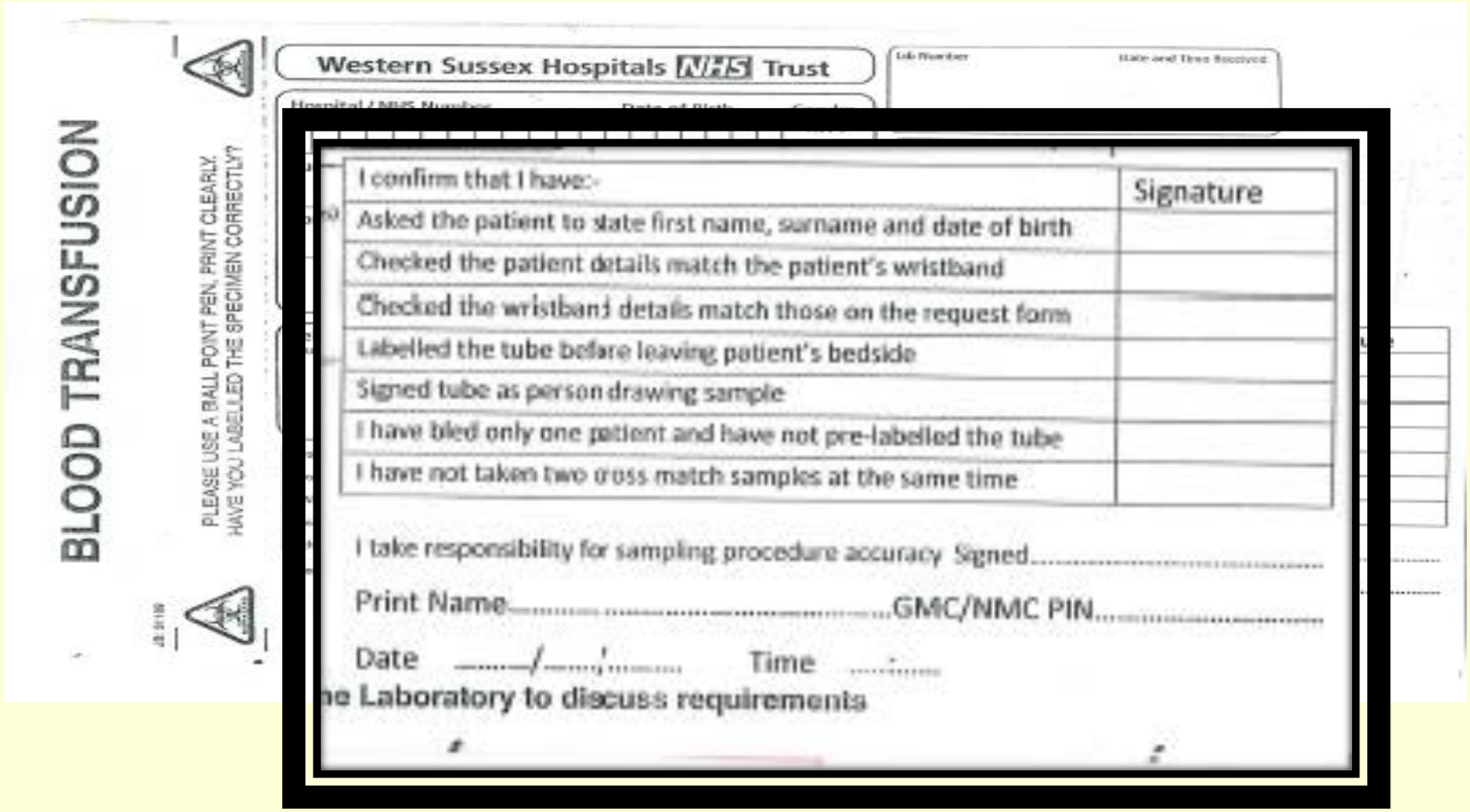
Group and Save ☐ Red Cells..... (Units/ml)
Crossmatch ☐ *Platelets..... (Units/ml)
DAT ☐ *FFP / Cryoprecipitate..... (Units/ml)
Clotbase ☐ Blood Products e.g. Anti-D, HAS, PCC
Other test ..... (Details)

Required On (Date & Time)
/ / : h

Special Requirements
Irradiated ☐
CMV Negative ☐

I take responsibility for sampling procedure accuracy Signed.....
Print Name.....GMC/NMC PIN.....
Date ...../...../..... Time .....:.....

* Phone Laboratory to discuss requirements



BLOOD TRANSFUSION

PLEASE USE A BALL POINT PEN. PRINT CLEARLY.
HAVE YOU LABELLED THE SPECIMEN CORRECTLY?

Western Sussex Hospitals NHS Trust

I confirm that I have:-	Signature
Asked the patient to state first name, surname and date of birth	
Checked the patient details match the patient's wristband	
Checked the wristband details match those on the request form	
Labelled the tube before leaving patient's bedside	
Signed tube as person drawing sample	
I have bled only one patient and have not pre-labelled the tube	
I have not taken two cross match samples at the same time	

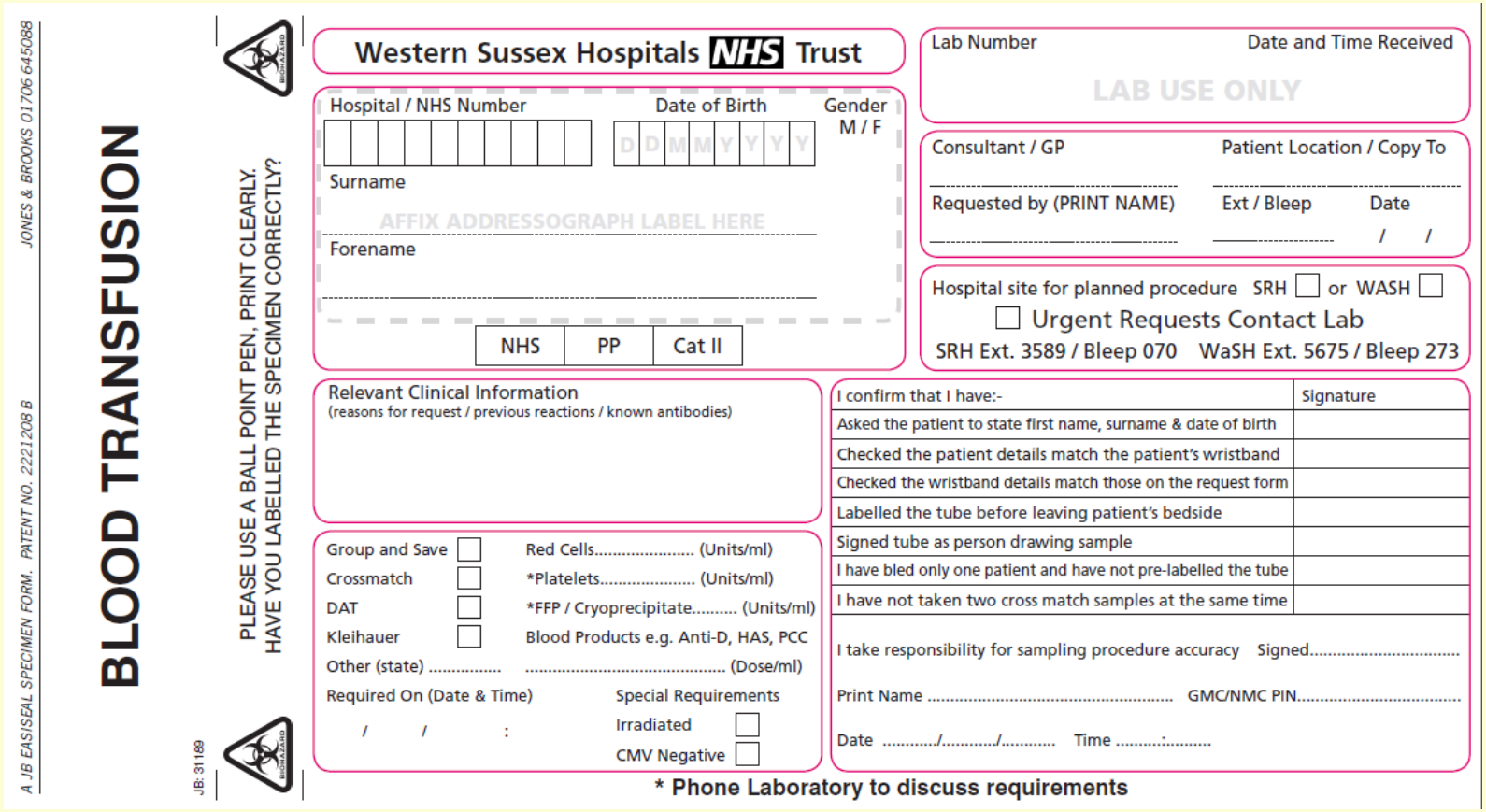
I take responsibility for sampling procedure accuracy Signed.....

Print Name.....GMC/NMC PIN.....

Date ...../...../..... Time .....:.....

...e Laboratory to discuss requirements

Fresh from the printers…



BLOOD TRANSFUSION

A JB EASISEAL SPECIMEN FORM. PATENT NO. 2221208 B

JONES & BROOKS 01706 645088

JB: 31189

PLEASE USE A BALL POINT PEN, PRINT CLEARLY.
HAVE YOU LABELLED THE SPECIMEN CORRECTLY?

Western Sussex Hospitals NHS Trust

Hospital / NHS Number

Date of Birth D D M M Y Y Y Y

Gender M / F

Surname

AFFIX ADDRESSOGRAPH LABEL HERE

Forename

NHS | PP | Cat II

Lab Number

Date and Time Received

LAB USE ONLY

Consultant / GP

Patient Location / Copy To

Requested by (PRINT NAME)

Ext / Bleep

Date / /

Hospital site for planned procedure SRH ☐ or WASH ☐

☐ Urgent Requests Contact Lab

SRH Ext. 3589 / Bleep 070 WaSH Ext. 5675 / Bleep 273

Relevant Clinical Information
(reasons for request / previous reactions / known antibodies)

I confirm that I have:-	Signature
Asked the patient to state first name, surname & date of birth	
Checked the patient details match the patient's wristband	
Checked the wristband details match those on the request form	
Labelled the tube before leaving patient's bedside	
Signed tube as person drawing sample	
I have bled only one patient and have not pre-labelled the tube	
I have not taken two cross match samples at the same time	

Group and Save ☐
Crossmatch ☐
DAT ☐
Kleihauer ☐
Other (state) .....

Red Cells..... (Units/ml)
*Platelets..... (Units/ml)
*FFP / Cryoprecipitate..... (Units/ml)
Blood Products e.g. Anti-D, HAS, PCC
..... (Dose/ml)

Required On (Date & Time) / / :

Special Requirements
Irradiated ☐
CMV Negative ☐

I take responsibility for sampling procedure accuracy Signed.....

Print Name ..... GMC/NMC PIN.....

Date ...../...../..... Time .....:.....

* Phone Laboratory to discuss requirements

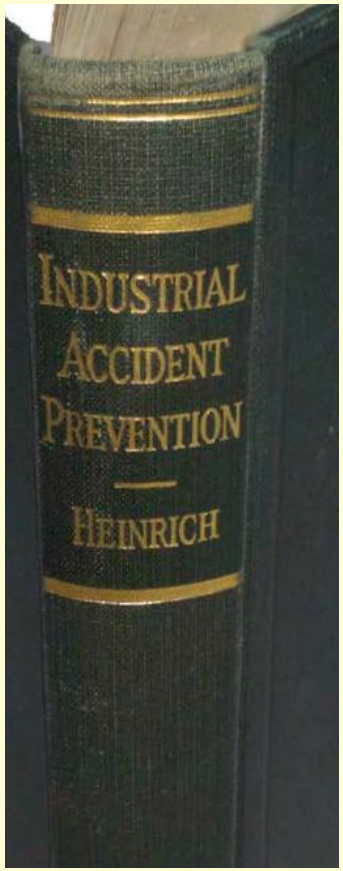
Present time

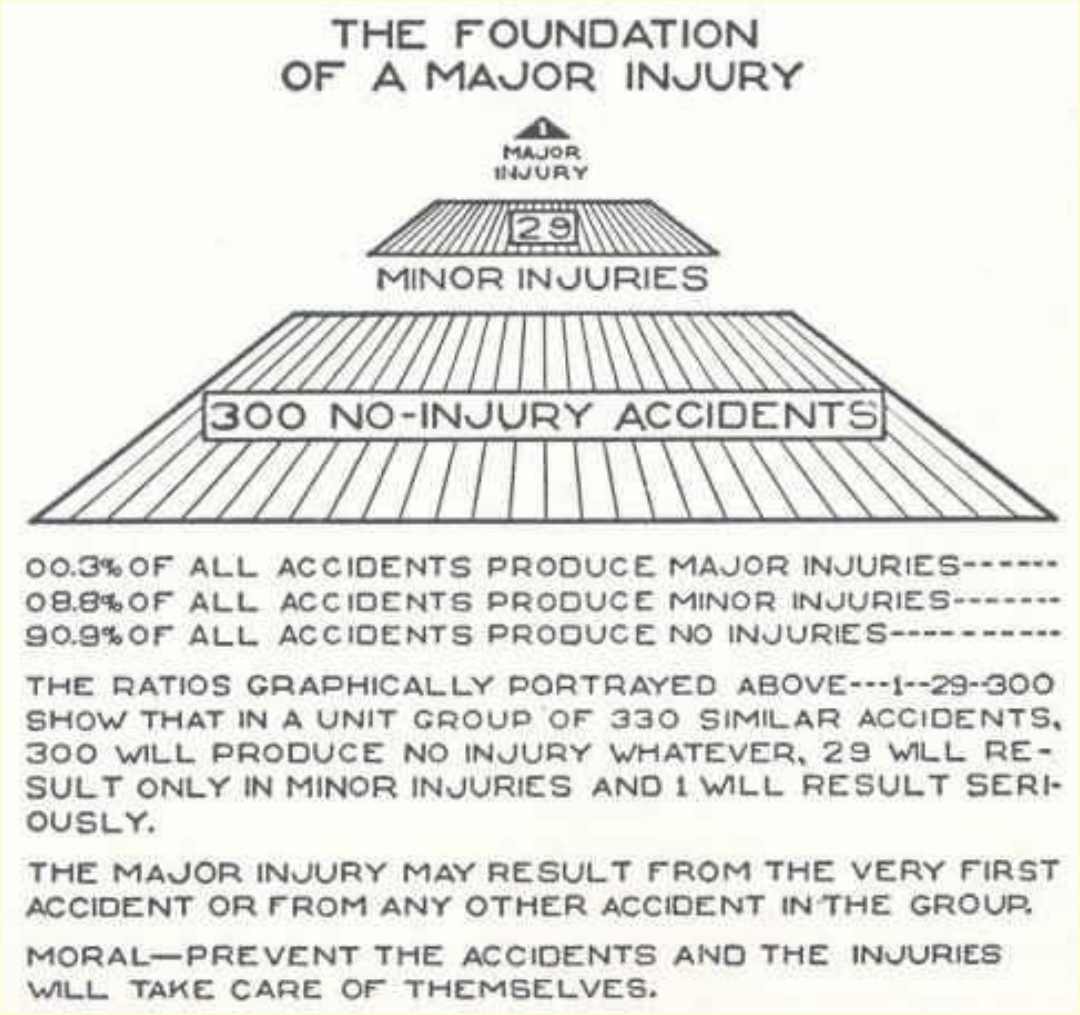
- New forms accepted and in use
- Global letter sent highlighting importance of following instructions
- All WBITs lead to ban in sampling followed by retraining
- Impression – lower rate but still occuring

Herbert William Heinrich

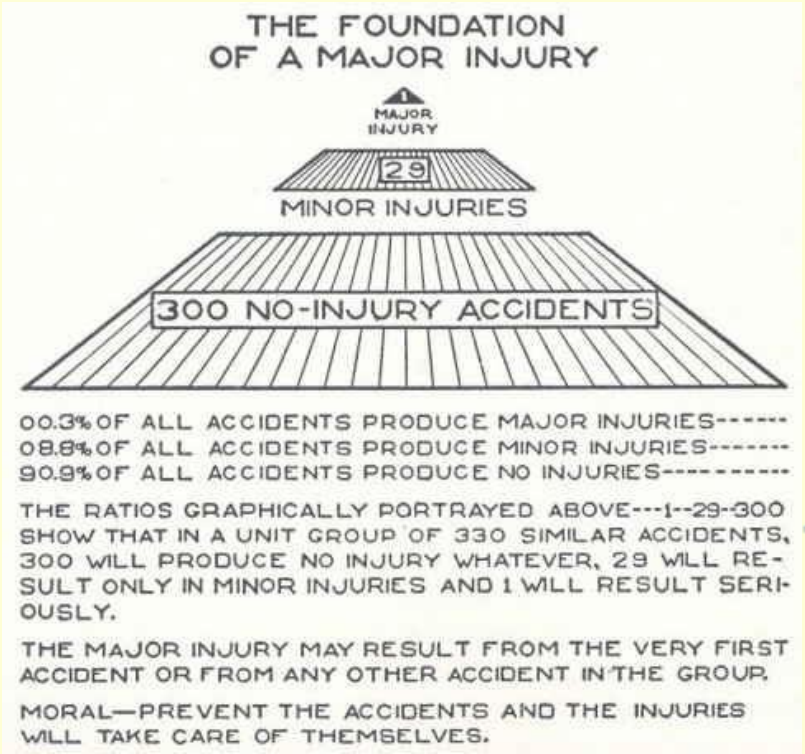
Industrial Insurance Investigator
1920s America

Industrial Accident Prevention 1931





Industrial Accident Prevention 1931



The Heinrich 300-29-1 Model

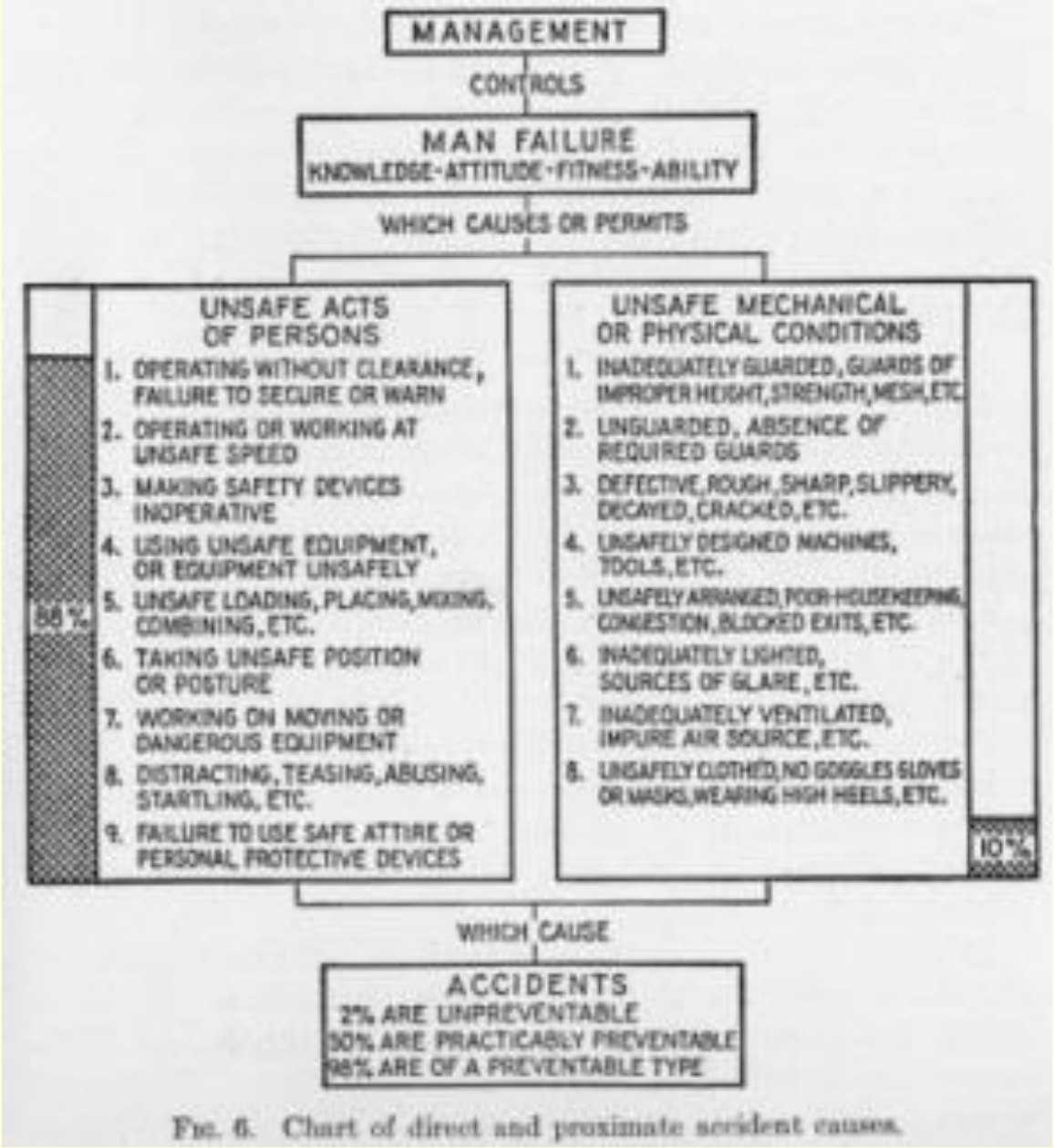


FIG. 6. Chart of direct and proximate accident causes.

Why?

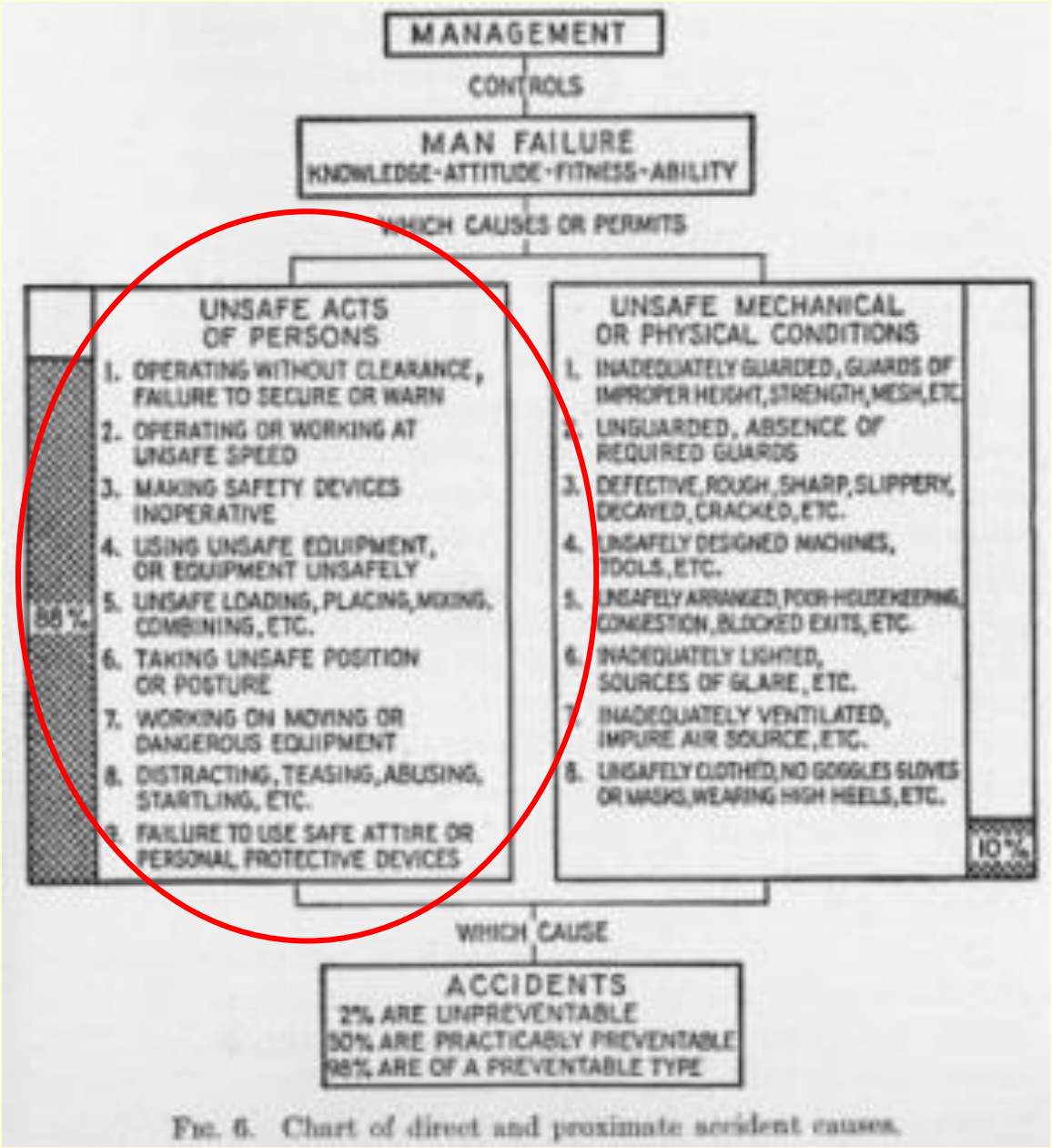


FIG. 6. Chart of direct and proximate accident causes.

Why?

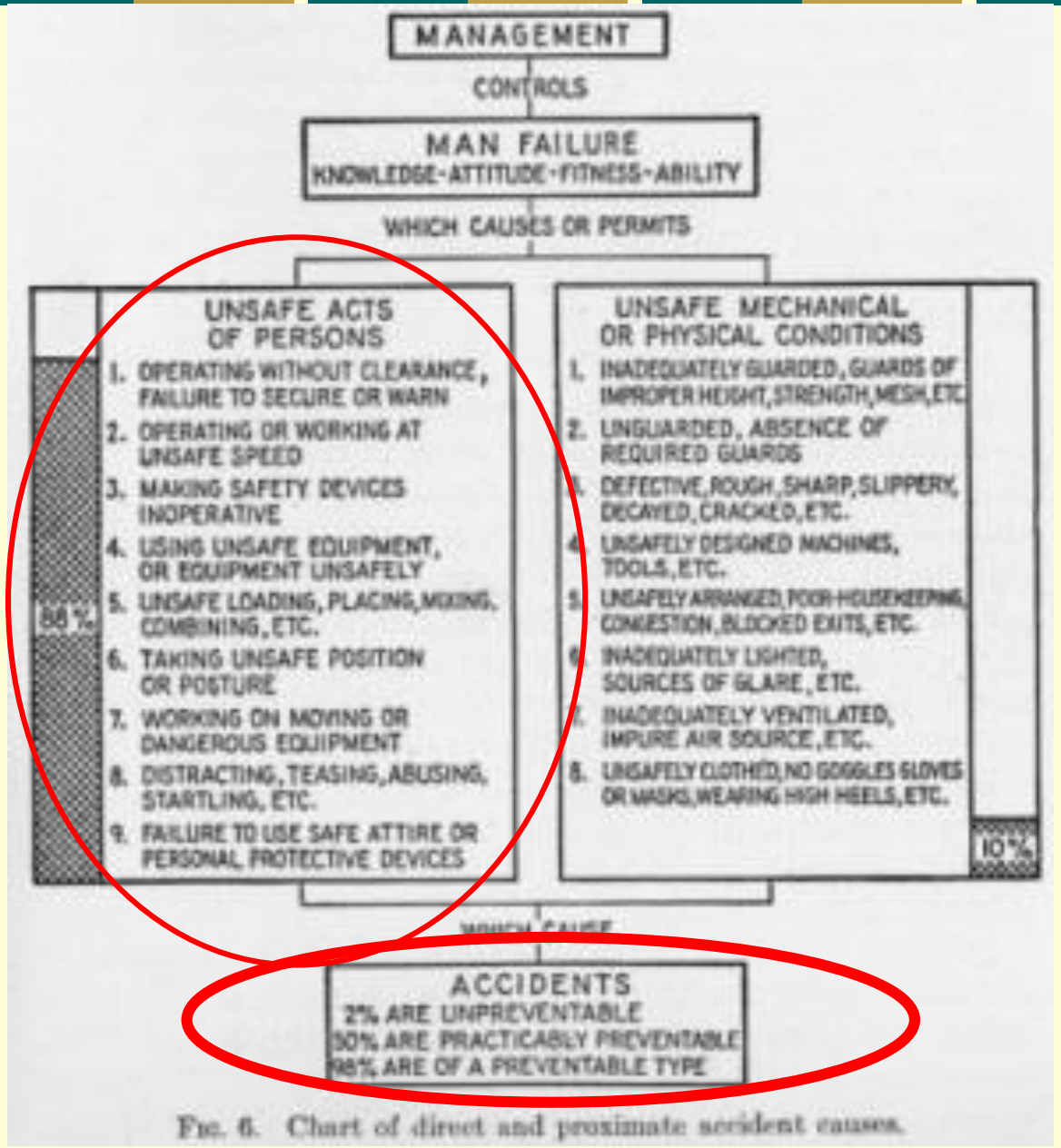


FIG. 6. Chart of direct and proximate accident causes.

Why?

Domino effect

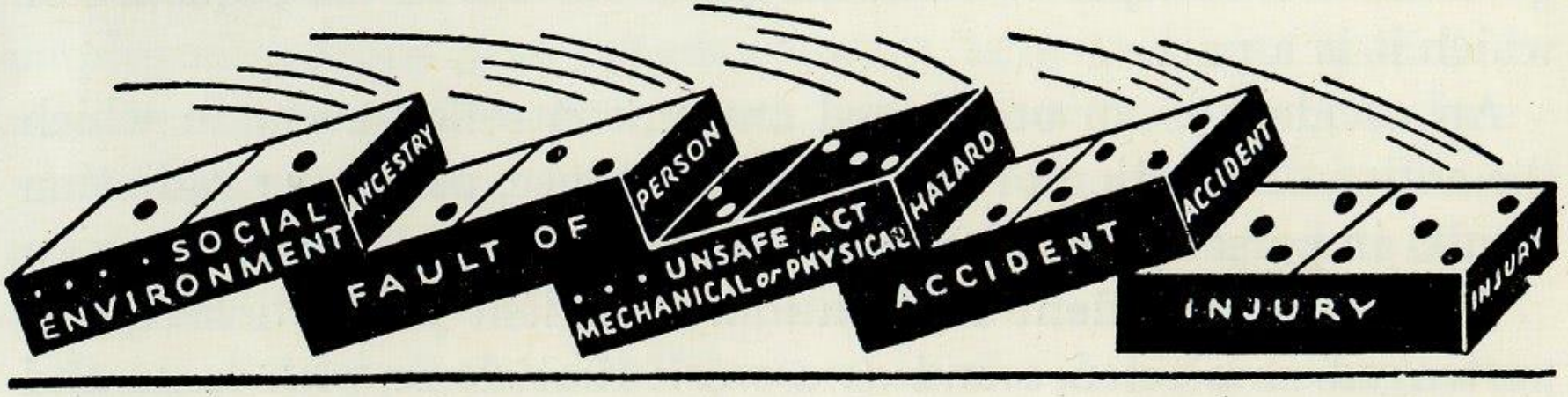


FIG. 3. The injury is caused by the action of preceding factors.

Domino effect

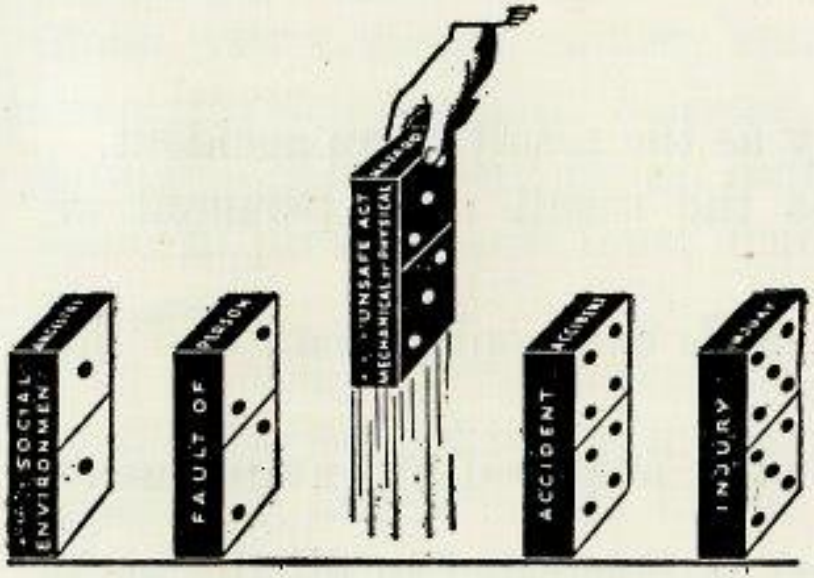


FIG. 4. The unsafe act and mechanical hazard constitute the central factor in the accident sequence.

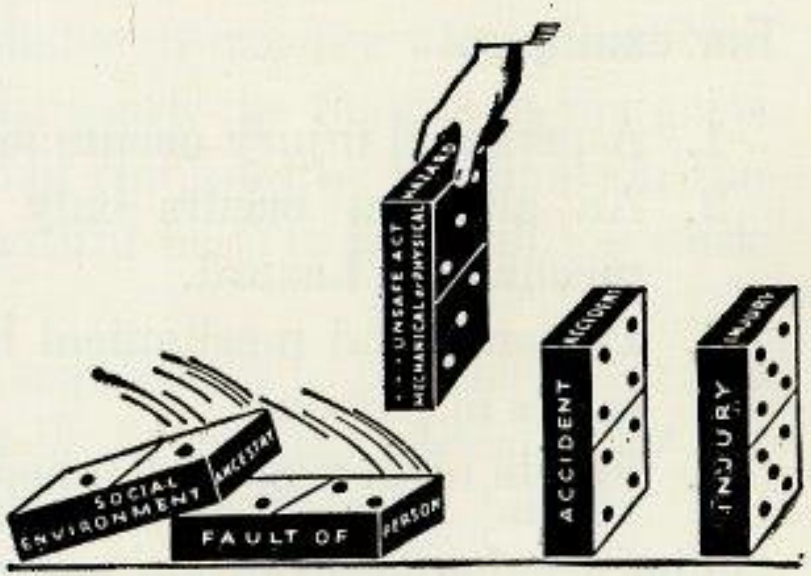
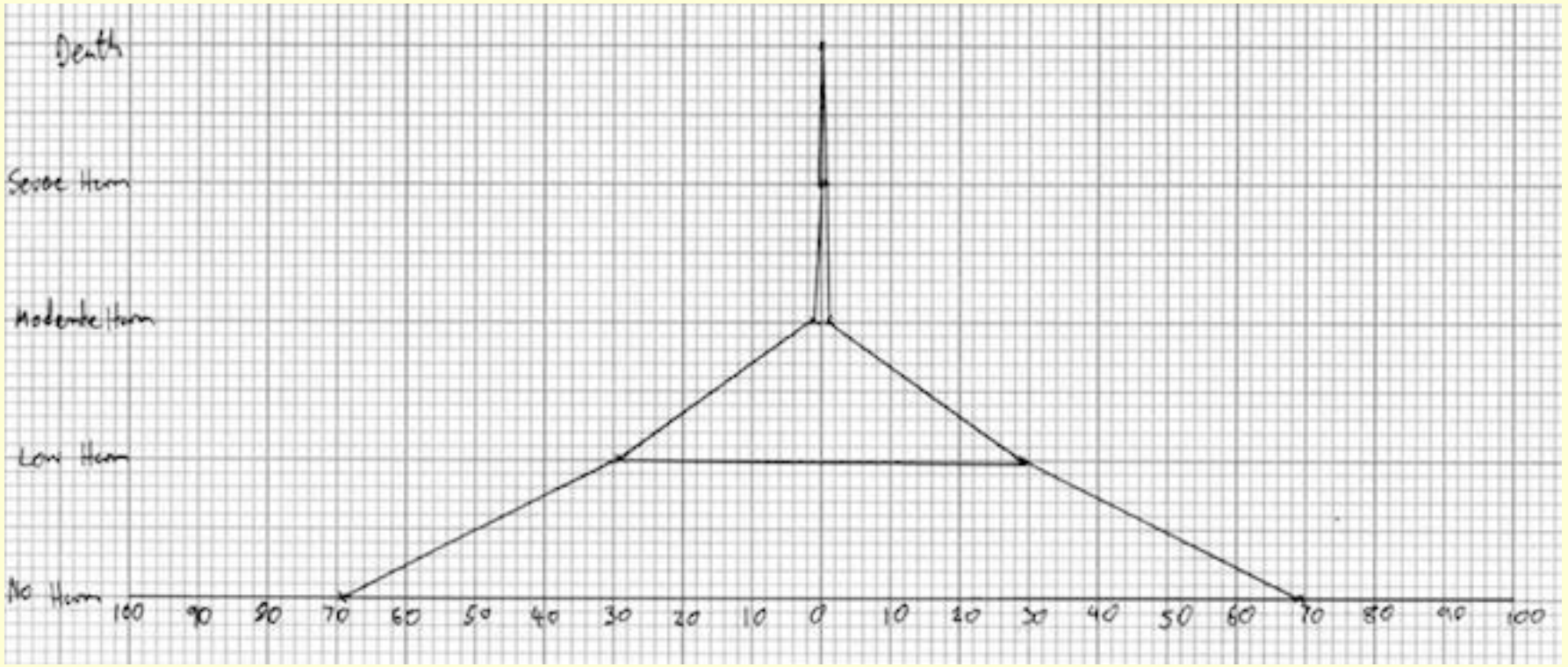


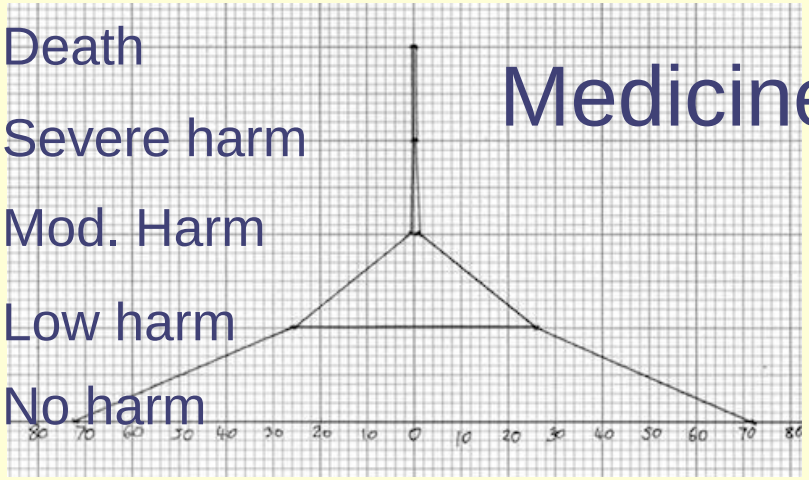
FIG. 5. The removal of the central factor makes the action of preceding factors ineffective.

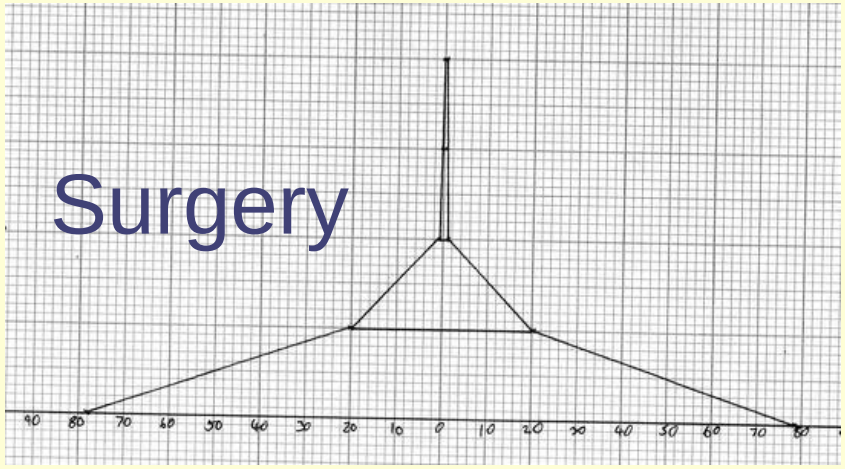
NHS and Triangles



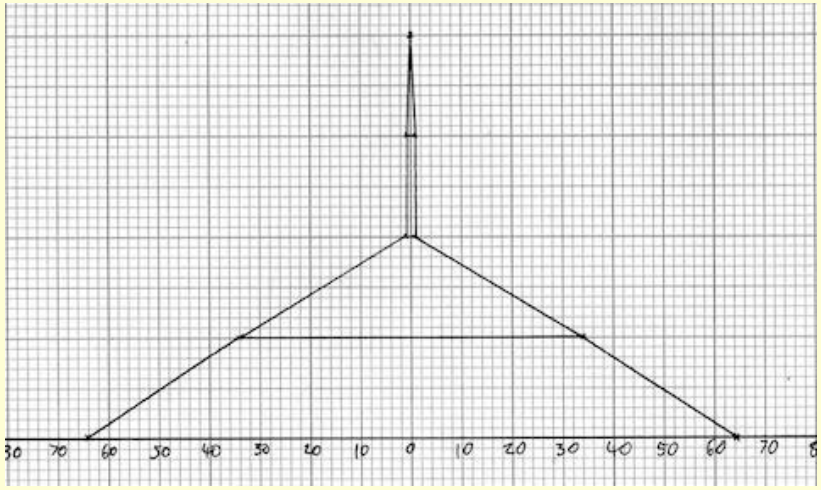
Western Sussex NHSFT National data

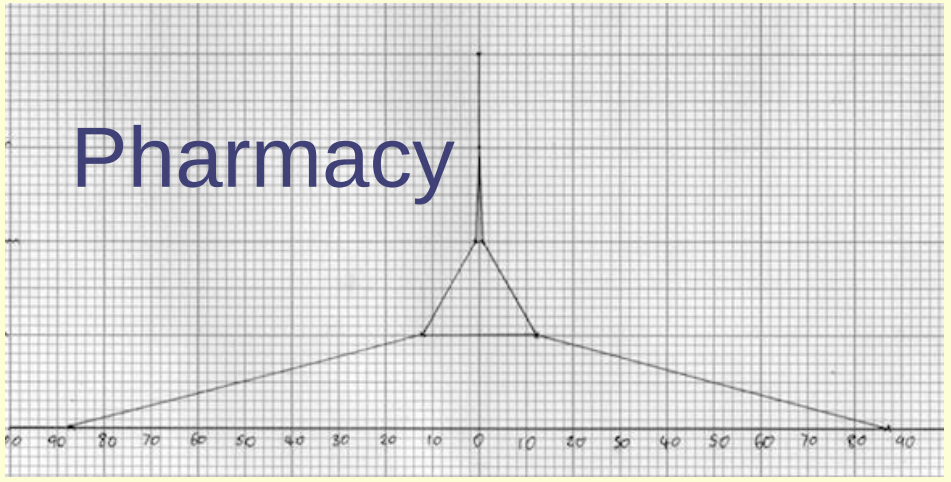
Different Departments….



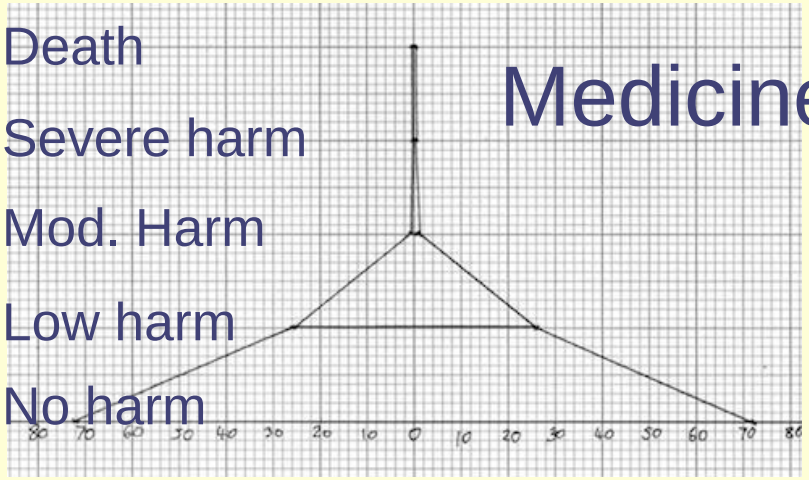


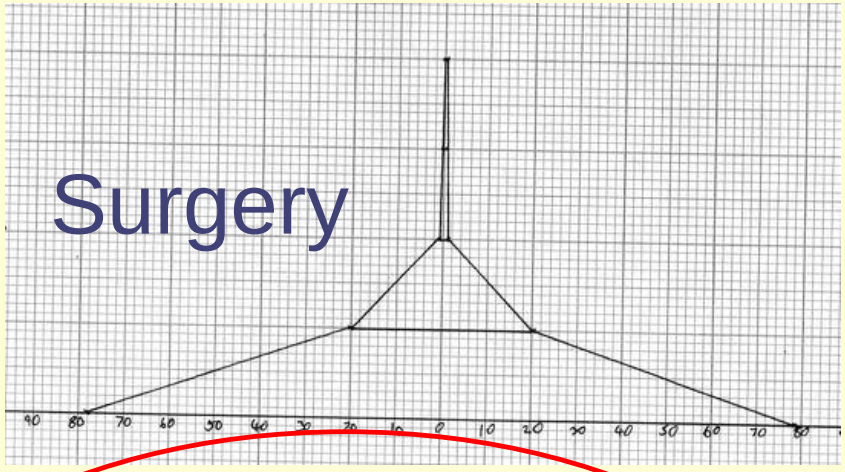
Women and Children's



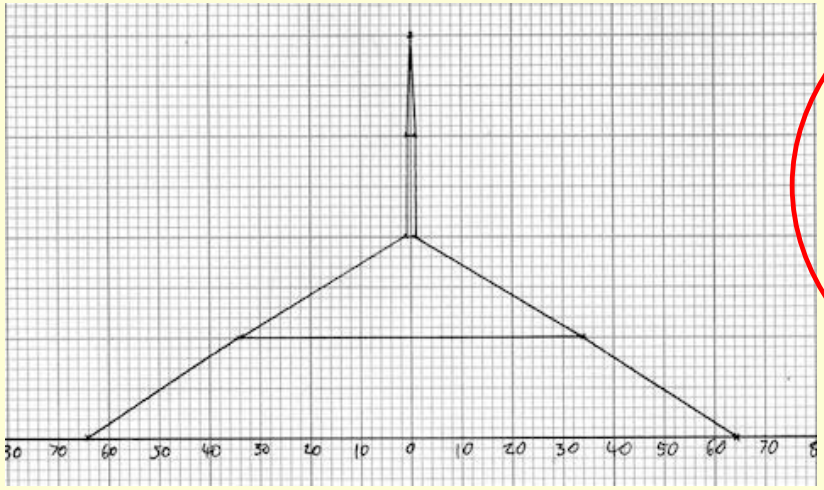


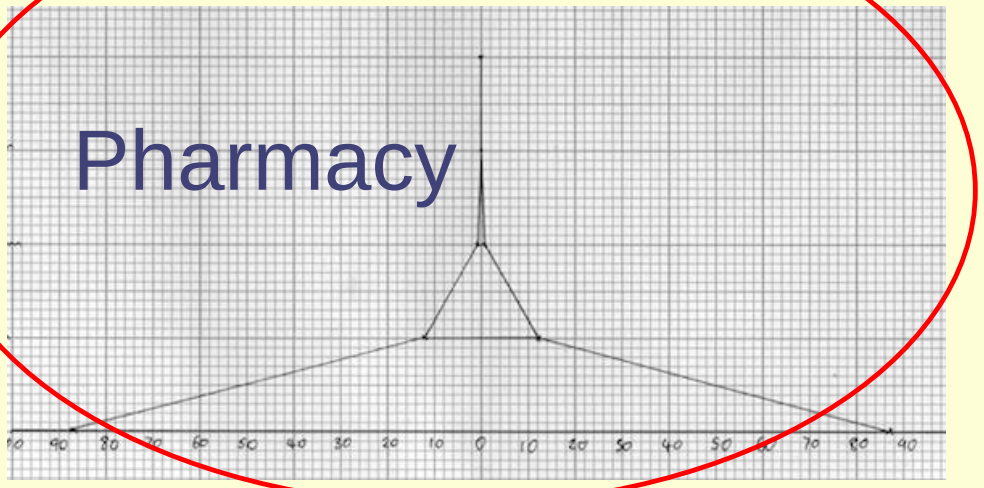
Different Departments….



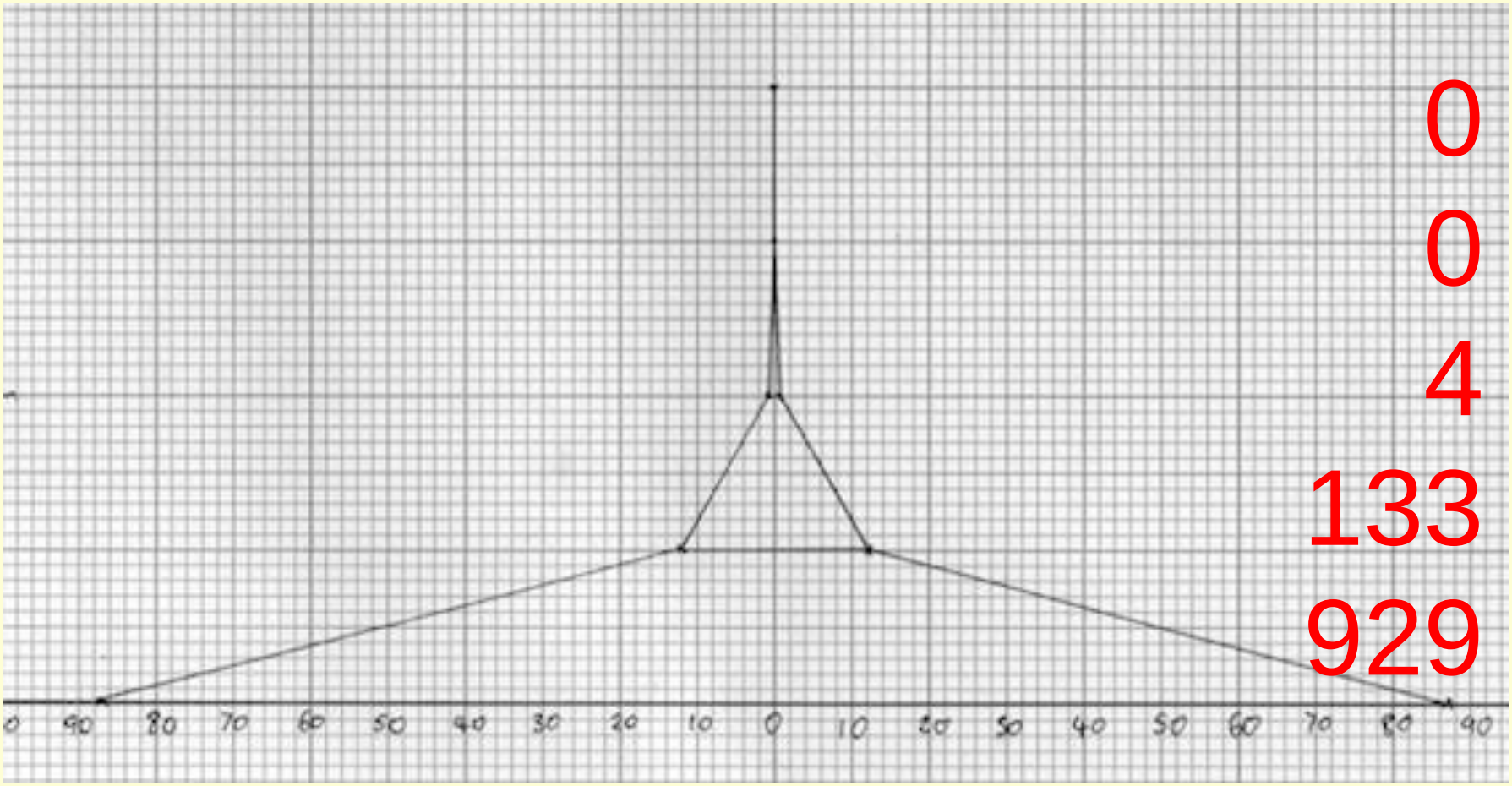


Women and Children's

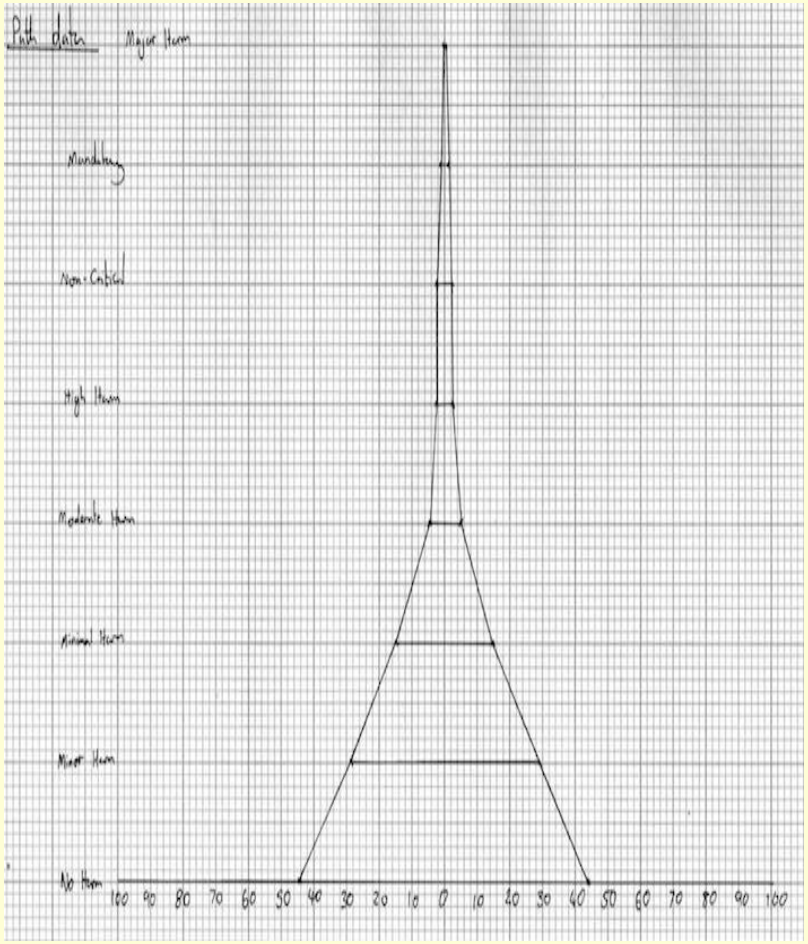




Pharmacy

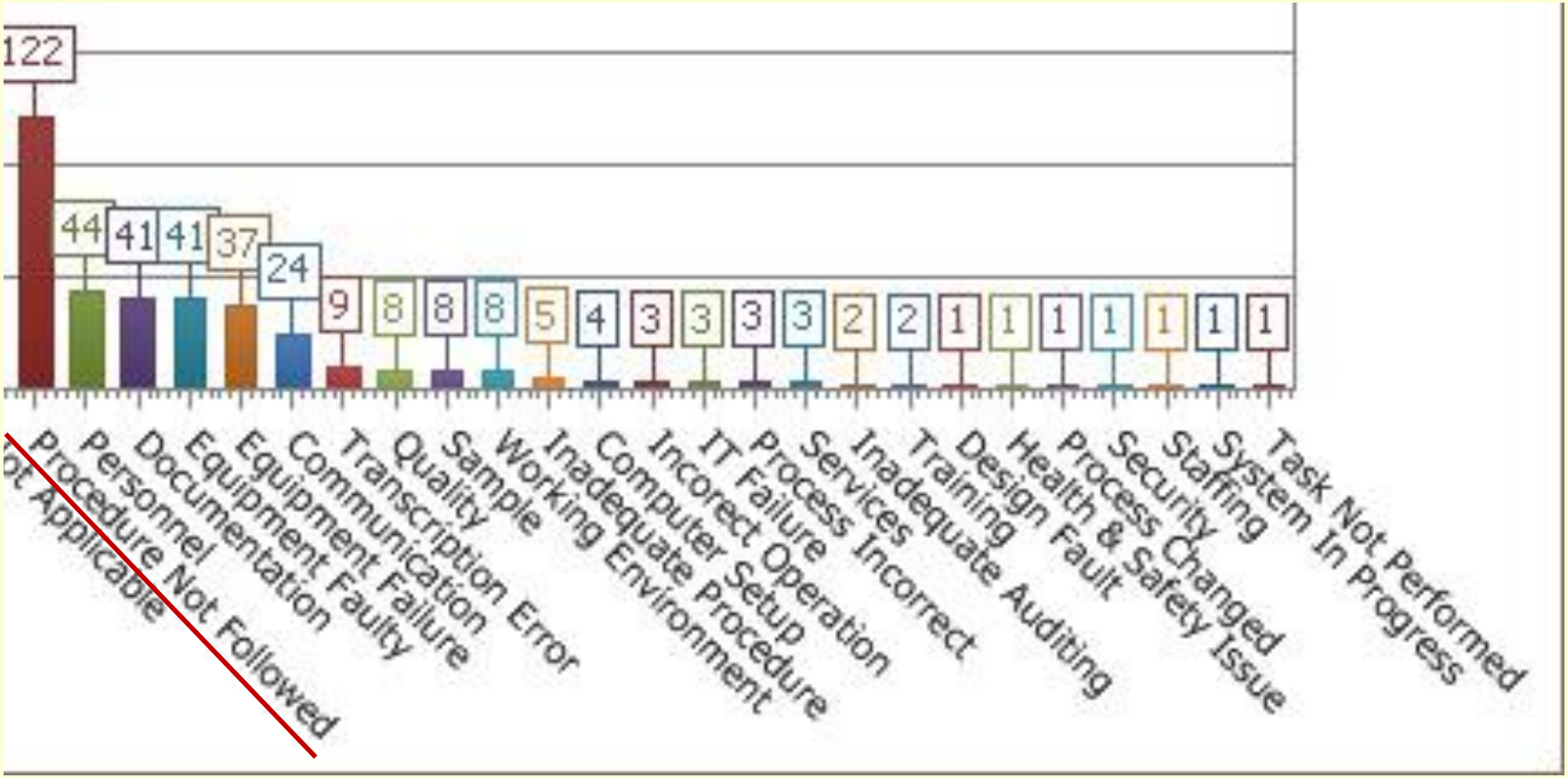


Pathology (Qpulse)



Major harm	4
Mandatory	12
Non Critical	17
High harm	18
Moderate harm	28
Minimal harm	98
Minor harm	190
No harm	293

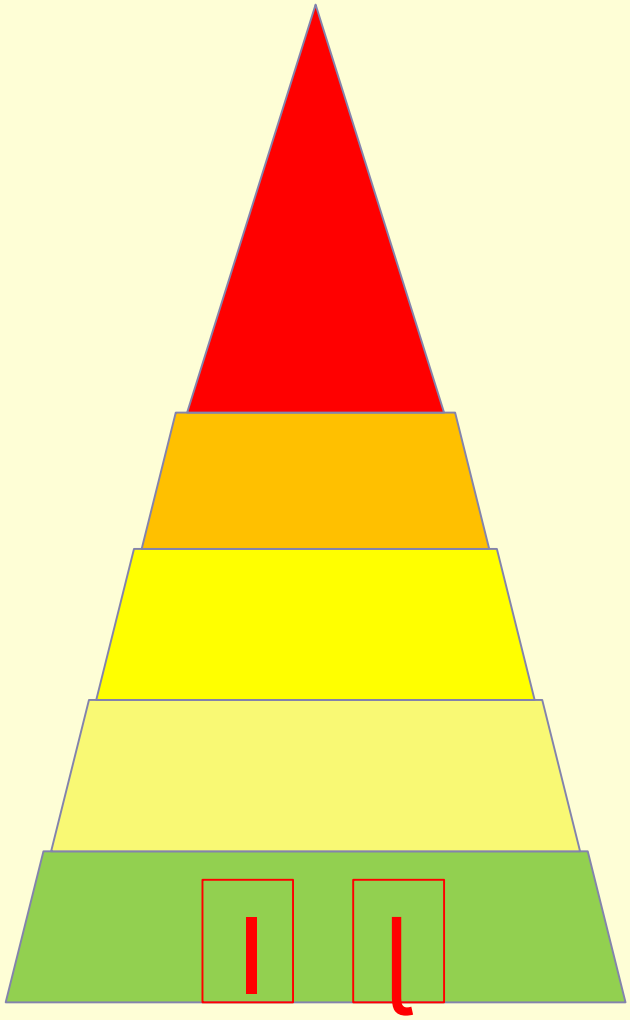
Why?


122
44
41
41
37
24
9
8
8
8
5
4
3
3
3
3
2
2
1
1
1
1
1
1
1
Not Applicable
Procedure Not Followed
Personnel
Documentation
Equipment Faulty
Equipment Failure
Communication Failure
Transcription Error
Quality
Sample
Working Environment
Inadequate Procedure
Computer Setup
Incorect Operation
IT Failure
Process Incorrect
Services Inadequate
Training
Auditing
Design Fault
Health & Safety Issue
Process Changed
Security
Staffing
System In Progress
Task Not Performed

50 Days of rejected samples

Error category	Number of times recorded
Name incorrect / illegible	41
Hospital number incorrect / missing	37
Insufficient sample	32
Date +/- Time incorrect / missing	30
No clinical details provided	28
Duplicate request	25
Date of birth incorrect / missing	24
Haemolysed sample	14
Addressograph incorrectly used	10
No clinician name / signature	9
Sample incorrect (eg. wrong sample tube)	6
No sample sent	6
Incorrect form used	4
Sample taken <30 mins apart	3
No patient label	2
Two people have filled out form	2
Sample leak	1
Tube expired	1
Patient not admitted on computer	1
Total number or errors	**276**

Henrick Accident pyramid



30 day Mortality

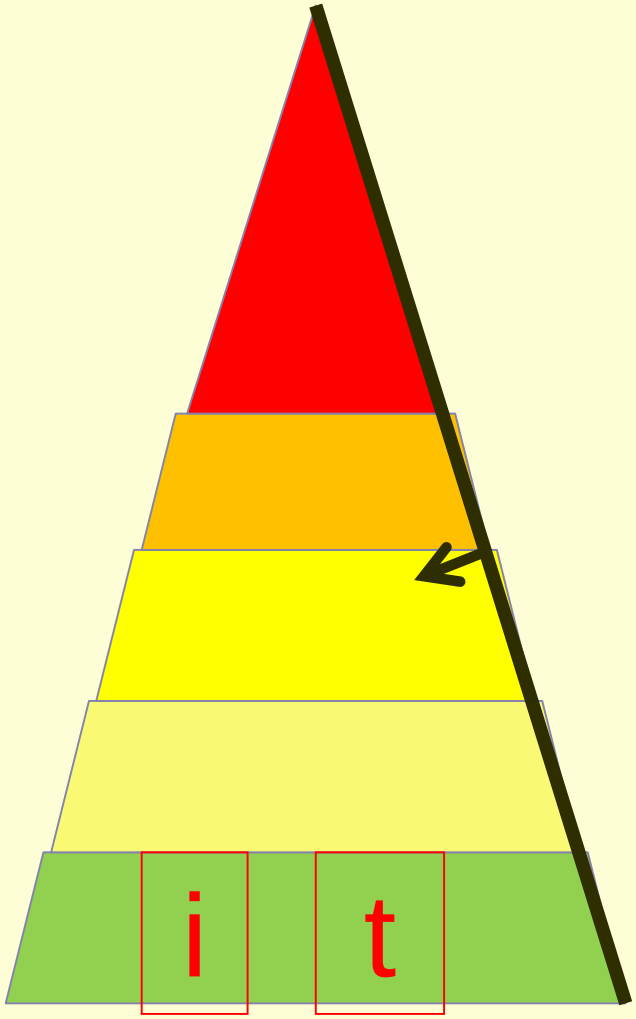
Serious Morbidity lowering survival

Moderate Morbidity

Relatively minor morbidity

‘At risk’ professional behaviour

Henrick Accident Pyramid



30 day Mortality

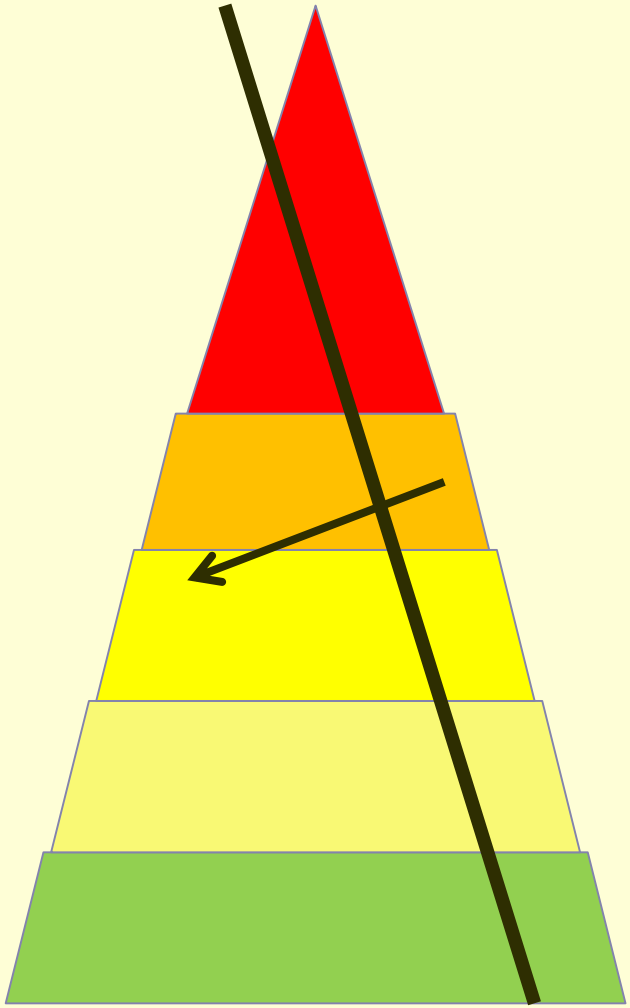
Serious Morbidity lowering survival

Moderate Morbidity

Relatively minor morbidity

‘At risk’ professional behaviour

Henrick Accident pyramid



30 day Mortality

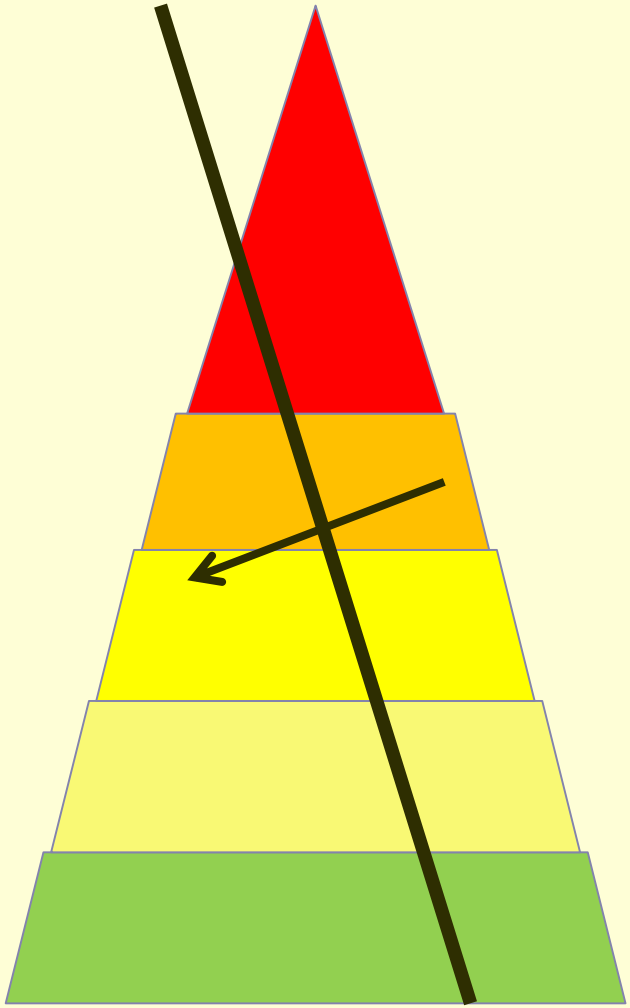
Serious Morbidity lowering survival

Moderate Morbidity

Relatively minor morbidity

‘At risk’ professional behaviour

Henrick Accident pyramid



30 day Mortality

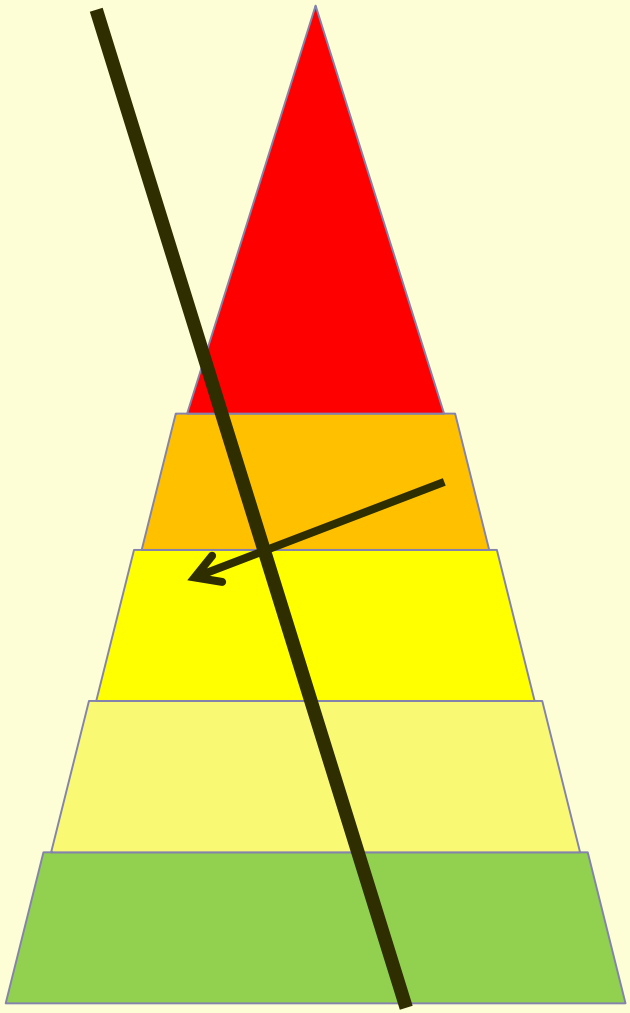
Serious Morbidity lowering survival

Moderate Morbidity

Relatively minor morbidity

‘At risk’ professional behaviour

Henrick Accident pyramid



30 day Mortality

Serious Morbidity lowering survival

Moderate Morbidity

Relatively minor morbidity

‘At risk’ professional behaviour

Progress

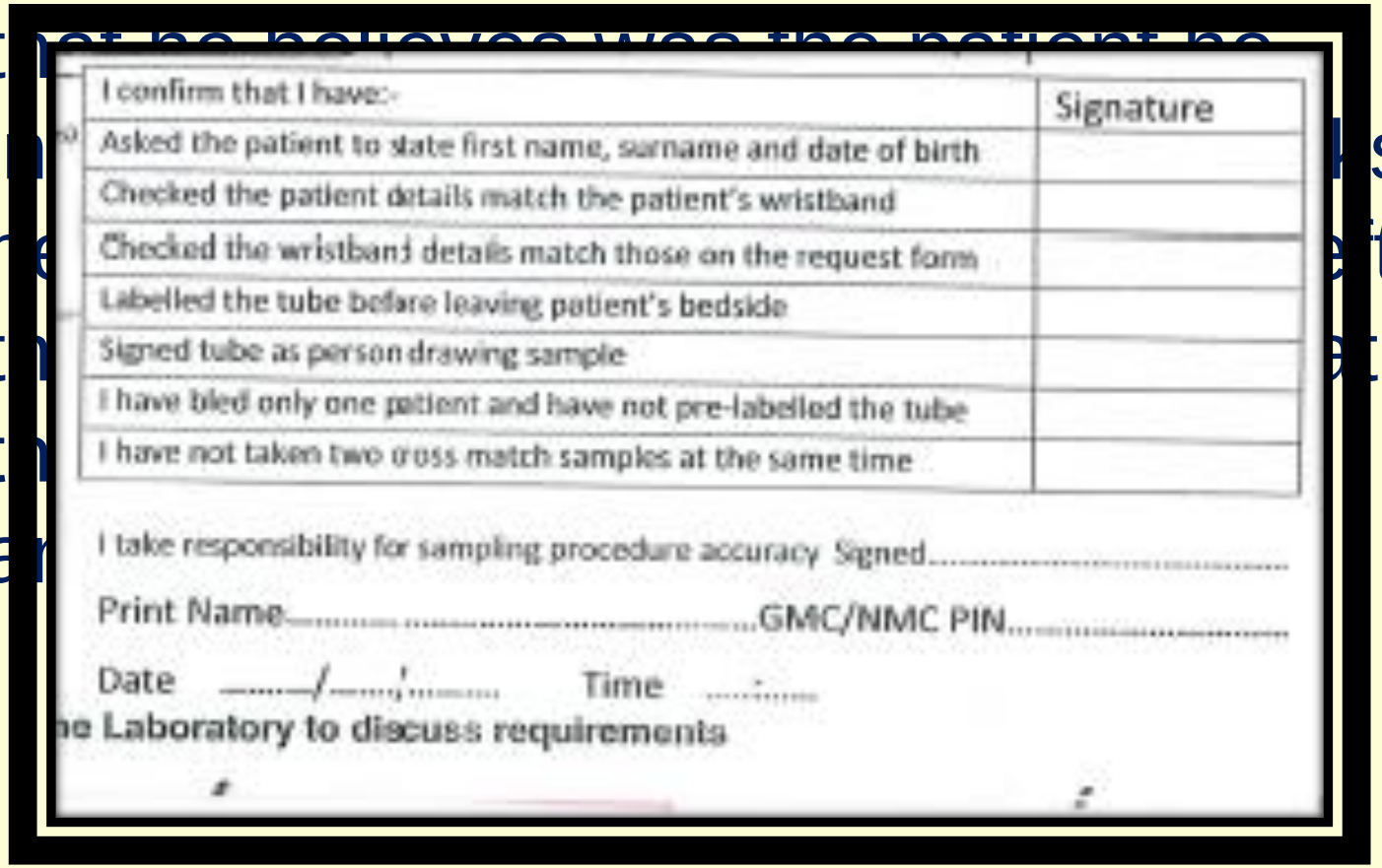
- Improvements seen with new form, threats and retraining policy
- WBITs still happening but less frequent

WBIT example

- A Dr went to the bedside of the patient that he believes was the patient he intended to bleed, he did no ID checks, he did not have a request form, he left the patient and labelled the sample at the nurses' station with the notes of another patient.

WBIT example

- A Dr went to the bedside of the patient



I confirm that I have:-	Signature
Asked the patient to state first name, surname and date of birth	
Checked the patient details match the patient's wristband	
Checked the wristband details match those on the request form	
Labelled the tube before leaving patient's bedside	
Signed tube as person drawing sample	
I have bled only one patient and have not pre-labelled the tube	
I have not taken two cross match samples at the same time	

I take responsibility for sampling procedure accuracy Signed.....

Print Name.....GMC/NMC PIN.....

Date ...../...../..... Time .....:.....

...e Laboratory to discuss requirements

WBIT example 2

- Specialist Trainee
- Lab noticed change in blood group from O pos to A pos compared with history
- Individual identified and asked to
  - cooperate with investigation
  - Not take transfusion samples before retraining
- No engagement

WBIT 2

- TPs repeatedly asked for WBIT form & retraining by TPs and Haematologist
- Individual happy that they knew how the mistake was made and not to do it again.
- Also happy not to take transfusion samples
- Rotating to another hospital soon

WBIT 2

- Case brought to HTC meeting
- Plan
  - Contact ES
  - Contact Deanery – ensure retraining at next hospital
- ES meeting -
  - finally WBIT form received!
  - Trainee rotated before retraining

So…

- Clear need to promote meticulous practice
- Hope that vein to vein technology will help in transfusion
- What about all the other areas of NHS practice?

1931

88% of accidents are caused by ‘unsafe act by an individual’

2018

85.5% of the 3230 incidents reported to SHOT were caused by error

Serious Hazards Of Transfusion SHOT 20 YEARS

1931

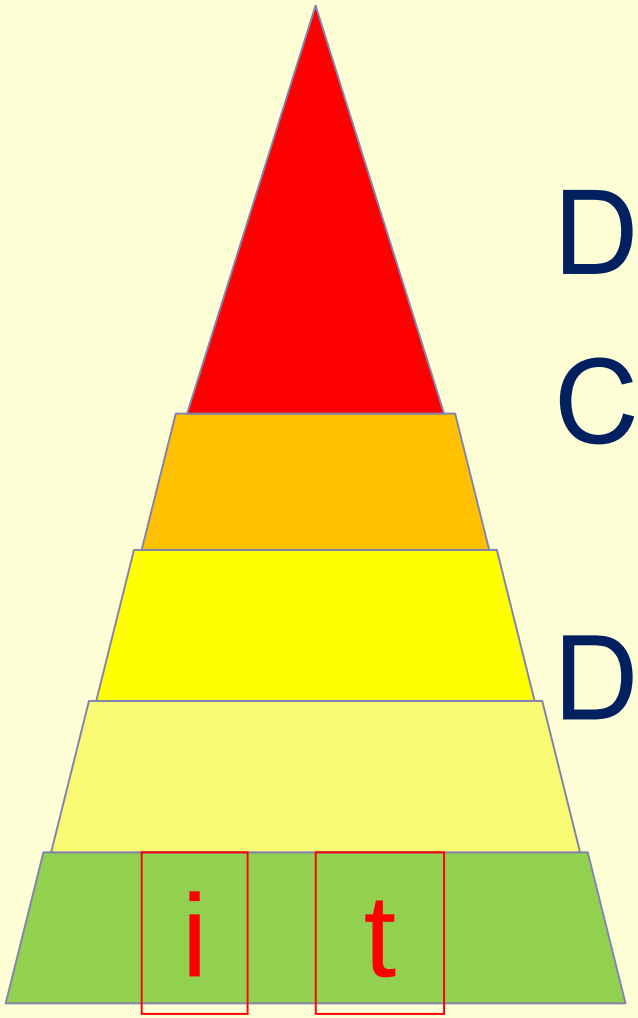
88% of accidents are caused by ‘unsafe act by an individual’

2018

85.5% of the 3230 incidents reported to SHOT were caused by error

Serious Hazards Of Transfusion SHOT 20 YEARS

Summary



Dot the **‘i’** s

Cross the **‘t’** s

Do **‘it’** every time