

Safety in pathology laboratories

IEQAS

October 2005

Healthcare and Safety 1995

- Mainly legal orientation
- No awareness of scale of problem
- Little clinical involvement
- Almost no interventions
- Few national initiatives
- Little research
- Poor care of injured patients

And the size of the problem?

- 10.8% of patients admitted to hospital
- Average of 8.7 extra days in hospital for each adverse event (Range 0 - 60)
- 8 million admissions per year in England
- 856,000 adverse events
- £400 million clinical negligence settlements/year



Charles Vincent 2000

An Organisation with a Memory (DoH England 2000)



- To err is human
- To cover up is unforgivable
- To fail to learn is inexcusable

National Patient Safety Agency

- Part of the UK National Health Service since 2001
- Collects confidential national data on medical errors and safety incidents
- Covers England and Wales (53 million population)
- Issues alerts and notices to hospitals and primary care about safer practice
- Works on designing safer systems of healthcare
- Is not a regulatory or investigative body

National Patient Safety Agency

- Its primary aim is to make the NHS a safety conscious organisation like other high risk industries such as offshore oil production, nuclear power and aviation
- In other words to change the culture of the service and its entire staff



THE NPSA NRLS



LRMS
TRUSTS

PUBLIC
E-FORM



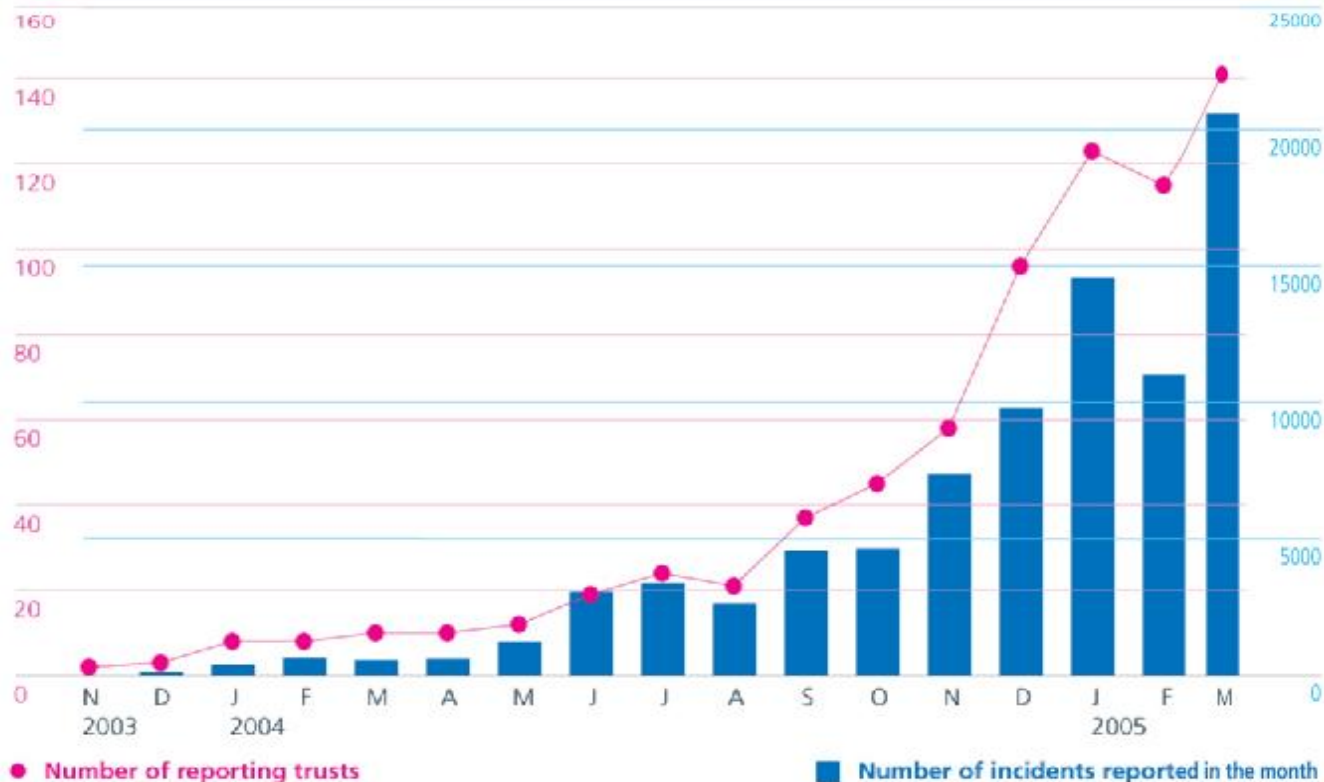
STAFF
E-FORM

POST
E-MAIL

NRLS PROGRESS

- Fully connected to 90% Trusts July 05
- Over 10,000 reports a month
- 70% from acute hospitals
- Approx 5-6% of all admissions

Diagram 1: Roll out of the NRLS: reported incidents and number of reporting trusts, by month



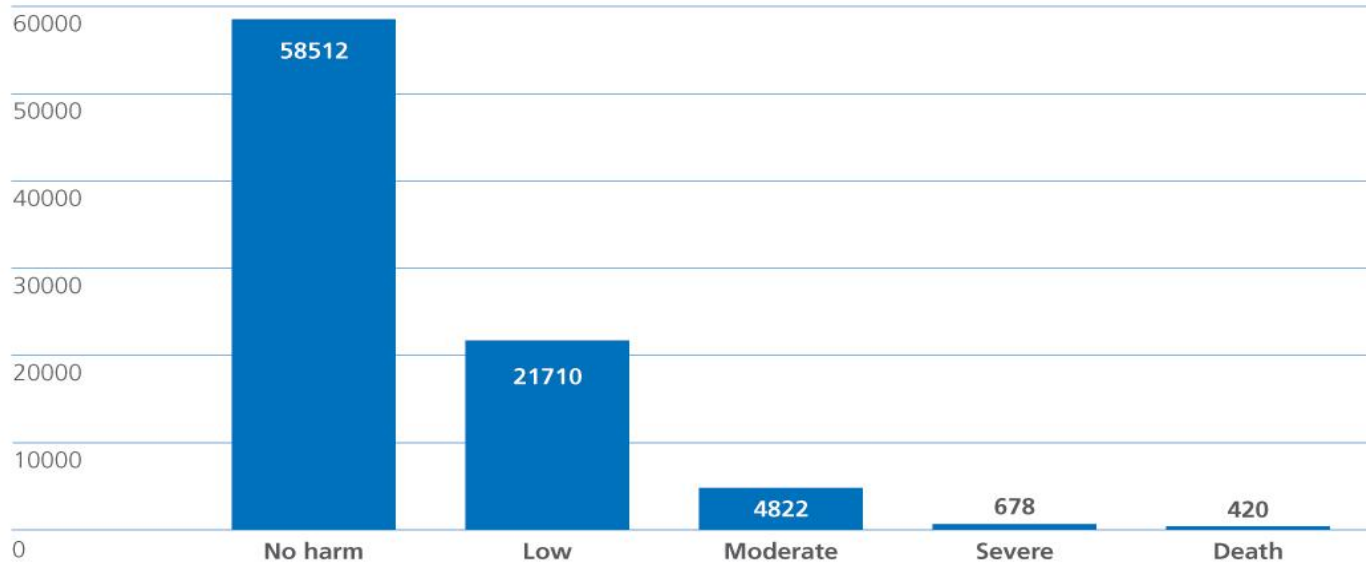
Incidents and Deaths so far from NRLS

- 18 Trusts regularly reporting for >3 months
- Incident rate and death rate calculated using HE stats
- Extrapolating for England
 - 440-700,000 incidents per year
 - 400-1500 deaths per year*

*Based on 47 deaths and takes no account of under reporting

Diagram 2: Degree of harm to patients

Number of patients



Source: Reports in the NRLS database up to 31 March 2005

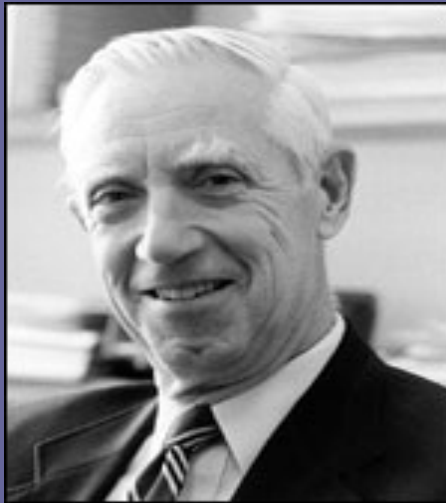
Comparison with widely quoted extrapolations

- Total incidents 850,000 (OWAM)
 - 10% of all episodes
 - Deaths 25,000 (Bristol Inquiry) ? source
 - 35,000 calculable from Vincent 2000 by scaling up from tiny case note review study

Wrong things people do

- Slips and lapses - absent mindedness
 - Habitual task in familiar circumstances
- Mistakes
 - Carefully doing the wrong thing
- Violations
 - Ignoring the rules

Why do people do wrong things?



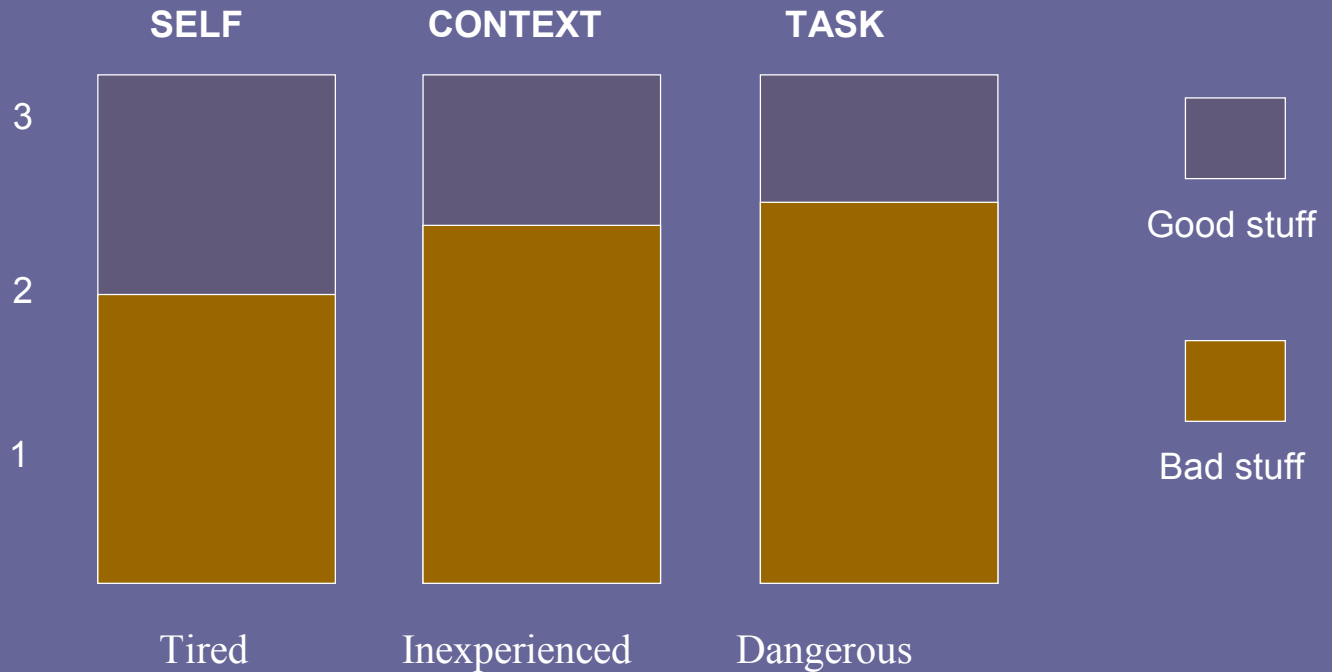
Mostly because the systems tasks and processes they work in are poorly designed

Lucian Leape: 'To err is human'

Systems: Basic design fault



Tasks: Reason's 3 bucket model



Processes: data management



What sort of things go wrong?

- **Communication**
- **Identification**
- **Medication**
- **Delay**

What can go wrong in laboratories?

Answer: a great deal

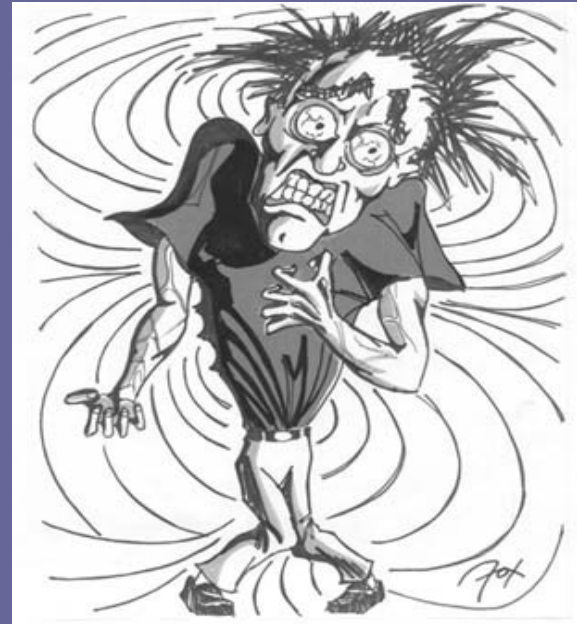
- 2500 reports of problems involving laboratories in NPSA NRLS January –July 2005
- No directly attributable deaths; several near misses in blood transfusion
- Involve pre-analytical, analytical and post analytical phases
- Include delayed diagnosis of leukaemia and malaria
- Include default upstaging of breast cancer through spoiled lymph node biopsies

Recurrent themes in laboratory errors

- Right patient wrong label
- Discordant ID data
- Hybrids and doppelgangers
- Inappropriate/inadequate samples
- Lost/misplaced/mishandled samples
- Wrong tests done
- Right test wrong result
- Delay in reports/communication important results

No harm?

- Repeat colposcopy
- Delayed surgery
- Delayed treatment
- Delayed reassurance
- Repeat visit for sampling



Biggest problem is misidentification



Tuesday 22 December 1998

electronic Telegraph

Boy disabled by wrong blood is awarded £2.4m

By Sally Pook

A CHILD left brain damaged following a mix-up over surnames was awarded £2.4 million damages in the High Court.

James Green was given A rhesus negative, rather than O rhesus positive, red cells to combat neonatal jaundice when he was three days old. He suffered convulsions and heart failure. The blood was intended for another newborn child with the same surname. An exchange transfusion took place too late to stop brain damage that led to cerebral palsy.



Patricia Green with her son

WHO'S WHO IN HOSPITAL

495,306 records: Royal Brompton Hospital PAS



13,157 matches with same name and DOB

And after exclusion of multiple registrations



**2253 (0.5%) cases in which full name
and DOB shared by ≥ 2 registrations**

Misidentification risks vary



Communication

- With hospital clinicians
- With primary care
- With other laboratories
- Within laboratories

So what needs to be done?

- Redesign systems
- Change attitudes and behaviour
- Create an open and fair culture
- Be open about error
- Work as teams not in silos

And what else?

- Understand the science of safety (see education)
- Report and learn (see aviation)
- Design better equipment (see formula 1 racing)
- Design better information systems (see Tesco)
- Design better operating procedures (see Swiss railways)
- Develop feral vigilance (see squirrels)

SAFETY

SO WHY DON'T THE NPSA JUST FIX IT?



Patient Safety in health: the challenge

- Largest industry in the world
- Massive scale
- Diversity and complexity of activities
- Diversity of settings
- Less proceduralised, more 'hands on'
- Causes of error and harm complex

Patient Safety: Progress 1995-2005

- *Mainly legal orientation*
 - Strong safety focus evolving
- *No awareness scale of problem*
 - Widespread awareness of error and harm
- *Little clinical involvement*
 - Increasing involvement of clinicians, managers and researchers
- *Almost no solutions*
 - Dedicated programme of solutions development

Patient Safety: Progress 1995-2005

- *Few national initiatives*
 - National Patient Safety Agency
 - Major initiatives in US, Europe etc
 - World Health Organisation
- *Little research*
 - Dedicated programme of research
- *Poor care of injured patients*
 - Open disclosure policy

It will take time

The aviation industry took 13 years...

But team work and persistence pays off

