

Management of distraction in the Blood Transfusion Laboratory

Richard Haggas
Quality Manager – Specialist Laboratory Medicine
Richard.haggas@leedsth.nhs.uk



Scope

- Why should we worry about distraction?
- What distractions are there in a transfusion lab?
- What effects do they have?
- Strategies for managing distractions

Why worry?

- Air Pilot Distraction

- An examination of accidents and incidents involving pilot distraction in Australia between 1997 and 2004
Australian Transport Safety Bureau 2005
- “...distraction has contributed to a substantial number of aviation safety occurrences. Between 1997 and 2004 there have been over 500 occurrences in which distraction has been identified as a contributing factor...”

Example

- When the windscreen fogged, the pilot's vision was reduced and when he attempted to wipe the windscreen, he was sufficiently distracted to not notice the helicopter descending towards the water.

ATSB Occurrence No: 200000622



Why should we worry about distraction?



- Car Driver Distraction

- Australian National Coroner's Information System (NCIS) survey
- 51 fatal accidents (61 deaths) where the driver was distracted
- Causes
 - **Visual distraction** – e.g. looking away from the road.
 - **Auditory distraction** – e.g. responding to a mobile phone.
 - **Biomechanical (physical) distraction** – e.g. visually searching for a control to manipulate.
 - **Cognitive distraction** – e.g. being 'lost in thought'.

Transfusion Incidents (reports to SHOT)

- 50% of SHOT reports are caused by human error
- Many of these have distraction as a contributory factor
- MHRA (SABRE) reporters state the following reasons as being the most common cause of errors:
 - **Distraction and interruptions causing concentration lapses**
 - Incomplete or ineffective training
 - Rushing or cutting corners due to urgency of request or lack of staffing
 - Overriding IT alerts due to over-familiarity
 - Absent IT alerts due to incomplete validation of LIMS or IT 'bugs'
 - Inappropriate or out of date procedures

Transfusion Incidents (reports to SHOT)

- 2011 SHOT report
 - **Pre transfusion testing errors** “...Most of the errors in this section appear to be ‘slips’. Heavy workload and distractions were cited as mitigating circumstances in a number of cases..”
 - **Data entry errors and component labelling errors** continue to occur frequently. Root cause analysis of many of these errors suggests that staff are often very distracted by noise and interruptions during their work
- Learning points
 - Distractions must be kept to a minimum.

SHOT report example

- Due to the wrong sample being selected for testing, a patient was typed as AB RhD positive and transfused 3 units of red cells. The patient's actual group was A RhD positive...
- The error primarily related to failure to follow the sample checking process as directed by the standard operating procedure (SOP). This failure was probably a result of distractions, including interruptions from staff from other disciplines and phone calls.

What distractions do we have in a transfusion lab?

- Auditory distractions
 - Telephone calls
 - Mobile phones
 - Alarms
 - Blood fridges/freezers
 - Incubator
 - Air tube station
 - Automated analysers
 - Blood Track
 - Plasma thawer
 - Listening to other peoples conversations
 - Being asked questions by other staff
 - Urgent requiring immediate response
 - Trivial / not requiring response
 - Sound of air ambulance landing

What distractions do we have in a transfusion lab?

- Visual distractions
 - Other people in laboratory
 - Looking out of a window
- Environmental / Working condition distractions
 - Laboratory conditions
 - Temperature
 - Humidity
 - High workload – multiple competing tasks
 - End of shift fatigue

What distractions do we have in a transfusion lab?

- Task based distractions
 - Patients with multiple complex requirements
 - At LTH we have identified 39 groups of patients with different special blood requirements
 - Complex tasks
- Individual Factors
 - Medical conditions / illness
 - Cognitive distraction – being ‘lost in thought’

Effect of Interruptions or Distractions

- The primary effect of interruptions or distractions is to break the flow of on-going activities:
 - SOPs;
 - Checklists;
 - Communications (i.e., listening, processing, responding);
 - Problem solving activities.
- The diverted attention leaves staff with the feeling of being rushed and faced with competing tasks.

Effect of Interruptions or Distractions

- When being faced with concurrent task demands, natural human limitations result in performing one task to the detriment of another.
- May result in:
 - Incorrect components being issued
 - Data entry errors
 - Missing or misinterpreting an instruction
 - Omitting an action
 - Experiencing task overload

Strategies for dealing with distractions

- Recognize the potential sources of interruptions and distractions;
 - Understand their effect on the flow of laboratory work
 - Ensure staff are aware of when they may be distracted
 - Ensure staff know when they may be distracting other members of staff
 - Acknowledging that staff may have control over some interruptions / distractions and not over some others.

Sterile cockpit rule

- Within the airline industry they operate the “*sterile cockpit rule*”
 - *“No flight crewmember may engage in, nor may any pilot in command permit any activity during a critical phase of flight which could distract any flight crewmember from the performance of his or her duties or which could interfere in any way with the proper conduct of those duties”*
- For the purpose of this requirement, an “activity” includes :
 - *“..., engaging in **non-essential conversation** within the cockpit and non-essential communication between the cabin and cockpit crews ...”*

In a transfusion lab

- A similar rule in the laboratory could be applied i.e. “Not engaging staff in non-essential conversation when they are performing critical tasks”
 - Booking in requests
 - Editing results
 - Entering results and authorising results
 - Reserving components
 - Labelling components
 - Issuing components

In a transfusion lab

- Making decisions about when it is appropriate to break off from a task
 - Try not to break off in the middle of performing a task
 - E.g. Booking in ten requests
 - Don't break off in the middle of booking in one request
 - Could break off between requests
- After being interrupted when performing a critical task
 - Repeat the task again from a suitably safe starting point
 - Recheck what you have already done
 - If unsure – start again

Other strategies dealing with distractions

- Operating procedure design
 - Try to avoid SOPs that require tasks to be conducted concurrently
 - Use SOPs that require tasks to be conducted sequentially
- When performing processes with checklists
 - Record completion of each task as it is completed
 - Don't do all the tasks and then record completion
- Using barriers
 - IT system designed to reduce effects of distraction
 - Ward order comms (reduces booking in errors)
 - LIMS systems preventing or alerting to issue of non-irradiated, non phenotyped matched...etc...

- The member of staff twice failed to notice that the patient required irradiated red cells
 - At booking in
 - At red cell reservation
- During booking in he had to break off to help other staff deal with a major trauma
- During reservation he was interrupted by a manager asking if he could fix his printer as he wanted to print the new distraction policy

Summary

- Acknowledge that staff can be distracted
- Make sure we all know when we are being distracted
- Make sure we avoid distracting others
 - Is this essential communication?
 - Can I wait until the person is free?
- Make sure tasks are designed to reduce the effects of distraction