

Quantifying Distraction and Interruption in Anaesthetic Practice: a proposed study

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Outline

- Why Is Distraction and Interruption Important?
- Previous Research
- Why Study For The Anaesthetist?
- Proposed Study

- Objective: Advice, Suggestions, Comments

Why Study Distractions and Interruptions?

- Patient safety
- Previous research:
 - Task-Switching
 - Aviation
- Distractions and interruptions are not uncommon:
 - **Distraction:** A break in attention, observed by orientating away from a task or a verbal response
 - **Interruption:** A break in task activity, observed by the cessation of a task
- Complex and dynamic work environment:
 - Human error inevitable
 - Critical incident reporting – variable efforts of reporting

Previous Research: The Surgical Team

Methods

- Observation:
 - 30-50 operations:
 - Urology
 - General surgical
 - Predefined categories
 - Team involvement

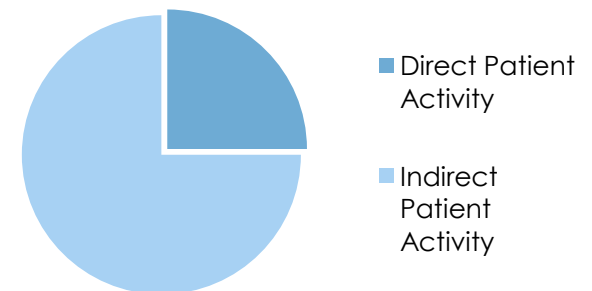
Discussion Points

- High frequency of distractions and interruptions:
 - Bleeps
 - Conversation
 - Environment
 - Equipment
 - Procedure
 - Telephones
- Raise awareness of sources of distraction/interruption:
 - Within specific surgical specialties
 - For team debrief
- Further develop measures of interference

The Anaesthetist

- Attention: Key demand of anaesthetic practice with a range of tasks both mental and practical to be undertaken simultaneously
- Work environment
 - Complex, dynamic, time pressured
 - Varying complexity:
 - Increased action density at induction and emergence of anaesthesia
 - Mental activity continues intra-operatively
 - Unexpected events are characteristic of anaesthesia

Intra-operative Activities



Pilot Study - Aims

1. To measure the **frequency** of distraction and interruption to the anaesthetist
2. To identify the **timing** of distraction and interruption to the anaesthetist
3. To identify the **cause and effect** of distraction and interruption
4. To explore if there are any **strategies already in place** which anaesthetists use to reduce distraction and interruption
5. To **refine and develop the methodology** for studying this topic to inform a future larger study

Pilot Study - Methods

- 4 months
- University teaching hospital
- Consent from consultant anaesthetists
- Approval from theatre managers
- Structured interviews (10)
- Observation
 - 50 anaesthetics:
 - Vascular (6)
 - Orthopaedic (6)
 - General Surgery (6)
 - Obstetrics (6)
 - Gynaecology (6)
 - Urology (6)
 - Emergency (7)
 - Day case (7)

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Task Recording Sheet – Anaesthetic Room

Observation no. __

- Pre-defined categories:
 - Bleeps
 - Case irrelevant communication
 - Communication difficulties
 - Equipment
 - External Staff
 - Procedural
 - Telephones
 - Work environment

- Record:
 - Frequency
 - Timing
 - Cause
 - Effect

Step in Anaesthetic Process	Time	Source of interruption/distraction	Event description
Anaesthetist arrives			
Checking machine			
Drawing up Medications			
Patient arrives			
Cannulation			
Induction			
Insertion of airway device			
Positioning			
Moving to Theatre			

Task recording sheet – Intraoperative

Observation no __

Time (mins)	Intraoperative anaesthetic task	Source of interruption/distraction	Event description
0			
5			
10			

Task Recording Sheet – Postoperative

Observation no __

Step in anaesthetic process	Time	Source of interruption/distraction	Event description
Operation finished			
Emergence from anaesthesia			
Transfer to Recovery			

The Future

- Establish basis for safety related improvements:
 - Training
 - Work environment design
 - Checklists
- Personal responsibility
- Goal: Reduce error
 - Increase patient safety
 - Improve patient outcome

Your Comments Invited On...

- Are distractions always undesirable? Could they be beneficial?
- Is an observer themselves a source of distraction?
- Anaesthetic Workload:
 - Will the effect of a distraction/interruption change with stages of anaesthesia?
 - Will the effect of a distraction/interruption change with the experience of the anaesthetist?
- Method of Recording

Thank-You

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