



# Human Factors in Patient Safety in Surgery and Emergency Medicine

RCSI DEVELOPING HEALTHCARE LEADERS WHO MAKE A DIFFERENCE WORLDWIDE

# Human Factors in Patient Safety Training at RCSI



## Introduction

It has been estimated that only 25% of the important events which occur during a surgical procedure are related to manual or technical skills and that 75% relate to human factors such as decision making, communication, team work and leadership (Kohn et al 1999). Other human factors which are important in medicine include self-awareness (i.e. insight), conflict resolution and error management to name a few.

While some individuals seem to be born with these skills, many others can have these skills improved by formal education and training. Although it is unlikely that innate personality can be changed, it is undoubtedly possible to alter certain aspects of behaviour which impact negatively on colleagues and on the team in the work place.

With appropriate training, individuals can improve their personal skills and thus function more effectively as part of the multidisciplinary team in which all doctors work today (Aspegren 1999, Manser 2009, McCulloch et al 2009, Cahan et al 2010).

A programme of training in Human Factors in Patient Safety principles is a mandatory component of surgical, ophthalmology and emergency medicine for trainees at junior and senior levels of training. This programme is assessed at the end of each academic year. An academic degree in the form of the MSc in Human Factors in Patient Safety is also available. In addition, non-consultant-hospital doctors currently not on training programmes have access to a Personal and Professional Development programme in Human Factors in Patient Safety.

## **Training and Assessment Methodology**

Training sessions use a combination of didactic and action-based learning teaching methods. Classes are kept to a maximum of 25 attendees or smaller to allow for simulation and practice. Surgical, Emergency Medicine, Ophthalmology and Radiology trainees attend sessions together at which stimulates interdisciplinary communication. Sessions are facilitated by a psychologists and medical specialist/educationalist. Each trainee attends two to three full day sessions per year, depending on year of training. Objective Structured Clinical Examinations (OSCE) are held at the end of each of the first two years. Marks for attendance and OSCE marks are significant components of the annual assessment necessary to permit progression through the training programmes.

## **PGDiploma/MSc in Human Factors in Patient Safety**

A new interprofessional RCSI/NUI PGDiploma/MSc programme was launched in 2016 in RCSI for all health professionals working in acute hospitals. Credits will be awarded for the satisfactory completion online blended learning assignments in addition a research dissertation. Further details can be found on the RCSI website.

## **Continuous Professional Development Programme**

Non-consultant hospital doctors who are employed with the Health Services Executive (HSE) are eligible to attend professional development workshops on topics related to Human Factors in Patient Safety.

## **References**

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## **Summary Curriculum Table**

Level	Module Title	
Bootcamp*	Introduction to human factors and non-technical Skills Consent	
Year 1	Error Risk and Safety in Hospital Practice ** Talking to Patients and Relatives Professional Interactions <sup>R</sup>	
Year 2	Managing Stress <sup>R</sup> Crisis Resource Management in Trauma A <sup>0</sup> Crisis Resource Management in Trauma B	
Specialty/SpR Yrs 3-6  (Four year cycle)	Specialty specific Simulation training– One per year:  Sim1: Managing Teams Sim2: Managing Adverse Events Sim3: Decision making Sim4: Leading Teams ***  Workshops: One per year.  Leadership (Emotional Intelligence) <sup>R</sup> 21st Century Professionalism <sup>R</sup> Safety Management Systems <sup>R</sup> Advanced Communication: Advocacy and Negotiation	
7/8	Cycle 1 Train the Trainer Expert performance	Cycle 2 Healthcare Management: Preparation for Consultant Practice Presentation and Interview skills

- \* Surgical trainees only
- \*\*Online learning programme only
- \*\*\* Not required by all surgical specialities
- <sup>R</sup> Radiology trainees attend
- <sup>0</sup> Ophthalmology trainees do not attend

# Surgery and Emergency Medicine Human Factors training programme

## Curriculum Outline

### Surgical Bootcamp

1. **Human Factors and non-technical skills:** Introduction to high-fidelity simulation and the impact non-technical skills on patient outcomes
2. **Consent:** Principles of informed consent

### Year One

1. **Error and safety in hospital practice:** Introduction to the human factors approach to human and system performance and application to healthcare delivery.
2. **Talking to patients and relatives:** Strategies for effective communication and managing challenging situations.
3. **Professional Interactions:** The skills of good negotiation with colleagues. Handover, Bullying.

### Year Two

4. **Managing Stress:** Recognition of stress and strategies to cope and enhance well-being. Introduction to Schwarz Rounds.
5. **Trauma CRM 1:** Principles of crisis management and teamwork.
6. **Trauma CRM 2:** Principles of crisis management and communication with patients and relatives.

## Years Three to Six.

### Specialty Specific HF Simulation

**Sim 1: Managing Teams /MASCOT 2 :** Multidisciplinary crisis resource management simulation training in the emergency department.

**Sim 2: Managing Adverse Events:** Recovery from error, disclosure, Critical Incident investigations.

**Sim 3: Decision-making:** Understanding decision strategies, biases and heuristics in decision making, situation awareness.

**Sim 4: Evaluating Non-Technical skills and performance:** Self-assessment in the workplace, team-working and speaking up.

### Human Factors topics (one per year and two in year six)

**Spr Topic 1: Leadership:** Leading with emotional intelligence (EI), assessment of EI and relevance to high performing teams.

**Spr Topic 2: 21<sup>st</sup> Century Professionalism:** Culture and behaviour, compassion and empathy, clinical governance.

**Spr Topic 3: Safety Management Systems :** Evaluating and designing quality improvement processes.

**Spr Topic 4: Advanced communication:** Shared decision-making, BBN, MI, End of Life care.

**SpR Topic 5: Bias and Diversity training:** [text here](#)

## Years Seven and Eight

### Cycle one

19. **Leading in Acute Events:** CRM principles of leadership

20. **Train the trainer:** Educational theories and adult learning. Skills of giving effective feedback

### Cycle two

21. **Healthcare Management : Preparation for Consultant Practice:**

Working as a consultant in the Irish health service

22. **Presentation and interviewing skills:** Presenting oneself at consultant interviews