

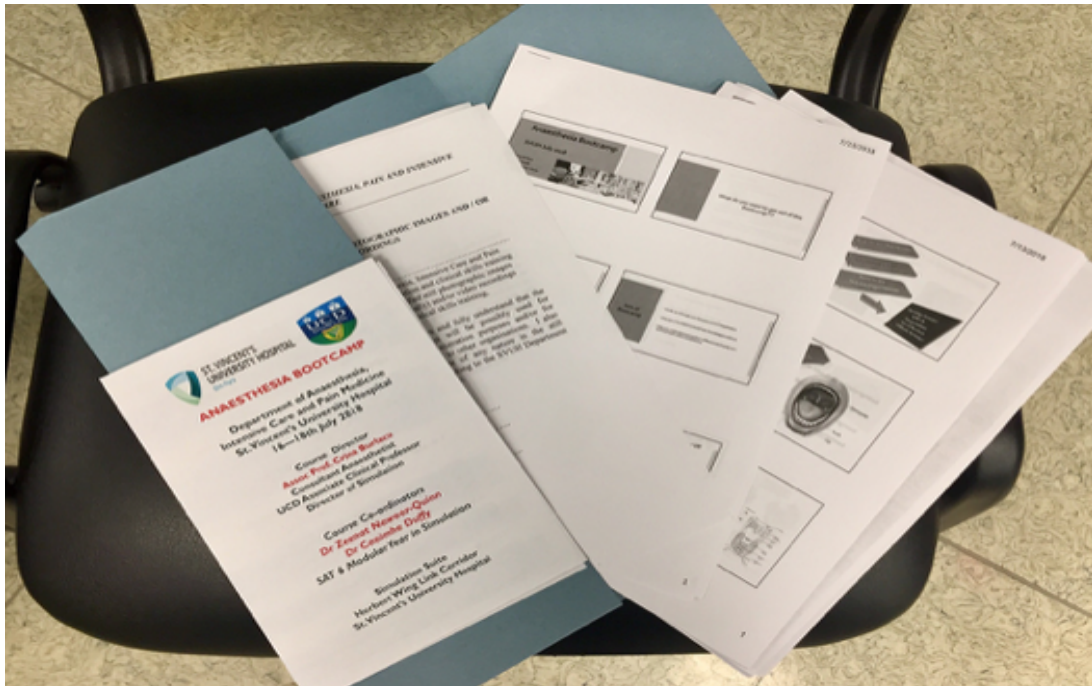
## **Bootcamp Program**

The Anaesthesia Bootcamp is an intensive 3-day simulation-based course that was launched in St Vincent's University Hospital in July 2018. The course was specifically designed to guide novice trainees during their first introduction to anaesthesia, creating a framework for them to further expand their technical and non-technical skills in anaesthesia.

The first intake of participants included five SAT1 trainees, two Emergency Department (ED) trainees who joined the Anaesthesia Department for a six-month period as part of their ED Training Scheme and three newly qualified Anaesthetic Nurses.

The Bootcamp comprised of interactive lectures, workshops and simulated scenarios; all designed to give the novice anaesthetic trainee a grounding in the main aspects of anaesthesia while directing them towards future milestones, for example, initial assessment of competence. The learning objectives included: understanding basic anaesthetic techniques, airway management, performing a preoperative anaesthetic assessment, anaesthetic machine check as per the Association of Anaesthetists of Great Britain and Ireland (AAGBI) Guidelines, medication preparation and assessing patients in the post-operative environment. High-Fidelity Simulated scenarios were designed to allow the trainee to consolidate knowledge and skills gained in the interactive lectures and workshops into crisis resource management of critical incidents in a simulated environment. At the end of the Anaesthesia Bootcamp programme, trainees took part in an MCQ for immediate post-training evaluation.

The aim of this bootcamp program was to better prepare our trainees for the beginning of their clinical rotation and lay the fundamental principles on which further knowledge and skills could be built during their clinical training.



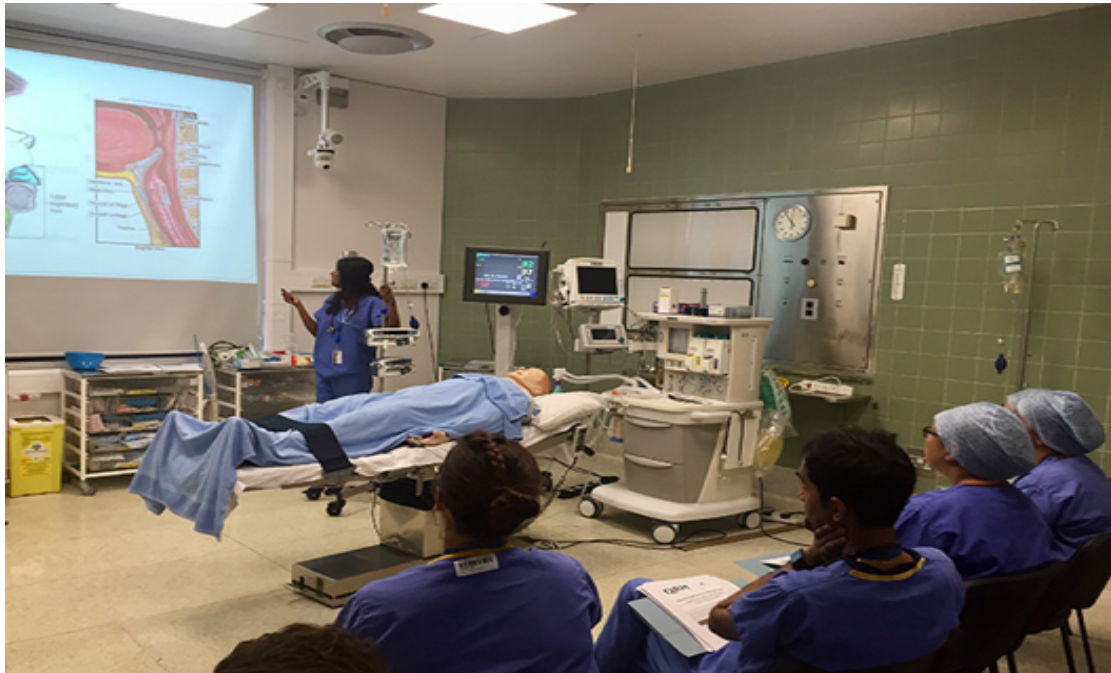
We are delighted to provide the framework that we used in our bootcamp for its implementation locally in other hospitals across the country. Please find attached a copy of the following in the folder:

- ✓ Anaesthesia Bootcamp Timetable for Faculty in Excel Format
- ✓ Anaesthesia Bootcamp Timetable for Trainees in Word Format
- ✓ Bootcamp Faculty/Personnel
- ✓ Bootcamp Equipment Breakdown
- ✓ Lectures
- ✓ Simulation scenarios
- ✓ MCQ paper & Evaluation form
- ✓ Supporting documents (QRH handbook and AAGBI protocols)

The layout of the program was kept in the same order on all three days. We started with two didactic interactive lectures, followed by three skills workshops and full-scale simulated scenarios. The Simulation Fellows delivered all lectures on this course. They were in PowerPoint format; a projector and a screen were both available in the simulation room. Workshops were led by the two Sim Fellows with assistance from the Anaesthesia Clinical Nurse Facilitator and Clinical Nurse Manager in gathering and setting up the equipment. Each sim scenario was run by a sim fellow on the console, a sim fellow in the simulation room, two trainees, and one of the three anaesthetic nurses on the course. The Clinical Facilitator supervised the anaesthetic nurses throughout the course.

### **DAY 1: Airway management.**

After a short introduction and pre-course MCQ, we gave a very comprehensive lecture on airway management and the difficult airway society (DAS) guidelines.



This was followed by the airway workshops where trainees were split into 2 groups for workshop 1 and 2. The whole group then attended workshop 3 together. Below is a list of equipment that were used in each:

WORKSHOP 1	WORKSHOP 2	WORKSHOP 3
Head Trainer	Head Trainer	FONA Trainer
Nasal prongs	<b>Endotracheal tubes:</b>	Scalpel
Simple facemask	• Classic	Bougie
Venturi facemask	• Reinforced	Size 6 ETT
C-Circuit	• RAE tubes	
Ambu bag	<b>Laryngoscopes:</b>	<b>OTHERS:</b>
Nasopharyngeal airway	• MAC	3 tables
Oropharyngeal airway	• McGrath	Gel spray
Supraglottic devices (LMAs)	Bougie	Syringes
	AMBU Scope	Tape/Tie

In addition, we set up a difficult airway trolley specifically for simulation training. The 4 drawers on the trolley were arranged with equipment according to the DAS guidelines with drawer 1 containing only equipment used in plan A, drawer 2 plan B, and so forth. We also provided a laminated DAS guideline at each workshop.



There was a 30-minute break between the workshops and simulated scenarios. The hospital canteen provided tea, coffee, scones and fruits, and the catering request was kindly arranged by the Anaesthesia secretary.

### **SIM Demo**

This session was a demonstration as the majority of trainees were taking part in simulation for the first time. We talked them through the SimMan 3G manikin and the monitors. We conducted a short scenario demonstrating induction of general anaesthesia and intubation of the manikin. It was kept simple and straightforward to allow trainees to understand basic functions of the manikin.

### **SIM 1: An unanticipated difficult airway scenario.**

Here, trainees were expected to put together knowledge and skills learnt in the airway lecture and workshops in the management of a difficult airway.

## **DAY 2**

### **Lecture 1: Peri-operative management of patients.**



It consisted of pre-operative patient evaluation as well as intraoperative and postoperative patient monitoring and care. Pre-operative evaluation, including assessment of operative risks and ASA status, were also discussed in the lecture.

### **Lecture 2: Anaesthetic Emergencies.**

In this lecture, the AAGBI Quick Reference Handbook was used for reference. We picked three topics, namely bronchospasm, hypoxia and anaphylaxis for discussion with some case scenarios.

### **Workshop 1: Anaesthetic machine check.**

The departmental clinical engineer and clinical nurse manager in Anaesthetics gave a practical demonstration on how to perform an anaesthetic machine check. All adjuncts and equipment on the anaesthetic machine were as per AAGBI guidelines and propped similar to the theatre environment.



### **Workshop 2: Drug preparation in theatre.**

We used expired drugs from theatre. Trainees were taught on how to reconstitute drugs where required and appropriately labelling drug syringes particularly where different drug concentration may be used. Minimising drug errors was the focus of this workshop. We also emphasised on avoiding cross contamination between patients, the need to discard unused drugs at the end of the list and safe disposition of MDA drugs. The clinical facilitator also spoke about changing Bee-lines out-of-hours, password for altering an epidural prescription and PCA prescription.

### **Workshop 3: Pre-op assessment and PACU**

This workshop was primarily based on pre-operative assessment where we provided a sample of the pre-operative anaesthetic assessment sheet used in SVUH for discussion.

### **SIM 2: Drug Error**

This was a drug error scenario where there was a mixed up of suxamethonium and fentanyl. Take home messages for trainees from this scenario were vigilance at all times, psychological safety for juniors, reporting errors and encouragement of local feedback.

### **SIM 3: Anaphylaxis**

This scenario was on management of anaphylactic shock under general anaesthetic. We encouraged trainees to use AAGBI guidelines and protocols where available in the management of crises in theatre.



### **DAY 3**

The lectures focused on human factors and crisis resource management. Multiple videos were used in order to illustrate these points, such as the Elaine Bromiley video. We highlighted the importance of non-technical skills in addition to technical skills in order to ensure safety of patients and reduce risks involved in clinical practice. Lack of non-technical skills such as situation awareness, decision-making, teamwork, communication and leadership are often the cause of system

failures. It is important that trainees are introduced to this concept from an early stage so that they understand the value of building a good team.

### Workshops 1 and 2:

VASCULAR ACCESS	NEURAXIAL TECHNIQUE
Central Line Trainer	2 Neuraxial Trainers
Red And Blue Colouring	Spinal Kit
Central Line Kit	Epidural Kit
Chloroprep	
Ultrasound Machine	<b>OTHERS:</b>
	Sharps Disposal Bin

In these workshops, trainees were split into 2 groups for workshop 1 and 2 while the whole group attended workshop 3 together (similar to day 1). The workshops were set up such that the trainee performed the procedure following a faculty demonstration and the anaesthetic nurses took turn to assist the trainee as they would in theatre.



### Workshop 3: Refreshing BLS and ACLS Skills

This workshop was run by an ACLS instructor from SVUH. She brought BLS resus manikins and AEDs from the Resuscitation Department in SVUH. All participants had a chance to refresh their BLS skills. Last year, there were some significant

changes made to the resus trolleys in SVUH and the resuscitation committee were also introducing a new defibrillator and phasing out the old ones. The workshop was a great opportunity to show trainees the new resuscitation trolleys and defibrillator. Trainees were taught how to perform defibrillation, cardioversion and pacing on the new defibrillator. We finished off the workshop by providing rhythms strips from the defibrillator and discussed management of some arrhythmias.

#### **SIM 4: Hypoxia**

The last SIM session was management of hypoxia of a patient post GA in PACU. Trainees were expected to consider common causes of hypoxia in PACU and if necessary, refer to the AAGBI Quick Reference Handbook for management of hypoxia.

#### **MCQs and Survey**

Trainees then conducted a post-course MCQ; the scores were compared to the pre-course MCQ. They also completed a survey and feedback forms at the end of the bootcamp.

#### **Faculty**

This course was led by:

Associate Professor, Dr Crina Burlacu, Course Director and Co-Ordinator  
Dr Zeenat Nawoor-Quinn, SAT6 SpR, Modular Year in Simulation  
Dr Caoimhe Duffy, SAT6 SpR, Modular Year in Simulation

Special thanks:

Nwabueze Nwankire, Peri-Operative Clinical Facilitator  
Lucinda Sugars, CNM, Anaesthetics  
Lucy O'Connell, CNM, Anaesthetics  
Derek Farrell, Clinical Engineer  
Patricia Flynn, ACLS Instructor  
Louise McNicholas, Secretary, Department of Anaesthesia