



# ST5.2 Phase 2: Cardiothoracic Intensive Care and Critical Conditions

Ashorne Hill, Leamington Spa

29<sup>th</sup> – 30<sup>th</sup> April 2024

## Programme

### Introduction

This is a new course covering cardiothoracic intensive care and critical conditions aimed at national trainees in the UK and Ireland in their ST4-6 years and equivalent level Trust Appointed Doctors members. It uses a well established course 'Beyond BASIC Cardiac ICU' to deliver content on advanced critical care in cardiac surgery. It also has additional content covering thoracic surgical intensive care and critical conditions to align with the ISCP cardiothoracic surgery curriculum (4 August 2021), covering most aspects in the curriculum relating to this area.

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## Course Directors

**Neil Cartwright**

Consultant Cardiac Surgeon, Sheffield Teaching Hospitals

**Jon Rosser**

Consultant in Cardiothoracic Anaesthesia and CICU, Sheffield Teaching Hospitals

Thanks to our industry partners:

**Medtronic**



**Ambu**

Faculty List	
Elizabeth Belcher	Consultant Thoracic Surgeon Oxford University Hospitals
Michael Shackcloth	Consultant Thoracic Surgeon Liverpool Heart and Chest
Mahmoud Loubani	Consultant Cardiothoracic Surgeon Castle Hill Hospital
Annabel Sharkey	Consultant Thoracic Surgeon Wythenshawe Hospital
Jack Satchwell	Senior Clinical Perfusion Scientist Sheffield Teaching Hospitals
Venkateswaran Jambunathan	Senior Anaesthesia Fellow Sheffield Teaching Hospitals
Rebecca Friar	Senior Clinical Perfusion Scientist Sheffield Teaching Hospitals
John Bramwell	Consultant in Cardiothoracic Anaesthesia and CICU Sheffield Teaching Hospitals



**Beyond BASIC Cardiac ICU** is a well established 1.5 day course aimed at specialty trainee level. The course has been running for many years internationally, and consists of clinically based lectures, skills stations and a course manual.

The course lectures are:

Day 1 – Monday, 29th April 2024		
09:00	Registration	
09:15	Introduction	Elizabeth Belcher
09:30	Cardiac operations	Neil Cartwright
10:15	Care of post operative cardiac patients on ICU	Jon Rosser
11:00	Coffee	
11:30	Epicardial pacemakers Cardiopulmonary bypass	John Bramwell
12:15	Lunch	
13:30	Haemodynamic instability	Mahmoud Loubani
14:15	Cardiac tamponade	Jon Rosser
15:00	Coffee	
15:30	Cardiac arrest in the post-op cardiac patient	John Massey
16:15	VA ECMO	Jack Satchwell
17:00	Closing remarks	Elizabeth Belcher

The level of the lectures aligns with the current curriculum and skills needed by a day 1 consultant.

## Day 2 – Tuesday, 30th April 2024

### 08:30 – 12:30

The skills stations will run on the morning of the second day, with delegates rotating through each station as a smaller group for interactive focused sessions. The skills stations are:

1. Pacing workshop – ML
2. ECMO emergencies – JS / JR
3. IABP - JM
4. Thoracic airways management – LO
5. Ventilator basic settings – JB
6. Cerebral protection for aortic arch surgery – NC
7. Tracheostomy simulation – EB / MS

Each skill station has one instructor with 4-5 delegates and runs for 30 minutes.

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### 12:30 Lunch

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**13:30** Thoracic Surgery 1: Ventilation

Michael Shackcloth

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### 14:15 Coffee break

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**14:45** Thoracic Surgery 2: Emergencies and trauma

Annabel Sharkey

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**15:30** Closing Remarks

Elizabeth Belcher

The most recent cardiothoracic surgical curriculum (4 August 2021) has two particular CiPs covered by this course: Manages the unselected surgical take (CiP 4) and Manages patients within the critical care area (CiP 6). The curriculum states that these CiPs should be taught in the early years of training, and this course offers the ideal package of lectures and simulated skills stations to ensure that the curriculum is covered to the right level for all trainees attending. The syllabus highlights the critical conditions that trainees should be able to demonstrate knowledge and understanding of their management in appendix 3 (see below). This course covers critical conditions 2-6, 8 and 9 in detail. Although aspects relevant to aortic dissection (1) and endocarditis (7) are also covered in this course, it is felt beyond the scope of this 2 day course to include the full syllabus relating to these subjects, which are covered in greater detail in other courses.

**Critical Conditions - Cardiothoracic**

Each specialty manages a large number of individual conditions as described in the syllabus. Assessment of a trainee's ability to manage these is through the supervision level decisions made when assessing the shared and specialty-specific CiPs. Each specialty also has a list of critical conditions which are felt to be of significant importance for patient safety and to demonstrate a safe breadth of practice. These critical conditions will be assessed individually by means of WBA which will both provide formative feedback to the trainee and feed into the summative assessment of the AES and ARCP.

To ensure that trainees have the necessary skills in the critical conditions, by certification (the end of phase 3) there should be documented evidence of performance at the level of a day-one consultant to level 4 (*Appropriate for certification*) of the CEX or CBD (see CBD/CEX forms for the full list of levels). Please note that there is no requirement for a certain number of CBDs and CEXs), however.

Trainees must be able to demonstrate knowledge and understanding of the management of the following critical conditions:

1. Aortic dissection
2. Stridor
3. Secondary / tension pneumothorax
4. Cardiac tamponade
5. Acute haemothorax
6. Low cardiac output following Cardiac Surgery
7. Endocarditis-native or prosthetic valve
8. Respiratory failure following Thoracic Surgery
9. Myocardial ischaemia / infarction