

The Faculty of Intensive Care Medicine

ICM Unit Brief

Part 1 Hospital Details

1.1 Hospital name

Surrey and Sussex Healthcare NHS Trust

1.2 Full address (you **must** include postcode)

East Surrey Hospital
Canada Avenue
Redhill
RH1 5RH

1.3 Hospital Telephone number

01737 768 511

Part 2 ICU Department contact details

2.1 Direct telephone number to Department

01737 768 511 ext 1670

2.2 Faculty Tutor name

Dr Alice Myers

2.3 Faculty Tutor Email address

alicemyers@nhs.net

Part 3 Unit Structure

3.1 Number of Beds

17

3.2 Number of admissions

1100

3.3 Percentage of elective vs emergency admissions

62% medical, 16% elective surgical, 22% emergency surgical

3.4 Overview of case mix within the unit

East Surrey hospital has a 17 bed mixed medical and surgical adult intensive care unit. There are 1100 admissions to the unit every year with a large proportion of acutely unwell medical patients. Approximately 36% of patients are mechanically ventilated, more than 30% require renal replacement therapy, and over 40% are admitted with sepsis. Elective admissions mainly derive from major colorectal surgery for cancer or inflammatory bowel disease, and complex ENT surgery.

East Surrey Hospital has a large catchment area, including Gatwick airport and a portion of the M25, looking after a population of approximately 720,000. The hospital has a busy Emergency Department resulting in a large number of unplanned admissions to critical care, both medical and surgical. A substantial number of overseas patients, and patients from outside our catchment area, are frequently brought by ambulance from Gatwick airport. This contributes to the wide range of acute medical pathologies dealt with by our critical care department each year.

The critical care unit was extremely busy during the Covid-19 pandemic and surge capacity was up to 35 level three beds. ICNARC data placed our unit amongst the top 12 comparator units nationally during the first wave (Standardised Mortality Ratio 0.55).

There are twice weekly multidisciplinary team meetings and alternate day microbiology ward rounds. We have monthly senior staff meetings, frequent M&M meetings and regular joint anaesthetic-ICM clinical governance meetings. The service is part of the Surrey Wide Critical Care Network and takes an active part in its activities. The critical care service is supported by 9 ICM consultants, over 70 nursing staff, ICNARC audit nurses and 16 junior doctors.

Our critical care equipment includes Hamilton G5S ventilators, Nikkiso Acquariusphy depart haemofilter machines capable of running renal replacement therapy with heparin and citrate, and several Nasal High Flow Oxygen machines. We are well established in the use of prone positioning and APRV for patients who are difficult to oxygenate. We possess comprehensive ultrasound capabilities with strong links to our ultrasound and echocardiography departments. Our department has a state of the art GE Vivid S70 R2 echocardiography machine with reporting station installed within the ICU, 2 x GE Vivid IQs, and 3 x GE Venue Go's. We assess well over 500 patients a year for haemodynamic status, fluid responsiveness, and valvular pathologies using echocardiography.

We have strong links with St Thomas' Lane Fox REMEO unit, a long term domiciliary ventilation unit and all our consultants hold honorary consultant contracts with St Thomas's hospital to facilitate this. The intensive care unit is in the process of moving to a paperless notes system. As part of this transition, each bedspace has been equipped with an individual computer system.

Critical Care Outreach provides a valuable 24h service 7 days a week. We have a dedicated critical care specialist psychologist, and an ICU follow up clinic is in place for patients to revisit the unit and discuss their stay with consultants and senior nursing staff.

Full support areas for visitors and staff are also available, including a seminar room and an interview room. Our unit has consistently scored highly in Friends and Family surveys.

3.5 Names of Consultants, roles and areas of interest

Name	Role (eg clinical lead, consultant)	Areas of Interest
DR SYED ALI	Intensivist & Anaesthetist	Appraiser
DR MATYAS ANDORKA	Intensivist & Anaesthetist	FUSIC Lung Supervisor FUSIC Heart Mentor
DR RAVI KUMAR	Intensivist & Anaesthetist	EDIC Examiner
DR FIONA LAMB	Intensivist & Anaesthetist	Chair of Resuscitation Committee FUSIC Heart Mentor Medical Examiner
DR CLAIRE MEARNS	Intensivist & Anaesthetist; Clinical Lead for Critical Care	Final FRCA Examiner FUSIC Heart Mentor
DR PATRICK MORGAN	Intensivist & Anaesthetist	FFICM examiner Organ Donation Lead Medical Examiner
DR ALICE MYERS	Intensivist & Anaesthetist; Faculty Tutor for Critical Care	Lead for FUSIC Heart training EDIC Examiner Director for EASY Final FRCA course Director for EASY Primary FRCA course
DR SAMEER RANJAN	Intensivist & Anaesthetist	Lead for critical care digitalisation London Centre Director for EDIC examination
DR THEOPHILUS SAMUELS	Intensivist & Anaesthetist; Lead for ICU Echocardiography fellowship	Lead for Critical Care US & Echocardiography FUSIC Heart Supervisor FUSIC Lung Supervisor FAMUS Supervisor ICNARC lead Statistical advisor Director for EASY FUSIC Heart / BSE Level 1 Course

3.6 Details of research projects being undertaken within the unit

EASY-CCRG (EAsT SurreY Critical Care Research Group) has developed over the last few years due to the combined interest and enthusiasm of the ICU consultant body. Our active weekly journal club has inspired trainees to submit letters for publication in *Thorax* and *Anaesthesia*, and also to carry out various research and quality improvement projects on the intensive care unit (multiple abstracts published in *Critical Care* and *Intensive Care Medicine*). One of our critical care consultants is also a qualified statistician and performs all statistical analyses required for publication of original research.

Peer reviewed publications and research activity

- 2020 (limited due to Covid): 1 peer reviewed case report, plus part of RECOVERY Trial Group

- 2019: 15 abstracts published. 11 trainees and 2 nurses presenting at international conferences.
- 2018: 18 abstracts, 3 letters, 1 review article. Several further articles and case reports have been submitted and are awaiting publication. During 2018, 11 intensive care trainees will have also achieved international presentations following work done in the East Surrey critical care unit.

We have now commenced our first in-house Trust sponsored critical care research study (CRiSIS; ISRCTN 23174569), that is looking at how the heart functions in sepsis using novel methods. The unit has a long history of participating in NIHR portfolio multi-centre studies more recently including: POETICS, TEST-IT, A-STOP, EPIC III, COVID-OR, RECOVERY, GENOMICC.

3.7 How is the unit staffed?

There are 9 consultants in intensive care medicine who take turns in leading the unit on a weekly basis. During normal working hours, the “consultant of the week” is supported by a second consultant intensivist.

There are two tiers of junior doctors working in critical care. 8 doctors with airway skills work on a rolling rota comprised of a mixture of Stage 3 ICM trainees, anaesthetic trainees, and clinical fellows with at least 1 year anaesthetic experience.

The junior tier rota is comprised of 8 doctors who do not have advanced airway management skills but are often experienced medics. 4 core medical trainees and 2 foundation year one doctors spend 4-month placements on ICU. We have two dedicated echocardiography / ultrasound fellows who partake fully in the junior on-call rota.

Out of hours, the 17-bed critical care unit is staffed by one senior tier doctor and one junior tier doctor supported by a consultant intensivist on call.

Critical care doctors work alongside additional RCoA trainees, anaesthetic clinical fellows and specialty doctors working on call for theatres and obstetrics.

Echo / ultrasound fellows are allocated one half day per week for echo / ultrasound training. Trainees at ST5+ are allocated one SPA per 2 weeks in accordance with training requirements. All rotas are EWTD compliant.

Part 4

Training

4.1 Details of training opportunities on the unit

INTENSIVE CARE MEDICINE TRAINING

ESH has ICM training posts available in the following areas:

- Two Stage 3 ICM posts in critical care
- One Stage 1 ICM post in anaesthetics
- One Stage 1 ICM post in acute medicine
- Echo SSY (Special Skills Year) pending approval

Our critical care is GMC approved for ICM training at all levels.

All ICM trainees based in ESH (whether completing a critical care rotation or working in their dual specialty) receive ICM educational supervision and are actively encouraged to attend weekly ICM teaching and journal club.

Stage 3 ICM training opportunities include:

- “Consultant of the Week” step-up experience. Our unit offers the opportunity to spend a full week on ICU acting as lead under the safe supervision and mentorship of experienced ICM consultants. This includes: leading handovers, safety briefs, ward rounds, and MDTs; making decisions regarding admissions and discharges; liaising with nursing staff, site team and exec regarding bed management. Trainees receive support throughout this process with detailed individual feedback. Those trainees who have taken up the opportunity have unanimously found this beneficial and given strongly positive feedback.
- Advanced trainees are encouraged to take on leadership roles and develop both clinical and non-clinical management skills. Time off the unit can be arranged to attend Trust board meetings.
- All ICM trainees will be taken through FUSIC Heart, if not already obtained during their training.
- Advanced trainees can arrange to take part in a 5-day Rapid Process Improvement Workshop, part of the Virginia Mason Institute, to develop their management CV.
- Trainees are expected to take an active role in journal club and teaching.
- Regional ICM teaching takes place at East Surrey Hospital and the advanced trainee would be encouraged to take part in the organisation of this.
- The critical care unit at East Surrey hospital supports the Lane Fox Remeo satellite unit. We have an integrated teaching programme with input from respiratory specialist consultants from St Thomas’ Hospital. Interested trainees have the opportunity to spend time on the Lane Fox satellite unit learning specifically about domiciliary weaning, obesity hypoventilation syndrome, NIV for COPD, neuromuscular disease, etc.

Pre-stage 3 ICM training opportunities:

- All ICM trainees are actively encouraged and supported to attend and present at weekly ICM teaching and journal club. We have strong links with the anaesthetic and AMU departments and all are aware that ICM journal club happens every Wednesday! This is also a good opportunity for local ICM trainees to keep in touch with one another to keep up to date with ICM training news.
- Stage 1 and 2 trainees working in critical care are encouraged to lead ward rounds under supervision
- ICM trainees in acute medicine can expect good exposure to a range of medical pathologies, the opportunity to lead solo ward rounds, and lead procedure clinics.
- The anaesthetic department has over 30 anaesthetic consultants with a wide range of interests and skills. They are an enthusiastic and energetic team who enjoy teaching. Novice anaesthetists can expect to spend a good deal of time working in CEPOD, dealing with emergencies in resus and around the hospital, taking part in paediatric resuscitations, as well as learning the management of elective major colorectal, orthopaedic, ENT and dental cases etc.
- All trainees are encouraged to attend and present at M&M sessions
- Active ICM supervision and mentorship with careers support and advice (with individual support for ARCP preparation)

- Support to prepare for examinations, job applications, interview preparation etc
- Support to carry out QIPs, research, writing up projects for publication or presentation

ECHOCARDIOGRAPHY FELLOWSHIPS

Our critical care unit currently can employ up to 4 echo fellows: 2 with advanced airway skills on the senior tier rota; 2 on the junior tier rota who are not required to have advanced airway skills. In addition, the Echo Special Skills Year is currently pending approval and we hope to have it in place for August 2022.

Amongst our consultant intensivists we have

- 6 x FUSIC Heart mentors
- 1 x FUSIC Heart supervisor
- 2 x FUSIC Lung, Abdo and vascular mentors
- 2 x FUSIC Lung, Abdo, and vascular supervisors
- 1 x Level 1 BSE TTE Supervisor
- 1 x Level 2 BSE TTE Supervisor

Echo fellows are expected to complete FUSIC Heart, Lung, Abdo and Vascular at the very least but enthusiastic fellows are encouraged to achieve Level 1 BSE during their fellowship year. We have successfully taken over 20 individuals through FUSIC Heart accreditation in the past 2 years.

We have a successful record of training fellows to achieve their Level 1 BSE (7 trainees by Nov 2021). Particularly dedicated trainees are able to begin or complete Level 2 BSE accreditation (1 trainee by Nov 2021). Our current echo fellow has nearly completed their level 2 BSE TTE accreditation (Nov 2021).

There are opportunities to spend time in echo clinic with a fully BSE accredited critical care consultant, and to present interesting cases on Wednesday afternoons following Journal Club.

A FUSIC Heart course is run twice yearly on site at East Surrey Hospital, and a level 1 BSE TTE course is run once per year. Echo fellows are encouraged to direct and lead these courses.

All echo fellows are actively involved in ongoing research in the department, taking an active role and learning the processes involved in getting research REC approved and published.

OTHER TRAINEES WORKING IN CRITICAL CARE:

ANAESTHETIC TRAINEES

Anaesthetic trainees completing a module in critical care take full part in the senior on call rota including daytime and out-of-hours cover. Any anaesthetic trainees working within the critical care on call rota but not completing a module in critical care are NOT expected to spend normal working daytimes in ICU - they are protected in attending their anaesthetic training lists.

Anaesthetists are encouraged to take full advantage of their time in critical care to develop their technical and non-technical skills as detailed below. Many of our trainees have been able to achieve publications and international presentations through work completed in ICU.

CORE MEDICS AND FOUNDATION DOCTORS

Core medical trainees and FY1 doctors are a valuable asset to our unit and very much encouraged to take full advantage of all training opportunities in critical care. Many of our trainees have been able to publish original work with our support. Even those trainees focussed on careers outside critical care are able to use their time to develop essential clinical and non-clinical skills. There are ample opportunities to complete quality improvement work and get involved in clinical governance.

SUMMARY

We have consistently received excellent feedback for training and support on our critical care unit. In addition to the specific training elements detailed above, the following training opportunities are available to all doctors working in the ICU:

CLINICAL

- * Procedures regularly performed on intensive care (tracheostomy, bronchoscopy, chest drain insertion etc)
- * Echocardiography – although we have specific echo fellows, there is ample support for non-fellows wishing to learn or improve their echo / ultrasound skills including learning FUSIC.
- * Ultrasound – regular chest, abdominal and vascular ultrasound is performed on the unit. Enthusiastic trainees may wish to aim to complete FUSIC accreditation.
- * Resuscitation and stabilisation skills – a large proportion of our admissions are emergency medical admissions requiring resuscitation and advanced ventilatory, cardiovascular and renal support.
- * Advanced respiratory techniques – we regularly use prone positioning and APRV

NON-CLINICAL

- * weekly journal club (all junior doctors are expected to present at least once per 4 months)
- * weekly ICM teaching (delivered by consultants. Enthusiastic trainees can arrange to present specific teaching / simulation sessions)
- * regular M&M – with the opportunity for trainees to present cases
- * research – the majority of trainees working on intensive care achieve at least one publication and presentation at national or international level.

4.2 Details of departmental teaching

- *Weekly journal club (Wednesdays 13.15 – 14.00)
- *Weekly consultant led teaching (Wednesdays 14.00 – 14.45)
- *Regular M&M on Wednesday lunchtimes

*Monthly ICM / anaesthetics teaching including sessions delivered by consultants from Lane Fox (first Friday of every month 13.30 – 16.30)
*Frequent ad hoc bedside ultrasound and echocardiography teaching
*Annual ICM regional teaching day

4.3 Details of clinical governance meetings days and / or M & M

Fortnightly M&M led by Consultants with the opportunity for trainees to present cases
Monthly M&M data presentation, consultant led
Monthly senior staff meetings
Monthly combined anaesthetics and ICM clinical governance afternoons

4.4 Number of trainees on each tier of the rota

8 junior tier (831 bleep): non airway trained
8 senior tier (830 bleep): advanced airway skills