

# The Faculty of Intensive Care Medicine

## ICM Unit Brief

### Part 1 Hospital Details

#### 1.1 Hospital name

Guy's and St Thomas' NHS Foundation Trust

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

Department of Intensive Care  
ICU Support Offices, 1st floor East Wing, St. Thomas' Hospital,  
Westminster Bridge Road, London, SE1 7EH

#### 1.3 Hospital Telephone number

0207 188 7188 Ext: 83343

### Part 2 ICU Department contact details

#### 2.1 Direct telephone number to Department

020 7188 3343

#### 2.2 Faculty Tutor names

Dr Katie Lane, Dr Jo Petrie, Dr Farah Shariff

#### 2.3 Faculty Tutor Email address

[Katie.Lane@gstt.nhs.uk](mailto:Katie.Lane@gstt.nhs.uk)  
[Joanne.Petrie@gstt.nhs.uk](mailto:Joanne.Petrie@gstt.nhs.uk)  
[Farah.Shariff@gstt.nhs.uk](mailto:Farah.Shariff@gstt.nhs.uk)

### Part 3 Unit Structure

#### 3.1 Number of Consultants

41 (plus 8 Lane Fox)

#### 3.2 Percentage of elective versus emergency admissions

61% Emergency admissions overall with unit heterogeneity  
(c.98% EW1, EW2, EW6, VHDU, 50% GCCU, 10% DHU/OIR)

#### 3.3 Overview of case mix within the unit

Guy's and St Thomas' NHS Foundation Trust Critical Care is one of the largest in the country, admitting well over 5000 patients across almost all subspecialities of critical care each year. We are the regional tertiary referral centre for cardiothoracic surgery, vascular surgery, renal and pancreatic transplant surgery and adult congenital heart disease, in addition to many medical specialities including dermatology, haematology, oncology and renal medicine. We also receive referrals for Interventional Radiology and the Pulmonary Embolism Lysis Team. Hepatobiliary, major trauma, major burns and neurosurgery are not represented. In February 2021, the Royal Brompton and Harefield joined Guy's and St Thomas' NHS Foundation Trust, bringing together world-leading expertise in the care and research of heart and lung disease.

Guy's and St Thomas' is the designated Severe Respiratory Failure (SRF) centre for the South East of England. This Consultant delivered service offers; remote advice, retrieval and advanced respiratory management techniques to patients in our catchment area. Pre-COVID the unit provided Extra Corporeal Membrane Oxygenation (ECMO) for approximately 100 patients per year with severe respiratory failure, this increased following COVID.

The Critical Care footprint includes:

- East Wing 1, St Thomas' (15 bedded level 2/3 area)
- East Wing 2, St Thomas' (15 bedded level 2/3 area)
- East Wing 6, St Thomas' (15 bedded level 2/3 area)
- Doulton HDU (DHU)/ East Wing 8, St Thomas' (10 bedded level 2 area)
- Victoria HDU (VDHU)/ East Wing 10, St Thomas' (15 bedded level 2 area)
- Guy's Critical Care Unit (GCCU), Guy's Hospital (15 bedded level 2/3 area)

Overnight Intensive Recovery (OIR) predominantly delivers perioperative level 3 care to cardiac, vascular and comorbid surgical patients. It is predominantly managed by Cardiothoracic Anaesthetists within the Trust. Lane Fox Unit is a tertiary referral unit for type 2 respiratory failure and complex weaning, covered by the Lane Fox Unit Consultants.

The three level 3 units (EW1, EW2, and EW6) at St Thomas' receive predominantly high acuity (ICNARC predicted in hospital mortality of 9.7%) medical (60%) and surgical (40%) patients from the Emergency Department, the hospital wards, operating theatres and other hospitals. The average APACHE 2 score is high (15.6) and a large proportion have significant comorbidities. Thirty percent require 3 organ or more support, with nearly 60% requiring advanced respiratory support (intubation & ventilation). Median length of stay is 3.2 days.

Guy's Critical Care unit receives 60-70% surgical admissions (mainly transplant, head and neck, thoracic surgery, complex urology and co-morbid surgical patients) and 30-40% medical admissions (mainly haematology, medical oncology, and renal). APACHE 2 score is also high (14.1) but hospital predicted mortality for these patients is lower at 2.5% with a median stay of 1.8 days.

Overnight Intensive Recovery and Doulton HDU receive predominantly surgical patients (mainly cardiothoracic, vascular, upper GI and co-morbid patients). These patients have a median stay of 2.7 days and predicted in-hospital mortality 1.4%.

The unit submits data to the Intensive Care National Audit and Research Programme (ICNARC). Risk-adjusted mortality is consistently below predicted across all of our units. NHS England data in 2021 revealed GSTT to have the lowest rate of COVID deaths (per COVID per day) in the country.

### 3.4 Details of training opportunities on the unit

The diverse case mix across GSTT critical care provides a breadth of clinical experience in managing critical care patients in numerous specialities including obstetric medicine, dermatology, haematology (including thrombosis, sickle, and haemato-oncology), oncology, renal, respiratory, cardiology, cardiothoracic surgery, vascular surgery, general and urological surgery, upper GI surgery, head and neck surgery and transplant surgery. As a tertiary referral centre for various specialities including Adult Congenital Heart Disease (ACHD), Pulmonary Embolism Lysis (PELT), Interventional Radiology (IR), dermatology, cardiothoracic and vascular surgery we provide exposure to rarer clinical cases that may not have been encountered previously. A twice daily Consultant led ward round provides opportunities to discuss and learn from these cases and review by base speciality teams enhances this learning. There are daily microbiology consultant led ward rounds that enhance care and provide discussion and learning opportunities. Each unit has dedicated physiotherapy, dietetic, speech and language, occupational therapy and pharmacy staff who participate in handover meetings and provide their expertise and multidisciplinary learning opportunities.

GSTT provides the designated Severe Respiratory Failure (SRF) centre for the South East of England; offering remote advice, retrieval and advanced respiratory management techniques to patients in our catchment area. In 2021-2022 the service provided Extra-Corporeal Membrane Oxygenation (ECMO) for well over 100 patients.

The Lane Fox Respiratory Service is a national referral centre for weaning, rehabilitation and home mechanical ventilation. The 14 bed unit comprises 10 level 3 weaning beds and 4 elective beds to assess and review patients with chronic respiratory failure. A 20 bed "virtual extension" to the Lane Fox unit has opened, the Lane Fox REMEO Respiratory Centre within East Surrey Hospital grounds.

A variety of invasive monitoring and organ support equipment is utilised in the department. Most ventilators are Draeger ventilators with facilities for a range of ventilation strategies which includes APRV (Airway Pressure Release Ventilation). A range of airway equipment including the Glidescope, Ambu-scope and CMAC are in routine use, and bronchoscopy for diagnostic or therapeutic purposes is frequently used. The majority of tracheostomies are performed on the unit percutaneously and there will be many opportunities to gain experience in this.

A range of invasive haemodynamic monitoring is used including LIDCO (Lithium Thermodilution Cardiac Output), PICCO (Pulse Contour Cardiac Output) and PAC (Pulmonary Artery Catheter) monitoring. Echocardiography is readily available with a number of VENUE machines across the units, with each unit additionally having a Vivid echo machine. Over a quarter of Critical Care consultants are FICE/FUSIC accredited and many have higher echocardiography accreditation. Echocardiography and lung ultrasound are regularly used clinically and there are weekly Consultant led sessions on FICE and level 1/FICE-HD accreditation. The unit uses both CVVH (Continuous Veno-venous Haemofiltration) and CVVHD (Continuous Veno-venous Haemodialysis), supported mainly by Calcium-Citrate anticoagulation.

A variety of research is undertaken in the department and there are many opportunities to become involved at various levels with this. There is a very active undergraduate presence within the department and many opportunities to deliver and develop teaching. The department uses CareVue information system which is useful for audit and quality improvement initiatives. The department has a strong culture of safety and governance with opportunities to participate in meetings and undertake quality improvement. Our guidelines platform Clinibee (on mobile phone and computer) provides immediate access to learning and guidance on a variety of ICU related topics.

### 3.5 Names of Consultants, roles and areas of interest

Abbreviations: ACCP (Advanced Critical Care Practitioner), AMD (Associate Medical Director), CD (Clinical Director) CRT (Clinical Response Team), DTC (Drugs & Therapeutics Committee), ECMO (Extra-corporeal Membrane Oxygenation), HCID (High Consequence Infectious Disease), HSL (Honorary Senior Lecturer), Intensive Care Medicine (ICM), King's Health Partners (KHP), OOHCA (Out of Hospital Cardiac Arrest), PACCS (Pulmonary Medicine, Adult Critical Care and Sleep Management), QI (Quality Improvement), RBHT (Royal Brompton & Harefield Trust, R & D (Research & Development), RSM (Royal Society of Medicine), SRF (Severe Respiratory Failure), TPD (Training Program Director), WICM (Women in Intensive Care Medicine).

Consultant	Clinical Care	Critical Care Role (Other roles will be stated as such)	Areas of Interest
Dr Ehsan AHMADNIA	Critical Care	Junior Doctors Lead	Echocardiography.
Dr Andrew ASWANI	Critical Care & Anaesthesia	Vascular Access Lead	Translational research in the field of sterile inflammation and multiple organ failure; Ultrasound in critical care.
Dr Nicholas BARRETT	Critical Care	Clinical Lead	Severe Respiratory Failure; Severe Cardiac Failure; The role of ECCO2R.
Professor Richard BEALE	Critical Care	Professor of ICM, KCL; Leader in Allergy, Respiratory Medicine, Anaesthetics, Critical Care & Pain Clinical Academic Group, KHP; AMD, KHP/RBHT Partnership	Sepsis; Haemodynamics; Nutrition in the critically ill; ICU informatics.
Dr Aimee BRAME	Critical Care	Critical Care ACHD Lead.	Pulmonary Hypertension; Right Heart Failure.
Dr Craig BATISTA	High Dependency & Respiratory Medicine		COPD; airways diseases; NIV and integrated care.
Dr Helen CAHILL	Critical Care & Respiratory Medicine	GSTT Medical Examiner	NEWS2 steering committee co-chair; Interstitial Lung disease.
Dr Luigi CAMPOROTA	Critical Care	Service Lead for SRF & ECMO>	Respiratory failure; Mechanical ventilation & respiratory monitoring research; ECMO.
Dr Rebecca DCRUZ	Respiratory Medicine & Lane Fox Unit		Respiratory failure, weaning and home ventilation.
Dr Nishita DESAI	Critical Care	Critical Care Outreach Team medical lead.	Critical Care Echocardiography; Ultrasound and Education.
Dr Amy DEWAR	High Dependency & Respiratory Medicine		COPD; NIV; Integrated Care.
Dr Kyra DINGLI	Critical Care	HDU Lead.	Delirium.
Dr Robert GATHERER	Critical Care (Locum)		Cardiothoracic Critical Care; Anaesthesia and Critical care transfer medicine; Transoesophageal Echocardiography; Medical Education Research in Team expertise and Healthcare Change Management.
Dr Guy GLOVER	Critical Care	Trust Chair of Acutely Ill Patients committee.	Acute deterioration/outreach; ECMO/severe respiratory and circulatory failure; OOHCA / temperature management.
Professor Nicholas HART	Lane Fox Unit	CD for PACCS; CD Lane Fox Respiratory Service; Academic Director, Lane Fox Clinical Respiratory Physiology Centre; GSTT Director of Research Delivery; Joint Editor-in-Chief THORAX.	Complex weaning, rehabilitation and home ventilation.
Dr Jocelyn HALL	High Dependency & Respiratory Medicine		Respiratory Medicine.
Dr Nicholas IOANNOU	Critical Care		ECMO; Severe Respiratory and Circulatory Failure; Critical Care Echocardiography.

Dr Andrew JONES	Critical Care	Audit & QI Lead.	Respiratory disease in critical care; End of Life Care.
Dr Georgios KALTSAKAS	Lane Fox Unit & High Dependency	Clinical Co-Lead for Respiratory Motor Neurone Disease.	Complex weaning, rehabilitation, home ventilation, sleep, and respiratory physiology.
Dr Owais KADWANI	High Dependency & Respiratory Medicine		Respiratory Medicine.
Dr Boris LAMS	High Dependency & Respiratory Medicine	Lead Consultant for Respiratory Medicine.	Respiratory disease management in critical care; ILD.
Dr Katie LANE	Critical Care	FICM Faculty Tutor; Education Lead.	AKI and RRT in critical care; Simulation.
Dr Chris LANGRISH	Critical Care	Clinical Lead for South London Critical Care ODN.	ECMO; Critical Care simulation; Peer review and Human Factors; EDIC examiner.
Professor Richard LEACH	Critical Care & Respiratory Medicine	Honorary Professor of Medicine, CD for PACCS.	Fluid/electrolyte management in the critically ill; Respiratory Physiology; Respiratory disease management in critical care.
Dr Rebecca LEWIS	Critical Care	Critical Care Complex Patient Meeting Lead.	End of life care.
Dr Phil MARINO	Lane Fox Unit	Clinical Lead for Pulmonary Hypertension.	Pulmonary Hypertension; Chronic Respiratory Failure & Home ventilation.
Dr Chris MEADOWS	Critical Care	National Adult Critical Care Lead for HCID (Airborne); Director of ECMO Simulation; HSL, KCL; ECMO Subject Matter Expert advisor to the Healthcare Safety Investigation Branch.	Extracorporeal therapies and advanced ventilatory techniques for severe respiratory and cardiac failure; implementation and sustainability of safety cultures; co-design and co-production of service improvements to the patient pathway.
Dr Joel MEYER	Critical Care	Co-Lead for Critical Care Recovery Services; Deputy Chair FICM Life After Critical Illness; Chair Trust Clinical Guidelines Group.	Post-intensive care recovery and follow-up; Digital ICU patient/family care.
Dr Patrick MURPHY	Lane Fox Unit	Clinical Lead for Lane Fox Unit.	Domiciliary ventilation; sleep disordered breathing and respiratory physiology.
Prof Marlies OSTERMANN	Critical Care	Lead for Research and Development; Director of Research (Intensive Care Society UK).	Clinical management and research related to renal disease in critical care.
Dr Hina PATTANI	Critical Care	Coach & Careers Adviser.	Multi professional training and development and chronic respiratory failure and weaning.
Dr Richard PAUL	Critical Care & Anaesthesia	Critical care departmental IT Lead; Lead analyst for the Apollo programme; Medical Information Officer for the trust.	ICU-acquired weakness; Severe respiratory and cardiac failure; ICU informatics; Medical devices; Medical device integration.
Dr Jo PETRIE	Critical Care & Anaesthesia	FICM Faculty Tutor; Education Lead	Medical education & research (Stage 2 KCL tutor/supervisor); Echo/USS (FUSIC mentor)
Dr Jonah POWELL-TUCK	Critical Care	Critical Care Lead for Echocardiography; Critical Care Lead for Undergraduate Medical Education.	Medical education; Echocardiography and Ultrasound in Critical Care
Dr Michelle RAMSAY	Lane Fox Unit		Home mechanical ventilation; sleep disordered breathing and respiratory physiology.
Dr Andrew RETTER	Critical Care & Haematology	Clinical Governance Lead.	Haematology.

Dr Peter SHERREN	Critical Care & Anaesthesia	Critical Care simulation and human factors Lead; Associate Medical Director Essex and Herts Air Ambulance Trust.	ECMO / severe circulatory and respiratory failure; Cardiac Anaesthesia and Critical care; Prehospital and Retrieval medicine.
Dr Farah SHARIFF	Critical Care	FICM Faculty Tutor; Education Lead.	Critical care echo & USS (FUSIC mentor); Simulation.
Dr Andrew SLACK	Critical Care	Co-lead for Critical Care Recovery Services.	Post-intensive care follow-up and recovery; Renal Medicine
Dr Michael SLATTERY	Critical Care	Critical Care Journal Club Lead; Lead for Guy's Critical Care.	Prehospital Critical Care; Retrieval and transfer medicine; Human factors; Simulation; Respiratory failure.
Dr Simon SPARKES	Critical Care & Anaesthesia	Rota Co-ordinator; Clinical Lead Organ Donation.	Critical Care Ultrasound; Echocardiography; Retrieval and Transfer Medicine
Professor Joerg STEIER	Lane Fox Unit	Professor of Respiratory & Sleep Medicine.	Sleep & Ventilation Medicine.
Dr Eui-Sik SUH	Lane Fox Unit	Undergraduate Deputy Medical Director.	Home mechanical ventilation, sleep disordered breathing, respiratory physiology.
Dr Dan TAYLOR	Critical Care	Mortality Lead; End of life Lead.	Severe respiratory failure.
Dr Marius TERBLANCHE	Critical Care		Technology innovation in healthcare.
Dr Rosalinde TILLEY	Critical Care	Trust Director Undergraduate Medical Education; Regional Advisor in ICM.	Management and delivery of undergraduate and post graduate education and training.
Dr Stephen TRICKLEBANK	Critical Care & Anaesthesia	Physicians Associate Lead; Airway Lead; Medical Lead for ACCPs.	Airways in Critical Care/ Airway training; ECMO.
Dr Helen VOLLMER	Critical Care	Junior Doctor Lead; Infection control deputy Lead.	Post-intensive care recovery and follow-up.
Dr Duncan WYNCOLL	Critical Care	Infection control Lead for Critical Care.	Research – in particular in the fields of sepsis and transfusion.

### 3.6 Details of research projects being undertaken within the unit

#### **Critical Care and Lane Fox Research Strategy**

The department has a strong research strategy delivered by research active clinicians from a multi-professional background and dedicated research nurses. The key areas of research include sepsis, acute and chronic multi-organ failure, advanced organ support, nutrition, respiratory physiology and critical illness in general.

The research programme is broad and includes CLRN supported portfolio studies, investigator-led research projects and commercial trials. The team has close links with academic groups at KCL, other universities in the UK and the Intensive Care Society UK but also academic networks in Europe, North America, Asia and Australia, and industry partners. The department acts as a host centre for research training on behalf of other international societies.

The department offers many opportunities for trainees to engage in research activities:

- Active participation in departmental research meetings
- Access to training courses offered by KCL
- Opportunity to act as Associate Principal Investigator as part of the new NIHR Associate PI research training scheme
- Support and training for trainees who wish to pursue an academic career or a higher degree
- Opportunities to support research studies as research collaborator

## Part 4 Training

### 4.1 Details of departmental teaching

Journal Club 0830-0900 (Tues)  
 Departmental ICM Teaching

- ST1-2: 1300-1500 (Wed)
- ST3+: 1300-1500 (Thurs)

Severe Respiratory Failure MDT 1500-1700 (Wed)  
 ECHO/FUSIC teaching 14.00-16.00 (Once weekly)  
 ECHO virtual sign-off sessions 14.00-15.00 (Thurs)  
 Daily bedside teaching  
 Daily Consultant led microbiology ward round

### 4.2 Details of clinical governance meetings and / or M & M

Weekly complex patient meetings (Tues 14:30-15:30)  
 Monthly Clinical Governance monthly meetings inc M&M (third Thurs of month 09:30-12:30)  
 MDT Safety / Quality / Audit Day  
 Bi-monthly pharmacy meetings  
 Bi-monthly Education & Training Meeting (with trainee representation)

We have a proactive approach to clinical governance and promote a safety culture. Trainees are encouraged to participate through risk reporting, incident reflection, attending meetings, writing guidelines, quality improvement projects and audit.

### 4.3 Details of in-house courses available

#### **Departmental:**

FFICM Viva Course  
 Practice viva sessions for FFICM  
 Practice viva sessions for Primary/Final FRCA (via department of Anaesthesia)  
 Airway Rescue in Critical Care  
 Vascular access Course (usually delivered for ST1-3 at induction)  
 STICC Course (St Thomas' Intro to Critical Care course) (usually delivered for ST1-3 at induction)  
 FUSIC echocardiography (practical hands on training)  
 ECMO course  
 Patient safety in critical care course  
 Cardiac Advanced Life Support (CALs)

#### **Hospital-wide**

Grand Rounds – multi-speciality weekly meeting  
 The Resuscitation Department – Nationally recognised courses including ATLS, ALS, APLS, NILS,  
 The SAIL centre (Simulation) run a number of simulation courses including facilitation training

**The Medical Education School of Improvement** offer free training in many areas, including:

- Coaching and mentoring, Stress and Resilience
- Clinical and educational supervision
- Consultant interview preparation
- Civility saves lives
- Junior doctor leadership
- Speaking up and effective escalation
- Safety Connections

### 4.4 Details of junior doctor shift patterns (including on call)

Over eighty postgraduate doctors staff the junior rotas at any one time, with trainee doctors from ICM, Anaesthesia, Medicine and Acute Care Common Stem, plus postgraduate doctors not currently in training programs (FY3+, OoPE, post CCT or International Medical Graduates (IMGs)). The rotas are divided into junior resident, senior non-airway resident (ST3+) and senior airway resident (ST3+). Postgraduate doctors work a full shift rota comprising 13h long days (08:30 to 21:30), 13h nights (20:30 to 09:30) and standard days (08:30-17:30). All rotas new contract compliant.

Each of the 5 main Critical Care units (EW1, EW2, EW6, Victoria HDU, GCCU) are very well-staffed with an SHO and senior registrar (ST3+) for each unit minimum night and day (including weekends). Doulton HDU (10 bed surgical level 2 unit) has an SHO overnight only with cover from the Outreach Registrar. There is 24h ST3+ Outreach/CRT cover.

### 4.5 Details of senior doctor shift patterns (including on call)

A dedicated Critical Care Consultant provides 24:7 cover for each of our Critical Care units. They are on site from 08:00 to 19:00. Outside this timeframe they are immediately available for advice and can return to site if required. Consultant led ward rounds are conducted twice daily. Continuity of patient care is maintained at times of consultant changeover by formal handover meetings.

The Clinical Response Team (CRT)/Outreach Consultant is resident 08:00 to 21:00 and is immediately available for advice and can return to site as required outside this time. They lead the nightly meeting for incoming medical staff.

**Part 5****Additional information****5.1 Please provide any additional information about the unit**

We also have 4 physician associates who are well integrated within the running of the department who additionally provide advanced vascular access skills such as insertion of PICCS, midlines etc. Additionally, there is a plan to establish a formalised advanced critical care practitioner (ACCP) training programme within the department from February 2023.

There is also a very active undergraduate presence within Critical Care, and there are numerous opportunities to help deliver undergraduate education both formally and informally and to gain experience in educational design and assessment (Stage 2 and 3 KCL examinations) while based on the unit.