

British Society of Orthopaedic Anaesthetists

OCTOBER 2023

# BSOA NEWSLETTER

Updates and the 2023 ASM



## ASM 2023



I look forward to delivering  
my presentation at the BSOA  
ASM in London

DR MARIAPAZ SEBASTIAN  
Consultant Anaesthetist



'Diagnosis and Management of Nerve Injury after PNB'  
Presenting on 3 November 2023

Welcome to the October  
edition of the BSOA newsletter

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# B.S.O.A

*British Society of Orthopaedic Anaesthetists*



# B.S.O.A

British Society of Orthopaedic Anaesthetists

Dear Members,

*"The aim of medicine is to prevent disease and prolong life; the ideal of medicine is to eliminate the need of a physician." —William J. Mayo*

We look forward to the imminent BSOA annual scientific meeting on the 2nd and 3rd November 2023 at Woburn House in London. We have a wonderful program <https://bsoa.org.uk/meetings/bsoa-asm-2023/>. Speakers are populated with both "Surgical and Anaesthetic royalty". All generously organised by Dr Jan Cernovsky and his team. Invariably we look forward to seeing you all. I look forward to seeing you there, with all the industry and advances in orthopaedic and general anaesthesia.

We have been involved and working with multiple societies, led by the Difficult Airway Society of producing a consensus on Tracheal intubation in people with confirmed or suspected cervical spine injury, we hope to have a draft document by December 2023. There will be a mini presentation on NIHR HTA Knee analgesia trial (Named PREFER) for a wider understanding and involvement of centres that may be considered for involvement.

It has been a busy few month nationally, with debates on the validity of Anaesthetic associates in our UK setting. The clarity of the extent of syllabus covered over 5 years by the medical student, 7-9 years by the specialist trainee and the intermittent time of finding their calling culminates in a training that allows the consultant to veer off protocol-based management simply by virtue of their training and experience. The 2-2.25-year training program graduates start substituting for junior registrars and protocolised management plans are becoming the order of the day. Can we predict how it will affect the practically and scientifically trained medical staff, when the pattern recognising trainees/practitioners appear to provide similar results?

As a reminder of medical training, I have the pleasure of including an essay in this newsletter from a University of Birmingham medical student, Olivia Thomas. This essay won the Bruce Hawkins competition 2023. It details a segment of what medical students need to achieve in their quest to becoming doctors and think about specialising in anaesthesia.

We have taken a bold step this year to avoid hybridization of our meeting and try to capture the interaction and spirit of meetings pre-covid. I sincerely hope that we do not regret this.

Look forward to seeing you all in November 2023.

**Very best wishes**

**Dr EJ da Silva**  
**President of the BSOA**





# How are anaesthesia and critical care relevant across the MBChB curriculum and how will this experience prepare you for work as a foundation doctor?

**Olivia Thompson**

## **Introduction**

MBChB curriculums aim to produce competent and compassionate doctors, with competency coming from medical knowledge, experience, and skills, and compassion from empathy, respect, and advocacy. Specific curriculum aims are often generated in reference to guidance from statutory bodies, such as the General Medical Council (GMC).

Throughout clinical years medical students experience anaesthetics and critical care specialities in hospital placements. Anaesthetics involves the administration of drugs to induce unconsciousness, analgesia, muscle relaxation, and other physiological states necessary for surgical and emergency procedures(1), and critical care is the assessment and management of critically ill patients through the use of advanced life support techniques(2).

The foundations of these specialities augment the aims of MBChB curriculums and foster an ability to manage complex patients with multiple comorbidities.

## **Aims of the MBChB curriculum.**

The University of Birmingham MBChB programme is designed to meet the requirements of the GMC(3), whose three evidence-based outcomes for medical graduates are Professional Knowledge, Professional Skills, and Professional Values and Behaviours(4).

The first outcome, Professional Knowledge, requires appreciation of biomedical, social, and psychological sciences. Professional Skills encompasses communication and interpersonal working, diagnosis and management, safe prescribing, and effectively using information. The final outcome, Professional Values and Behaviours, includes dealing with complexity and uncertainty, safeguarding vulnerable patients, leadership and teamworking, and taking ethical and legal responsibility(4).

Increasingly, MBChB programs emphasise good communication and trustworthiness due to systematic reviews illustrating that effective communication and established trust leads to improved management, patient satisfaction, and measured health outcomes(5,6).

Chiefly, medical curriculums intend to create 21st century doctors who can holistically care for patients with multiple comorbidities and long term conditions; integrate mental health and social care; apply principles of health promotion; and keep up-to-date with medical developments and disease trends(4).

## **How experience of anaesthesia and critical care facilitates the achievement of MBChB aims.**

The foundations of critical care and anaesthesia include understanding physiology and pharmacology, making rapid decisions in high-stress situations, seamless collaboration between healthcare teams, supporting the most vulnerable patients, and the use of advanced medical technologies. Experience of these principles provides medical students with skills and knowledge that are synergistic with MBChB curriculum outcomes.

### **Professional knowledge**

#### ***biomedical, social sciences, and psychological principles***

Anaesthetics and critical care specialists have a comprehensive understanding of physiology and pharmacology which they use to appreciate the interconnectivity of organ systems whilst managing patients.

Rotations within these specialities not only expose students to a broad range of physiology, but also remind medical students to observe the human body as a whole, rather than focusing on systems in isolation. For example, critical care interventions such as ventilatory support, vasoactive medication, and renal replacement teach the fundamentals and interconnectivity of respiratory, cardiovascular, and renal sciences.

Furthermore, anaesthetists and critical care doctors appreciate patient social and psychological features such as anxiety, support networks, level of understanding, and personal priorities. These factors impact post-operative recovery and therefore must be considered when deciding appropriate anaesthetic techniques. Anaesthetics encounters allow students to recognise how medical, social, and psychological factors contribute to successful patient journeys.

Similarly, understanding social education differences and psychological factors of communication help anaesthetists and critical care doctors communicate effectively with patients from diverse backgrounds; and this benefit is assimilated by students observing anaesthetic and critical care situations.

### **Professional skills**

#### ***safe prescribing***

The pharmacological aspects of anaesthetics, such as drug indications, doses, interactions, side effects and physiological variant metabolism, comfortably link with MBChB pharmacology teaching and reinforce the importance of considerate prescribing. Further, anaesthetic rotations create ample opportunity for medical students to build confidence in the use of analgesics and safe prescribing. This is paramount as pain management has a substantial influence on patient reported outcomes(7).

#### ***diagnosis and management***

Critical care and anaesthesia aid medical curriculum teaching on diagnosis through the aforementioned broad physiology exposure; furthermore, these fields also teach exemplary management.

A staple of anaesthesia and critical care is airway management. As first taught by the ABCDE approach, 'A' for airway is the most immediate aspect of keeping a patient alive(8). In

anaesthesia and critical care rotations, students learn different airway management techniques and gain hands-on experience.

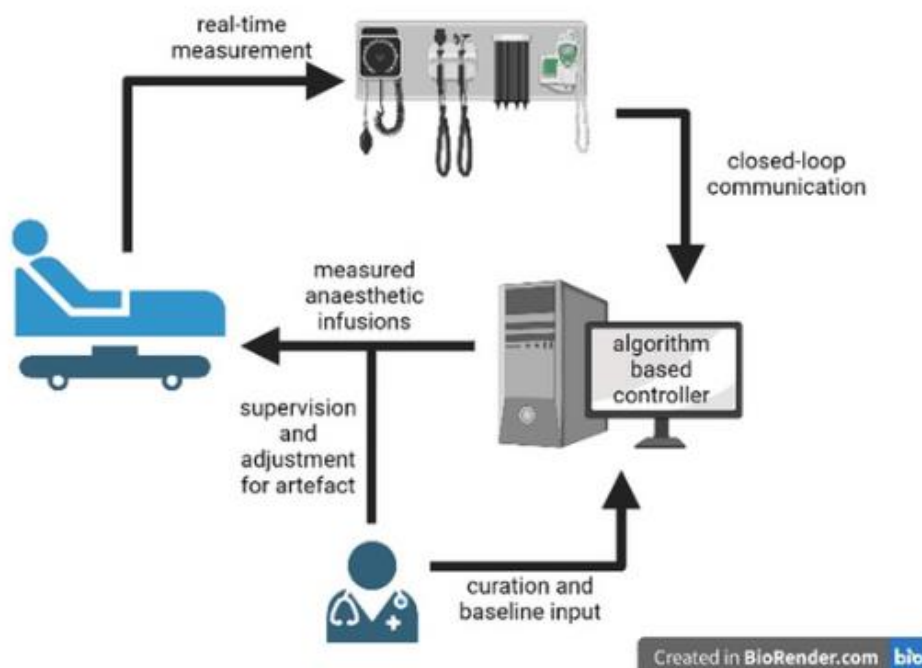
'C' of ABCDE stands for circulation, of which the crucial diagnostic aspects are well-taught by anaesthesia and critical care via haemodynamic monitoring. Likewise, a mainstay of haemodynamic management is IV access. Cannulation is arguably the most useful

physical skill a medical student can learn as it enables efficient delivery of fluids, blood products, drugs and more. Anaesthetics provides a bountiful environment for students to build competency in this skill.

### ***effectively using information***

A fundamental aspect of critical care and anaesthetics is the use of advanced medical technologies to help maintain vital organ function. Anaesthetic machines, for example, require control of gas delivery elements in response to observations such as cardiac monitoring, haemodynamics, temperature, capnography, and oxygen saturations. Additionally, consideration must be given to patient demographics and pharmacological interplay. Experience of this nurtures students' attention to detail and ability to effectively analyse and use information.

Looking to the future, developments of automation and closed-loop systems have the potential to revolutionise anaesthetics(9). Closed-loop systems, as demonstrated in figure 1.0, require anaesthetists to provide reliable data and adjust for data artefacts such as intraoperative events, endotracheal tube malposition, temperature changes, and faulty circuiting/tubing(9). Interaction with critical care doctors who stay up-to-date on constantly evolving medical practices and technologies exposes students to these cutting-edge technologies and prepares them for the lifelong learning and constant adaptation that is required of a doctor.



**Figure 1.0** | simplified representation of closed-loop anaesthetic machine function.  
source: self-published in BioRender with reference to (9)

### ***communication and interpersonal working***

The importance of seamless collaboration between healthcare teams cannot be overstated. Multidisciplinary teams (MDTs) have been evidenced to improve health outcomes from cancer survival to hypertension (10). Anaesthetics and critical care involve an interdisciplinary team approach, with multiple specialists working together to provide comprehensive patient care. Rotations in these fields enable students to both appreciate these MDTs and learn to become a valued team member.

In elective theatre, the anaesthetist is often the last practitioner to speak to a patient before surgery, when patients have the most anxiety. There is a responsibility to communicate clearly to ensure the patient is fully informed and comfortable.

Equally, in theatre anaesthetists are the principal practitioner focused on the patient whilst others focus on the procedure. This requires efficient communication to ensure all aspects of anaesthesia are correct before the surgery begins and to remain informed on what is occurring during the surgery so organ systems can be appropriately supported.

Anaesthetics imparts a well-rounded insight into the patient experience, and, alongside critical care, provides ample opportunity for students to both observe and practise empathy and communication skills. Collectively, these facilitate the evolution from medical student to a compassionate doctor.

### **Professional values and behaviours**

#### ***dealing with complexity and uncertainty***

Experience in anaesthetics and critical care, where rapid decisions are made in complex high-pressure situations, enables students to develop behaviours such as decisiveness, prioritisation, and composure.

Decisiveness is a key skill for MBChB students as it enables confident and informed decisions to be made that could be lifesaving. Prioritisation skills create a competent medical student who can prioritise tasks and manage time effectively. Likewise, the ability to remain composed and focused during adverse and emergency situations is a valued skill for any current and future practitioners who contribute to the management of medical emergencies.

Critical care involves early identification of physiological decline and potential complications, followed by pre-emptive intervention. Experience of this gifts students the intuition to recognise and prioritise critically ill patients.

#### ***safeguarding vulnerable patients***

Critical care and anaesthetics specialists support patients in the most vulnerable

situations; it is therefore integral for them to understand and advocate for patient needs. Further, in critical situations, when a patient may not be able to communicate, empathy is required to be perceptive of the emotions, needs and concerns of patients and their loved-ones.

Moreover, a vital aspect of anaesthetics is noticing signs of abuse during surgery. Whilst a patient is anaesthetised there is an uncommon opportunity to notice unexplained injuries in normally concealed areas, such as bruises or burns behind ears and in anogenital and intra-oral regions (11). Equally, harmful parent/child relationships and parental risk factors like

substance abuse may be noticed in perioperative care. Suspicion of abuse requires anaesthetists to initiate the 6 safeguarding principles enshrined by the 2014 Care Act(12). Consequently, by observing anaesthetics medical students build an understanding of safeguarding principles.

### ***taking ethical and legal responsibility***

Anaesthetics and critical care often involve complex ethical dilemmas, for example, making decisions about palliative and end-of-life care. Understanding social and psychological factors that contribute to ethical decision-making helps healthcare teams, and medical students, approach these situations with sensitivity and respect.

Furthermore, anaesthetists and critical care doctors must comprehensively understand Advanced Care Planning decisions such as Recommended Summary Plan for Emergency Care and Treatment (ReSPECT) forms, as they will frequently be the senior responsible clinician in a medical emergency(13). Appreciating the responsibility of honouring Advanced Care decisions, and how to treat patients with respect and dignity is a valuable learning opportunity for medical students.

### **Challenges of being a foundation doctor that are beyond the MBChB curriculum.**

MBChB curriculums offer students the skills, knowledge, and behaviours to become compassionate and competent doctors. Still, foundation doctors face a variety of challenges that are beyond MBChB curriculums.

Evidence shows that medical school graduates frequently do not feel prepared for certain aspects of foundation years, namely clinical reasoning/diagnosis, emergency management, and MDT-working(14). It has also been shown that foundation doctors experience extreme stress due to concern about their competence and knowledge, the pressure of dealing with clinical realities, and uncertainty around prioritising tasks(15).

Furthermore, it is widely accepted that being a doctor involves long, intense working hours, and these have been evidenced to cause sleep deprivation and fatigue(16). The adverse effects of fatigue impact a doctors' health, wellbeing, and performance, and therefore, the safety of themselves and patients. A survey of 53,835 junior doctors suggests that adjusting to these working hours puts a particular strain on new foundation doctors(16,17).

### **How anaesthesia and critical care experience develops skills beneficial in overcoming these challenges.**

Foundation year doctors navigate relationships with colleagues, patients and relatives, and cope with uncertainty, failure, and constantly changing systems. Experience of anaesthetics and critical care prepares foundation doctors for these challenges by equipping them with essential skills.

First and foremost, as students, foundation doctors will have assimilated adaptability skills when interacting with critical care doctors who constantly adjust their plans in response to changing circumstances. This is a crucial skill for foundation doctors in daily practice and will help them adapt to new ways of working when they rotate specialities every four months.

Anaesthetics rotations enable students to perfect the essential aspects of keeping a patient alive through airway and haemodynamic management. Additionally, exposure to high-pressure critical care environments develops composure in students. When a foundation

doctor is competent in critical management, and can remain calm and focused, they can be reassured that they have the best chance of keeping a patient alive whilst a diagnosis and management plan are formulated. Furthermore, a component of critical care and anaesthetics is addressing the most critical issues first, and therefore, prior exposure to these specialities enables foundation doctors to recognise which aspects of care to prioritise. Together, these capabilities may reduce the anxiety foundation doctors have around doubt and uncertainty(15).

Lastly, anaesthetics and critical care are valuable environments for students to observe clear and fair communication when emotions and stakes are high, and this experience will benefit foundation doctors when they inevitably interact with distressed patients, relatives, and colleagues.

Having essential skills to fall back on gives foundation doctors strategies for when they feel uncertain and out-of-depth by focusing on what they currently know and giving themselves time to figure out what they do not know. Polishing these skills will help the 55% of trainee doctors who feel that their work-related fatigue affects their ability to do their job(17) by making management of the most critical aspects second-nature.

## **Conclusion**

Anaesthetics and critical care specialities are bountiful environments for medical students to gain skills, experiences and behaviours that augment their MBChB curriculums and shape them into mindful and capable doctors. These aptitudes will also prove valuable when unprecedented foundation year challenges require new doctors to fall-back-on their essential skills.

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# ANNUAL SCIENTIFIC MEETING

2nd & 3rd November 2023

We are delighted to invite you to join us at the 2023 ASM, taking place at Woburn House, Tavistock Square, London

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