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Medical training in acute specialties: the acute care common stem training pathway

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Abstract

In 2007, the acute care common stem pathway changed the delivery of acute specialty training. Acute care common stem is the core training programme for all emergency medicine trainees, 46% of anaesthetic trainees and a cohort of acute medicine trainees with more than 630 places nationally, the third highest of any core training programme. In their first 2 years of core training (CT1–2), trainees rotate through 6-month rotations in emergency medicine, acute medicine, anaesthetics and intensive care to gain core competencies in the assessment and management of acutely unwell patients, before completing 1 year (CT3) in their parent specialty. Acute care common stem trainees benefit from undertaking rotations in allied acute specialties, which is invaluable when treating complex and comorbid patients in an ageing population. Acute care common stem gives trainees core skills in management of acutely unwell patients, which can be built upon in higher specialty training.

Key words: Anaesthesia, Emergency medicine, Intensive care, Internal medicine

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Background

Acute care is defined by the World Health Organization (Hirshon et al, 2013) as a medical intervention with the primary purpose of improving health, where the effectiveness is time sensitive. As the population ages and develops comorbidities, there is an increasing demand for acute care services in response to both emergencies and exacerbations of chronic illness, as shown by a record number of 19 million patients attending emergency departments in 2019 (NHS Improvement, 2019). In addition to this, providing routine care to patients with an increasing number of comorbidities is becoming more challenging. In the UK, acute care is delivered by a wide range of medical specialities in a variety of healthcare settings. In response to rising complexity and demand for acute care, the acute care common stem was introduced in 2007 with the intention of training doctors with the core competencies required to manage these patients.

Acute care common stem is the core training programme for all emergency medicine trainees, approximately half of anaesthesia trainees and a cohort of acute internal medicine trainees. Acute care common stem is designed to give trainees a broad range of experiences in managing acute presentations in a variety of settings. Following 2 years of training comprising 6-month rotations in emergency medicine, acute medicine, intensive care medicine and anaesthetics, trainees then complete core training in their parent specialty in order to be eligible for higher specialty training. In 2020, acute care common stem training had the third highest number of core training places behind GP training and internal medicine training. This consisted of 348 emergency medicine and 229 acute care common stem anaesthetics training programme places, with more than 630 jobs nationally (Health Education England, 2020).

Curriculum

Acute care is not confined by physical boundaries and is practiced in many settings, including the emergency department, acute medical unit, intensive care, the operating theatres and hospital wards. There is significant overlap in the skill set needed in acute medical specialties, and the acute care common stem curriculum requirements are designed to give trainees the key skills to manage time-critical emergencies. In order to progress

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through acute care common stem training, doctors gain experience of managing a wide range of presentations. There are six 'major' life threatening presentations:

1. Cardiorespiratory arrest
2. Major trauma
3. The septic patient
4. The shocked patient
5. Anaphylaxis
6. The unconscious patient.

Next, there are 38 'acute' presentations which are common presentations to hospital including chest pain, shortness of breath, acute abdominal pain, head injury, back pain and collapse. Practical skills are a key part of managing the acutely unwell patient and trainees are required to become competent in more than 90% of the 44 practical procedures in the curriculum. Acute care common stem trainees are also expected to demonstrate 25 'common competencies' required by all doctors in training, such as history taking, clinical examination and a variety of non-technical skills. Following on from the first 2 years of acute care common stem training, doctors complete a third year of training in their parent specialty. The parent specialty is determined at the application stage before starting acute care common stem training in order to match trainees to the number of training posts. Acute care common stem training gives exposure to a variety of acute specialties and as a result it is not uncommon for these experiences to lead to acute care common stem trainees changing their career plans. However, it is not possible to switch parent specialty during acute care common stem training and trainees wishing to continue training in a different parent specialty must relinquish their training number and reapply to recommence training from CT1. In 2021, the acute care common stem curriculum is likely to change in line with the General Medical Council requirements, increasing in length to a total of 4 years.

In addition to the core curriculum, there are specialty-specific competencies that must be obtained to complete acute care common stem training. During the 6-month anaesthesia rotation, trainees are expected to complete the initial assessment of competencies alongside keeping a logbook of cases managed. The intensive care medicine competencies are mapped to stage 1 of intensive care specialty training and focus on recognition and initial management of patients with organ failure.

Acute care common stem for emergency medicine

The emergency department is the cornerstone of unscheduled medical care, with an average of more than 50 000 patient presentations across England every day (NHS Improvement, 2019). As a result, emergency physicians must be prepared to manage patients with a wide spectrum of acute presentations. Acute medical placements offer emergency medicine physicians experience of working on the acute medical take and experience of the specialist medical management of a wide range of acute medical problems during the first 72 hours of hospital admission. Knowledge of how inpatient services can benefit a patient, as well as management options in the community, is a crucial component of emergency medicine. Development of ambulatory care is becoming increasingly important and the number of hospital admissions can be reduced through optimal use of ambulatory care pathways – emergency medicine will be at the forefront of driving this initiative in combination with acute medical teams.

In the era preceding acute care common stem training (Boyle, 1999), emergency medicine physicians commonly encounter critically unwell patients in the emergency department who require resuscitation along with an understanding of critical illness physiology and organ support. During their anaesthesia placement, acute care common stem trainees are expected to complete the 'initial assessment of competencies' and 'introduction to anaesthesia' modules along with experience of using anaesthetic agents. The initial assessment of competencies is required as a minimum to give sedation or perform rapid sequence induction within an appropriate clinical governance system (Royal College of Anaesthetists and College of Emergency Medicine, 2012). Maintenance of advanced airway skills during emergency medicine training in the UK is a controversial

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topic, particularly with immediate access to specialist support, with the competencies and skill maintenance required for independent rapid sequence induction not clearly defined. However, recognition and initial management of the compromised airway is an important, life-saving skill and a core skill of specialists in emergency medicine. There are increasing numbers of emergency medicine physicians with advanced knowledge and skills in resuscitation, particularly when combined with training in intensive care medicine or pre-hospital emergency medicine with increased exposure to critically unwell patients in a variety of settings.

Acute care common stem for anaesthetics

Acute care common stem has given anaesthetic trainees the opportunity to gain experience in acute internal medicine and emergency medicine beyond the core anaesthesia curriculum. Two-thirds of patients are looked after by anaesthetists at some point during their hospital journey, most commonly in the perioperative period but also by pain and resuscitation teams, or in the maternity and intensive care units. Anaesthetists with a broad set of skills, experience of managing acute medical problems and an understanding of working in other healthcare environments are becoming increasingly desirable. Patients presenting for both elective and emergency care are becoming more frail and medically complex with a higher risk of adverse outcome, while the rate of older people undergoing surgery is increasing faster than the rate of population ageing (Dhesi, 2018). As a result, there is an increasing interest in perioperative medicine, with an emphasis on patient-centred care from the point of contemplating surgery to full recovery rather than simply the silo of the operating theatre on the day of surgery (Schonborn and Anderson, 2019). Anaesthetists will inevitably be pivotal in the provision of this service.

During acute care common stem, trainees spend 6 months on acute medicine with time spent assessing and organising initial management of patients on the acute medical take under the supervision of medical consultants, with an emphasis on history taking and examination skills. This is an opportunity to develop skills in medical optimisation of patients with acute exacerbations of chronic illness, which is extremely relevant to the general work of an anaesthetist. Training in the emergency department gives acute care common stem trainees exposure to the concurrent resuscitation and investigation of time-critical undifferentiated illness, particularly with physiologically unstable patients in the resuscitation area. Anaesthetists are key members of a trauma team and their involvement with trauma patients continues into the perioperative period. In the emergency department, acute care common stem trainees can be involved in the management of trauma patients including the primary survey and practical procedures such as chest drain insertion, wound care and fracture manipulation. Anaesthetists are also more commonly getting involved in pre-hospital emergency medicine, although assessment and management of traumatic injuries is not part of their routine in hospital work. Completing acute care common stem not only gives trainees experience and confidence in these skills, it also means trainees are eligible to apply for pre-hospital emergency medicine and intensive care medicine higher specialist training.

Acute care common stem for acute medicine

Acute internal medicine became a General Medical Council recognised specialty in 2009, having previously been a subspecialty of general medicine. Acute care common stem for acute internal medicine was designed to produce acute internal medicine physicians with the knowledge and skills required to manage the increasing number of unwell patients accessing hospital services. Specialists in acute medicine work closely with colleagues in emergency medicine and a placement in the emergency department gives a working understanding of managing the interface between the outpatient and inpatient setting. Anaesthesia and intensive care placements will lead to a greater knowledge of treatment of physiological disturbance, improved procedural skills, experience of deciding which patients can benefit from intensive care admission and an understanding of the limitations of invasive organ support. The benefits of an intensive care placement is recognised by the

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Royal College of Physicians and is now a compulsory part of internal medicine training (Joint Royal Colleges of Physicians Training Board, 2019).

Acute care common stem acute internal medicine has a high rate of vacancies being filled – 98.5% nationally (Gowland et al, 2016). However, it was found that few acute medicine acute care common stem trainees were progressing into acute internal medicine higher specialty training. Gowland et al examined the career destination of acute care common stem acute internal medicine trainees in London over an 8-year period, and found that only 14% of acute medicine acute care common stem trainees took up higher speciality training in acute internal medicine, with many trainees entering other acute care common stem specialties. It was more common that trainees switched into anaesthesia and emergency medicine training (16%) than taking up an acute medicine post at ST3. Acute care common stem for acute internal medicine still recruits successfully in many parts of the country, confounded by the difficulty in recruiting doctors into higher acute internal medicine training. This is likely to be multifactorial, with the job of the medical registrar being stressful and busy with a significant out of hours burden. The most popular higher specialty training programme for these acute care common stem acute internal medicine trainees was intensive care medicine. Completing acute care common stem acute internal medicine gives trainees a multitude of future career options and further work needs to be done to understand what constitutes the optimal core training programme. As outlined in a response to this work, Murch and O'Kane (2017) noted that the aim of acute care common stem acute internal medicine is not to specifically prepare trainees for a career in acute medicine but to instead ensure trainees develop solid foundations in 'acute specialties'. Trainees who have completed acute care common stem acute internal medicine are eligible to apply for higher specialty training in any general medical specialty as well as acute medicine or intensive care medicine so it can be seen as an alternative to internal medicine training.

Future of acute care common stem training

In 2017, the report 'Excellence by Design' from the General Medical Council recommended that all medical specialty curricula must be revised by 2021. The acute care common stem curriculum, along with those belonging to Royal College of Emergency Medicine, Royal College of Anaesthetists and the Royal College of Physicians are currently undergoing significant changes. There has been a move towards generic professional capabilities and structured specialty learning outcomes which describe the work of an independent clinician in each discipline, with less emphasis on training as a box ticking exercise. These changes have resulted in extension of core training programmes in the parent specialties to 3 years, with acute care common stem training subsequently lengthened to 4 years. The timeframe for implementation is not confirmed, although the Royal College of Emergency Medicine is aiming to start recruiting to the new curriculum in 2021. Anaesthetics trainees starting CT1 in August 2019 are expecting to complete 3 years of core training (and therefore 4 years for acute care common stem trainees), although the COVID-19 pandemic may lead to delays in implementation.

Key points

- Acute care common stem training is the core programme for all emergency medicine trainees, approximately half of all anaesthesia trainees and a cohort of acute internal medicine trainees.
- Acute care common stem trainees undertake 6-month rotations through emergency medicine, acute internal medicine, anaesthesia and intensive care medicine before completing core training in their parent specialty.
- The acute care common stem training curriculum is broad and is designed to give trainees in these specialties the experience, knowledge and skills to required to manage the acutely unwell patient.

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Conclusions

Acute care common stem is the core training programme for all emergency medicine physicians, almost half of anaesthetics trainees and acute internal medicine trainees. Acute care common stem has a broad curriculum and rotating through the four acute specialties gives trainees the opportunity to develop a key set of technical and non-technical skills to manage the acutely unwell undifferentiated patient. There is a growing demand on acute care services and, as a result, recruitment to these specialties remain will continue to be imperative in providing high quality care in the future. Changes are being made to the acute care common stem curriculum in line with General Medical Council guidance and it is important that the development of acute care training programmes is promoted to meet workforce requirements in the future.

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Conflicts of interest

Benjamin Stretch is the national trainee representative for the intercollegiate committee for acute care common stem training; the other authors declare no conflicts of interest.

References

Boyle A. Anaesthetic training for accident and emergency trainees: an opportunity wasted. Anaesthesia. 1999;54(11):1122–1123. https://doi.org/10.1046/j.1365-2044.1999.01193.x

Dhesi J. Peri-operative care for older patients undergoing surgery. 2018. https://www.bgs.org.uk/resources/peri-operative-care-for-older-patients-undergoing-surgery (accessed 11 January 2021)

Gowland E, Ball KL, Bryant C et al. Where did the acute medical trainees go? A review of the career pathways of acute care common stem acute medical trainees in London. Clin Med. 2016;16(5):427–431. https://doi.org/10.7861/clinmedicine.16-5-427

Health Education England. Specialty training CT1 competition ratios. 2020. https://specialtytraining.hee.nhs.uk/Portals/1/2020%20Competition%20Ratios.pdf (accessed 11 January 2021)

Hirshon JM, Risko N, Calvello EJ et al; Acute Care Research Collaborative at the University of Maryland Global Health Initiative. Health systems and services: the role of acute care. Bull World Health Organ. 2013;91(5):386–388. https://doi.org/10.2471/BLT.12.112664

Joint Royal Colleges of Physicians Training Board. Curriculum for internal medicine stage 1 training. 2019. https://www.jrcptb.org.uk/sites/default/files/IM_Curriculum_Sept2519.pdf (accessed 26 December 2020)

Murch N, O'Kane K. Where did the acute medical trainees go? A review of the career pathways of acute care common stem acute medical trainees in London. Clin Med. 2017;17(2):189.2–190. https://doi.org/10.7861/clinmedicine.17-2-189a

NHS Improvement. Performance of the NHS provider sector for the year ended 31 March 2019. 2019. https://www.england.nhs.uk/wp-content/uploads/2020/08/performance-of-the-nhs-provider-sector-quarter-4-1819.pdf (accessed 26 December 2020)

Royal College of Anaesthetists, College of Emergency Medicine. Safe sedation of adults in the emergency department. 2012. https://www.rcem.ac.uk/docs/College%20Guidelines/5z7.%20Safe%20Sedation%20in%20the%20Emergency%20Department%20-%20Report%20and%20Recommendations.pdf (accessed 13 January 2021)

Schonborn JL, Anderson A. Perioperative medicine: a changing model of care. Br J Anaesthesia Educ. 2019;19(1):27–33

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