Appendix
B

The Shape of Training

Appendix Outline

B.1 Supporting the Needs of Patients and Service Providers

B.1.1 PHEM was approved by the GMC as a medical subspecialty of Emergency Medicine and Anaesthetics in July 2011 and of Intensive Care Medicine in October 2013. The development of the subspecialty was underpinned then, as now, by a need to address inequity of access and unmet demand, both from the perspective of patients and healthcare professionals. The drivers for the development of PHEM remain pertinent today and are articulated in detail in the Statement of Purpose (paragraph 2.1.1). The introduction of NHS-commissioned services employing PHEM subspecialty trained clinicians, such as the West Midlands Ambulance Service Medical Emergency Response Intervention Team (MERIT) in England[1], the Emergency Medical Retrieval and Transfer Service (EMRTS) in Wales[2] and the Emergency Medical Retrieval Service (EMRS) in Scotland[3], together with the expansion of

[1] wmas.nhs.uk/emergency-preparedness/
[2] emrts.nhs.wales
[3] www.emrsscotland.org

regional air ambulance services across the wider UK[4], has resulted in increased awareness of the benefits a PHEM subspecialist brings to patients and the continued inequity of access to such services. The PHEM workforce continues to expand to reduce this inequity, with workforce plans in place to ensure each NHS Ambulance Service region has access to PHEM subspecialists.

B.1.2 Practice and patient trends continue to evolve. Recruitment of the PHEM medical workforce from the acute specialties of Emergency Medicine, Anaesthetics and Intensive Care Medicine provides a continuous awareness and shared understanding of clinical developments and the emerging clinical and population trends. The most important trends currently relate to the growing number of older people across the UK and to increasing comorbidity and medical complexity. The PHEM subspecialty curriculum encompasses the breadth of acute emergency healthcare needs of the UK population in the pre-hospital environment, and specifically incorporates the management of elderly patients and decisions at the end of life. Trends related to mental health crises and acutely unwell bariatric patients have also been acknowledged and the curriculum developed accordingly.

B.1.3 Greater integration with NHS Ambulance Services has also allowed incorporation of the evolving role of ambulance services and ambulance professionals in the wider management of unscheduled and urgent care demands. The development of critical care practitioners (CCPs, typically paramedics or nurses) to complement PHEM specialist doctors within dedicated physician-CCP pre-hospital critical care teams has served to retain the focus of PHEM clinical practice on the immediate assessment and management of acute, unexpected and time-sensitive medical emergencies.

B.1.4 PHEM subspecialty training also takes an apprenticeship-based approach to training. Supervision and support are at the centre of both training and service delivery. PHEM subspecialty trainees work alongside a small number of trainers within small teams. An overarching educational supervisor, provides support and educational supervision for the duration of PHEM subspecialty training. There is a requirement for 100% direct consultant supervision in introductory training tapering according to progress to indicative minima of 50% during developmental training and 20% during consolidation training.

B.1.5 In recognition of the complexity and cost of PHEM subspecialty training, the curriculum encourages the use of regional, supra-regional and national courses to cover areas where there may be limited exposure. This is particularly important at the beginning of training where there is a steep learning curve related to personal, patient and team safety – hospital based training prepares trainees for the medicine but not the hazards and risks of the PHEM environment. The impact

[4]www.airambulancesuk.org

and cost-effectiveness of operational introductory training is optimised by the IBTPHEM's residential Generic Introductory Course, which focuses on trainees' operational safety, team resource management and psychosocial resilience, before they undergo service-specific induction and clinical introductory training with their local education providers.

B.1.6 PHEM subspecialty training enables clinicians in training to broaden their understanding and experience of acute emergency care. In that sense, it provides trainees within base specialty training programmes the flexibility to work and train in different operational environments and contexts.

B.2 Equipping Clinicians with the Skills to Participate in Emergency and Acute Care and to Provide Continuity of Care

B.2.1 PHEM subspecialty training focuses entirely on emergency and acute unselected patients and therefore develops and enhances the ability of clinicians to manage such cases. Experience since 2012 is that PHEM subspecialty training produces more broadly trained clinicians capable of providing acute emergency care in urban, rural and remote settings and working in multi-professional teams across hospital and pre-hospital care boundaries.

B.2.2 PHEM subspecialty trainees come from a range of specialty backgrounds, currently including Emergency Medicine, Anaesthetics and Intensive Care Medicine, and all three base specialties have been directly involved in shaping the curriculum to reflect the needs of unselected, acute patients. Most trainees have already typically completed foundation, core and elements of specialty training. They therefore enter PHEM subspecialty training with a range of generic skills as well as their base specialty-specific skills.

B.2.3 As illustrated in the Statement of Purpose (section 2.4), the PHEM curriculum comprises four generic, cross-cutting and six subspecialty specific themes. At the heart of the curriculum is the cross-cutting theme of Generic Professional Capabilities surrounded by the overlapping cross-cutting themes of Operational Practice, Team Resource Management and Clinical Governance. These cross-cutting themes build on existing general training and experience and ensure that generic knowledge, skills and behaviours are embedded throughout the subspecialty-specific areas of practice. In addition, the curriculum covers a large proportion of acute paediatrics and 25% of all summative assessments typically involve paediatric presentations. There is Royal College of Paediatrics and Child Health representation on both the Curriculum Committee and the IBTPHEM to ensure advocacy for children and an appropriate balance of adult and paediatric skills. The influence of the Royal College of General Practitioners (one of the lead colleges for PHEM) and the NHS Ambulance Services, as the two main providers of out-of-hospital emergency care in the UK, has

also been essential in ensuring that generic clinical skills remain embedded in the PHEM curriculum.

B.2.4 A key aspect of PHEM subspecialty training is that it exposes clinicians from base hospital specialties to multi-professional working across a broad spectrum of emergency care in diverse circumstances. Trainees become much more aware of disposition options other than acute hospital admission and develop the ability to navigate the unscheduled and emergency care network to the benefit of their patients.

B.3 Supporting the Delivery of Care in the Community

B.3.1 In the context of PHEM subspecialty training, *pre-hospital* refers to all environments outside an emergency department resuscitation room or a place specifically designed for resuscitation and/or critical care in a healthcare setting. It usually relates to an incident scene, but it includes the ambulance or air ambulance environment or a remote medical facility. Implicit in this term is the universal need of this specific group of patients, for transfer to hospital. Although a component of urgent and unscheduled care, PHEM practice predominantly relates to a level of illness or injury that is usually not amenable to management in the community setting, and is focused on critical care in the out-of-hospital environment.

B.3.2 Whilst there is a clear focus on the critically unwell, the curriculum does encompass alternative care pathways for accessing urgent and unscheduled care within the Emergency Medical System, the ability to safely leave patients at home or scene, and the navigation of Major Trauma, Burn, Cardiac, Stroke and Critical Care networks to the benefit of both adult and paediatric patients. In addition, specific curriculum areas relate to remote medical advice (including clinical and transfer decision support) and end-of-life care, enabling trainees to enhance inter-hospital transfer or consider whether it is appropriate or necessary to transfer at all.

B.4 Supporting a More Flexible Approach to Training

B.4.1 PHEM subspecialty training is inherently flexible. Its approval by the GMC as a subspecialty of Emergency Medicine, Anaesthetics and Intensive Care Medicine currently provides a route of access to doctors in training in three base specialties. The training complements that of the base specialty and also provides further exposure to doctors and trainers from the other specialties.

B.4.2 The PHEM curriculum, syllabus and assessment system are regularly mapped to those of the current base specialties, in order to complement and enhance base specialty training in these fields, balancing the knowledge and skills of the in-hospital emergency physician, anaesthetist or intensivist with the needs of the critically-ill or injured patient in the pre-hospital environment. The cross-cutting themes of Generic Professional Capabilities, Operational Practice, Team Resource

Management and Clinical Governance build on existing training and experience, and ensure that generic knowledge, skills and behaviours are embedded throughout the PHEM programme of learning. Developing expertise in these Generic Professional Capabilities and the subspecialty specific themes makes these specialists better clinicians both in and out-of-hospital.

B.4.3 The curriculum provides for a range of training schemes, allowing Deaneries and local education providers to design training programmes that integrate PHEM training with base specialty training. Less than full-time trainees and academic trainees can be accommodated in line with Deanery processes.

B.4.4 Gender equality within the emergency services is evolving. The combination of gender stereotypes related to the rescue elements of the emergency services and limited geographical availability of training posts has historically led to a lower number of female trainees than would be expected from base specialty distributions. Mirroring approaches taken by the Ambulance Services, work has been undertaken to promote female PHEM specialist role models across the UK and to encourage more family-friendly training rotations and duty hours for clinicians with parental or caring responsibilities. The IBTPHEM is also working with Air Ambulances UK, the national organisation representing the UK's 21 air ambulance charities, the British Association for Immediate Care and the Faculty of Pre-Hospital Care to further promote Equality, Diversity and Inclusion across all PHEM providers.

B.4.5 With regard to pregnancy, there are acknowledged significant occupational health constraints related to the use of restraint devices in vehicles and helicopters, vibration in helicopters, manual handling and working within the full range of pre-hospital operational environments. The IBTPHEM recommends adoption of the practices applied by NHS Ambulance Services in undertaking appropriate risk assessments and ensuring that best practices are followed.

B.5 The Potential Role for Credentialing in Part of the Pre-Hospital Emergency Medicine Curriculum

B.5.1 As has been highlighted, the PHEM subspecialist consultant role is, by virtue of the tempo of decision making, the hazards faced at incident scenes, the complexity of the medical care and the resource limitations, uniquely challenging and a very different activity compared to in-hospital practice. All of the syllabus must be assimilated and the curriculum completed to ensure safe and effective clinical practice as well as operational safety for patients, clinicians and teams. The curriculum has been mapped to the current base specialty curricula to ensure that direct overlap is minimised. Where there is overlap, the focus is on the differences related to the operational context. There is no unnecessary repetition.

B.5.2 The PHEM curriculum comprises six subspecialty specific themes or defined areas of PHEM professional practice. The theme "Supporting Safe Patient Transfer" includes the competences required to provide safe, effective and focused inter-facility transfer as well as transfer from the scene. The capabilities in practice within this theme are:

a) Understand the concepts underpinning transfer medicine
b) Understand the applied physiology of patient transfer
c) Coordinate and plan patient transfer
d) Prepare patients for transport
e) Utilise a range of patient transport modalities
f) Clinically manage patients during transport

B.5.3 The increasing need to provide the capability to undertake inter-facility transfers safely and quickly, particularly in relation to more acutely unwell patents has been recognised. The 2013 Keogh Review, *Transforming urgent and emergency care services in England,* recommended the introduction of an efficient critical care transfer and retrieval system, particularly in remote and rural areas.[5] The 2015 NHS England report, *Transforming urgent and emergency care services in England*, recommended that commissioners ensure that there are, or will be, dedicated services in place for the secondary transfer and retrieval of all patients (adult and paediatric), who require emergency inter-facility transfer.[6] In Scotland, Wales and some areas of England, NHS-commissioned regionalised retrieval and transfer services for adults, employing PHEM subspecialty-trained consultants, are now fully operational.

B.5.4 Prior to the CoViD-19 pandemic, there was growing evidence that the use of dedicated transfer teams improved the outcomes for critically ill patients transferred between hospitals.[7] Dedicated professional transfer services were increasingly advocated as the preferred method for transferring suitable patients.[8] The Association of Anaesthetists of Great Britain and Ireland and the Healthcare Safety Investigation Branch had also recommended a national standard for transfer of critically ill patients.[9] The CoViD-19 pandemic revealed the need for and benefits of transfer services and the NHS has now commissioned Adult Critical Care Transfer Services across the UK.[10] The demand for clinicians capable of undertaking these interfacility transfers exceeds the capacity of PHEM subspecialty

[5]www.nhs.uk/NHSEngland/keogh-review/Documents/UECR.Ph1Report.FV.pdf
[6]www.nhs.uk/nhsengland/keogh-review/documents/safer-faster-better.pdf
[7]The Faculty of Intensive Care Medicine. Guidance on: The Transfer of the Critically Ill Adult. May 2019.
[8]AAGBI. Safety Guideline: Interhospital Transfer. February 2009.
[9]Healthcare Safety Investigation Branch (HSIB). Transfer of Critically Ill Adults. Healthcare Safety Investigation I2017/002A. January 2019.
[10]www.england.nhs.uk/publication/adult-critical-care-transfer-services/

training programmes. In addition, interfacility transfer does not require the full range of capabilities of a PHEM subspecialist. The IBTPHEM is therefore exploring the development of a Transfer Medicine credential with the Royal College of Emergency Medicine, Royal College of Anaesthetists and Faculty of Intensive Care Medicine based on the "Supporting Safe Patient Transfer" theme of the PHEM curriculum. Supporting safe patient transfer will always be an essential component of the PHEM curriculum but this area of clinical practice could become the basis for a credential across a broader and multi-professional range of practitioners.