



**EMERGENCY
MEDICINE**



PAEDIATRIC EMERGENCY MEDICINE IN IRELAND

Development to date and future direction

APRIL 2021

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Abbreviations:

CSCST: Certificate of Successful Completion of Specialist Training (in Emergency Medicine)

CHI: Children's Health Ireland

ED: Emergency Department

EM: Emergency Medicine

EMP: Emergency Medicine Programme

IAEM: Irish Association for Emergency Medicine

ICEMT: Irish Committee for Emergency Medicine Training

MC: Medical Council

NDTP: National Doctors Training and Planning

PED: Paediatric only ED

PEM: Paediatric Emergency Medicine

PICU: Paediatric Intensive Care Unit

RCPCH: Royal College of Paediatrics and Child Health

RCEM: Royal College of Emergency Medicine

UCC: Urgent Care Centre

EXECUTIVE SUMMARY

- There are 22 hospitals in Ireland where acutely ill or injured children are seen. Children account for nearly a quarter of all attendances at Emergency Departments (EDs) outside Dublin, while approximately 120,000 children attend the three Paediatric-only EDs (PEDs) in Dublin on an annual basis.
- There are over 100 Consultants in Emergency Medicine (EM) in Ireland, with 15 WTE posts in Paediatric Emergency Medicine (PEM) and 1 WTE specifically appointed to such a role outside of Dublin.
- Outside of Dublin, paediatric emergency care is often provided through a combination of Emergency Medicine and General Paediatric services, often with little strategic integration between these specialties.
- With the development of the new Children's Hospital and the formation of Children's Health Ireland (CHI), 6 WTE appointments in PEM were made in late 2018, with further posts planned to facilitate establishment of the planned Urgent Care facility in Tallaght and to support the PEM model of care for CHI upon opening of The New Children's Hospital in 2023.
- Increases in Consultant in PEM staffing lead to evidence based reductions in hospital admission rates, complaints and ED waiting times, with substantial cost savings to health systems.
- The specialty of PEM is yet to be recognised as a standalone specialty in Ireland by the Medical Council (MC) although it is recognised as such in similar healthcare delivery systems in the UK, North America and Australasia. Currently, there are two types of relevant Consultant posts recognised as options by the Consultant Applications Advisory Committee (CAAC), namely a Consultant in Paediatric Emergency Medicine and a Consultant in Emergency Medicine with a subspecialty interest in Paediatric Emergency Medicine. While these options may have utility in the short term, we would envisage that subsequent to the specialty of PEM being so recognised by the MC, future posts should simply be recruited as Consultants in PEM.
- ICEMT and the Faculty of Paediatrics have agreed to advance the development of PEM in Ireland in tandem, and their joint support will be important in achieving sub-specialty recognition.
- PEM is now an established essential component of training in EM for both Core Specialist Training and Advanced Specialist Training in EM, giving an EM trainee a total of 12 months PEM experience.
- The previously agreed pathways to Consultant posts in PEM, as jointly outlined by the Faculty of Paediatrics and ICEMT, have been in use since 2010 and define the eligibility criteria for applicants for Consultant posts in PEM.
- PEM remains an optional component of General Paediatric training at both basic and higher level. It has not yet been mandated at either level. There has, however, been growing interest in PEM as a sub-specialty career and an increasing number of Specialist Registrar paediatric trainees select PEM rotations (and associated specialties like PICU) in years 3-5, when it becomes possible for trainees to choose sub-specialty rotations of interest.
- While a formal fellowship in PEM exists for candidates from Emergency Medicine, there is still work to be done in order to establish a fellowship in PEM for candidates from General Paediatrics. It is anticipated this will not be deliverable in Ireland in advance of opening of the New Children's Hospital.



1 INTRODUCTION

This document offers a 2021 update to the 2010 position paper *“The Development of Paediatric Emergency Medicine in Ireland”* published by the Irish Association for Emergency Medicine (IAEM) and the Advisory Committee on Emergency Medicine Training, now called the Irish Committee for Emergency Medicine Training (ICEMT).

At the time, the specialty of PEM was striving to become recognised in Ireland with only 5 Consultants in PEM in post, all in Dublin. The development of specialty training opportunities in PEM and the commencement of Children’s Health Ireland as a Hospital Group are among the reasons for a 2021 update to this document.

Aims of this document

- > To outline progress to date in development of the sub-specialty of Paediatric Emergency Medicine (PEM) in Ireland.
- > To describe the nationally agreed routes to training in PEM.
- > To outline qualifying criteria for Consultant posts in PEM both in paediatric only facilities and in mixed EDs outside Dublin.
- > To describe the future direction and development of the specialty.

2 BACKGROUND

Across Ireland acutely ill and injured children attend Emergency Departments and Urgent Care Centres on a daily basis. Mixed ED is the term used for those units outside Dublin that see patients of all ages, including children. There are 18 such mixed EDs. Of these sites, 17 offer in-patient paediatric beds with associated General Paediatrics and other specialty services. In addition there are 11 Injury Units nationally, of which 8 manage children with acute injuries from age 5 and older and one from age 10. In Dublin, the Children's Health Ireland group (CHI) operates 4 facilities: 3 paediatric EDs and 1 Urgent Care Centre (UCC) for which annual attendances exceed 120,000 in total. In most hospitals with EDs that see both adults and children (those outside Dublin), approximately one quarter of all attendances will be children, and this is consistent with international experience.^{1,2}

In the last two years CHI has delivered an increase in Consultant in PEM numbers in Dublin as part of preparations to deliver their PEM model of care and has opened a fourth facility, the UCC on the grounds of Connolly Hospital in Blanchardstown. This model of care will ultimately see on-site Consultant in PEM presence across one large main PED and two satellite UCCs over extended working days comparable with international standards of care. The main PED at CHI will be the national Major Trauma Centre for paediatrics and the hospital will house all paediatric sub-specialties under one roof for the first time in Ireland. Outside Dublin, however (where more children attend EDs than within Dublin) there has not been a corresponding investment in PEM posts.

In Dublin there are 15 WTE Consultant posts in PEM and 1 post outside Dublin in Cork University Hospital. There are a small number of Consultants in EM in other departments who have additional sub-specialty experience or sub-specialty training in PEM but whose current practice either involves a minority component or no paediatric practice. In Ireland, while great progress has been made in conveying the inherent value of specialists in PEM to care for children, there remains a variable approach to the management of acute undifferentiated paediatric illness and injury presentations in some hospitals.

In some mixed EDs, 'surgical' and trauma paediatric cases are managed by EM, while 'medical' paediatrics is managed by General Paediatrics sometimes on a paediatric ward or Paediatric Assessment Unit. Serious medical illness requiring resuscitation is often managed by EM, with Paediatrics consulting. Many mixed EDs have inappropriate physical infrastructure to manage acutely unwell children e.g. lack of adequate child friendly and appropriate areas within EDs. Equally, very few of these institutions have appropriate levels of nursing staff trained in paediatric emergency care. Having both appropriate infrastructure and nursing provision has been recognised internationally as being integral to the delivery of quality paediatric emergency care.^{2,3}



3 TRAINING DOCTORS FOR A CAREER IN PEM

In Ireland there exists a requirement for two kinds of Consultant in PEM posts: a Consultant in PEM in a Paediatric ED and a Consultant in PEM in a mixed ED.

The Irish Committee for Emergency Medicine training (ICEMT) and the Emergency Medicine Programme (EMP) have long recognised the strategic importance of the development of PEM. ICEMT has incorporated mandatory PEM training in both the Core and Advanced Specialist training programmes. The national programme document of the EMP, published in 2012, formally recommended that all 24/7 EDs in which children are treated should appoint at least one Consultant in PEM.

There are two established training routes for PEM sub-specialty training which are regarded as equivalent. These were first agreed and outlined in the 2010 edition of this document and have been in place since then. This training and accreditation in PEM and ultimately employment as a Consultant in PEM in Ireland is through the achievement of a Certificate of Successful Completion of Specialist Training (CSCST) in Emergency Medicine or General Paediatrics followed by additional training, tailored to the needs of the respective specialists as outlined below. While this training pathway was informed by preceding publications such as the Royal College of Paediatrics and Child Health (RCPCH) 'Red Book', this pathway differs somewhat from other international training bodies who have agreed joint routes to sub-specialisation e.g. Australasian College for Emergency Medicine/Royal Australasian College of Physicians as there is no 'exit exam' at the end of training.

TRAINEE IN EMERGENCY MEDICINE		TRAINEE IN PAEDIATRICS	
CSTEM Training	<ul style="list-style-type: none"> 36 months (includes mandatory 6 months PEM) 	Basic Training	<ul style="list-style-type: none"> 24 months
ASTEM CSCST in EM	<ul style="list-style-type: none"> 48 months includes 6 months PEM 	Higher Specialist Training CSCST in General Paediatrics	<ul style="list-style-type: none"> 60 months PEM - interested candidate should target positions in PEM (minimum 6 months) and PICU (6 months)
Fellowship in PEM	<ul style="list-style-type: none"> 18 months total - 12 months PEM + 6 months PICU (Optional 6 months in General Paediatrics) 	Fellowship in PEM	<ul style="list-style-type: none"> Tailored content to a total of 24 months, comprised of 18 months PEM + 6 months PICU may include optional 6 months General EM Some of above may be acquired as part of HST Minimum 6 months as fellow in paediatric major trauma centre
Training Completed	<ul style="list-style-type: none"> Eligible to compete for Consultant in PEM position 	Training Completed	<ul style="list-style-type: none"> Eligible to compete for Consultant in PEM position



3.1 PAEDIATRICS IN EMERGENCY MEDICINE TRAINING

In 2008, based on published recommendations from RCEM and RCPCH, ICEMT recommended that PEM would become a mandatory component of Higher Specialist Training in EM and that the PEM component would be delivered over a six month rotation in a dedicated PED, either in Ireland or potentially abroad in an ED recognised for paediatric sub-specialty training. Since then, there has also been one approved six-month HSTEM rotation in PEM in Cork University Hospital. ICEMT recommended that the competencies to be acquired by the general EM trainee at the end of his/her six-month PEM rotation would be those adopted by RCEM for ST3 trainees.

3.2 EMERGENCY MEDICINE IN GENERAL PAEDIATRICS TRAINING

There is currently no mandatory requirement to complete a PEM rotation as part of either basic or higher training in General Paediatrics. This is at odds with international norms, where most training systems would include a mandatory PEM component in both basic and higher training in paediatrics and this may disadvantage the interested candidate from General Paediatrics.

However, in recent years, interest in PEM has been steadily increasing amongst paediatric trainees in Ireland and Directors for Higher Specialist Training in paediatrics have been supportive in placing interested trainees in PEM rotations and other relevant training positions like PICU as part of their Higher Specialist Training.

Currently, in order for a paediatrician to complete sub-specialty training in PEM via fellowship, and in particular to gather the required skills in trauma and Emergency Department management, a clinical fellowship abroad at an internationally recognised centre for paediatric emergency care or a PEM training position in the UK have been the most readily accessible routes. While it may not be currently feasible to offer definitive fellowship training in PEM for candidates from a General Paediatrics background, it is the intention once the New Children's Hospital is open that there will rapidly follow a fellowship training programme in PEM for those from general paediatrics training backgrounds.

3.3 FELLOWSHIP PROGRAMME FOR PEM

In 2016 the first NDTP approved fellowship programme for PEM in Ireland was established. This 18 month programme incorporating 12 months PEM and 6

months PICU was developed to provide post CSCST EM specialists with the requisite fellowship-level training to complete subspecialisation in PEM in Ireland and deliver competitive candidates for Consultant in PEM posts. Candidates who successfully complete this programme are suitably trained for appointment to either a PED or mixed ED.

To date, the programme has delivered two consultant appointments in PEM; one additional candidate completed training in July 2020 and a further fellow commenced in post also in July 2020. The programme is currently delivered at CHI Crumlin but approval is in place for CHI Temple St to accept suitable candidates. The current fellowship programme can accommodate a maximum of two trainees per 18 month period at the Crumlin site and one at the Temple St site. Fellows form part of the Middle Grade head count so the posts are not supernumerary to existing approved NCHD numbers.

In the future and particularly after the opening of the New Children's Hospital in 2023 it is envisaged that a PEM fellowship at CHI would be very attractive to both national and international applicants.

The curriculum followed is that of the Royal Australasian College of Physicians PEM advanced training curriculum and successful completion of the programme also mandates undertaking non-clinical activities including

participation in departmental management activities, undertaking a research project and involvement in guideline development.

A formal assessment process has not yet been developed for the fellowship programme. Clinical supervisors undertake responsibility for assessment and sign off for successful fellows. Assessments during the programme include:

- Workplace based assessment (WPBA)
- Trainer-trainee meetings at departmental level

As described in the training diagram and discussed in section 3.2 above, for trainees from a Paediatric background 2 years PEM sub-specialty training is required, and may be achieved in part within HST in General Paediatrics. This is an approach that we would recommend and is the model employed by Faculty of Paediatrics for other paediatric sub-specialties and has been applied to previous trainees who pursued PEM specialty training. However, this requirement should be associated with 6 months of PEM completed as part of either basic or higher training in Paediatrics.

In 2019 a Paediatric Specialist Registrar was the recipient of a Richard Steevens scholarship to undertake funded fellowship training in paediatric point-of-care ultrasound at the Royal Children's Hospital ED in Melbourne.



4 NUMBER OF CONSULTANTS IN PEM REQUIRED NATIONALLY

4.1 CONSULTANTS IN PEM IN PAEDIATRIC EDS

Currently the only PEDs in Ireland are in Dublin. There are 15WTEs across the three PED sites at Crumlin, Temple St and Tallaght and the UCC at Connolly Hospital. Incumbents are from both EM and paediatric specialty backgrounds and vary by training route followed. There is one Consultant who is dual accredited. Those appointed since 2012 have attained eligibility through either of the two designated routes outlined in this document. Two have completed the National Doctors Training and Planning ICEMT accredited PEM fellowship programme. Five have completed fellowships at RCH Melbourne, two are UK PEM subspecialty-trained and one trained at Lady Cilento Brisbane. The remainder have attained their posts via an experiential route.

In Dublin, the Department of PEM at CHI has developed a model of care for the provision of Consultant delivered care on the Dublin sites across an extended working day and working week based on international precedents e.g. RCH, Melbourne with a Consultant in PEM presence on site 16 hours a day. This is planned to be introduced as part of the development of PEM within CHI.



4.2 CONSULTANT POSTS IN PEM IN A MIXED ED

In a mixed ED which forms part of an Emergency Care Network outside of Dublin the role of the Consultant in PEM may differ considerably from that in a PED. A Consultant in PEM in post as a single sub-specialist for a hospital or indeed hospital group may need to adopt a specialty service development role, while also delivering clinical care to patients. The Emergency Medicine Programme has advised that all 24/7 EDs in which children are treated should appoint at least one such Consultant.

Second and subsequent appointments of Consultants in PEM in ECNs should seek to appoint suitable candidates from both paediatric and EM backgrounds in order to complement natural skill strengths. Each Emergency Care Network (ECN) should have a lead clinician for PEM.

There is currently one Consultant in PEM, working in a mixed ED with a specific remit to develop delivery of paediatric emergency care on that site (Cork University Hospital).

Geelhoed et al⁶ have comprehensively investigated the hypothesis that increased presence of Consultant staff would lead to better outcomes in a PED. A retrospective observational study was conducted in a tertiary PED over a 10 year period, documenting trends in percentage of children admitted, complaints to the department and average waiting times. Consultant numbers increased from 2.6 to 6.2 whole time equivalent staff between 2000 and 2004. Other staffing numbers were essentially unchanged. All parameters examined improved, coincident with increasing Consultant numbers:

- The percentage of children admitted decreased by 27%;
- Complaints fell by 41%;
- The average waiting time fell by 15%;
- The yearly cost of an additional 3.6 Consultants (was \$A1.003 million with net saving to the hospital of over \$A9.48 million.

5 MEDICAL COUNCIL REGISTRATION

Currently PEM is not a recognised specialty in the Register of Medical Specialists in Ireland. The specialty is formally recognised in the UK, Israel, North America and Australasia, as well as more recently in South Africa, Turkey and Switzerland. In Ireland, PEM is as deserving of specialty recognition as other paediatric sub-specialties with similar or fewer Consultant numbers e.g. Paediatric Cardiology.

Preparations to achieve specialty recognition have commenced with agreement from ICEMT and the Faculty of Paediatrics to support the application. In March 2019 the MC reopened the process for applications for specialty recognition with a revised pathway and an application for PEM is planned for early 2021.

There is sometimes confusion surrounding the terms *Subspecialisation* and *Dual Accreditation*. It is proposed that the joint PEM training programme outlined above will primarily provide sub-specialisation e.g. a paediatric trainee who completes PEM sub-specialty training will be eligible to be included in the Register of Medical Specialists under both *Paediatrics* and *Paediatric Emergency Medicine* but not *Emergency Medicine*. For the latter to occur, the trainee would need to complete

training of equivalence to HSTEM and pass the exit examination of HSTEM in Ireland, the Fellowship of the Royal College of Emergency Medicine (FRCM). Equally, if an EM trainee with PEM sub-specialty training wishes to be included in the division of *Paediatrics* the trainee would need to complete additional training of equivalence to core General Paediatric training, while at the same time passing the Membership of the Royal College of Physicians in Ireland (MRCPI) *Medicine of Childhood* examination. It is these latter processes that define *dual accreditation*. It is assumed that very few specialists would choose this option based on experience from international PEM training programmes.

Assuming success is achieved in gaining Medical Council recognition of PEM as a specialty, then the Consultant Applications Advisory Committee of the HSE should be advised that any future posts in PEM be advertised as the post of 'Consultant in Paediatric Emergency Medicine' with the requirement that applicants must be eligible to be registered in the Specialist Division of the Medical Council Register in Paediatric Emergency Medicine.



6 THE FUTURE DIRECTION FOR THE SPECIALTY

This document has described an update on the status of PEM within Ireland in 2020. It also has outlined priority areas for development in the next ten years. These must include sub-specialty recognition of PEM by the Medical Council and, associated with this, a means to deliver fellowship programmes to the standard of international equivalents for trainees from both EM and General Paediatrics within Ireland. A further priority must be the delivery of Consultant in PEM appointments to ECNs outside of Dublin in order to deliver standardised PEM specialist supervised care equitably to children regardless of location throughout Ireland.

To conclude, the goals of the specialty of PEM in the years 2020 to 2030 are to:

- > Achieve formal Medical Council recognition.
- > Continue to deliver international standard fellowship training for candidates from EM.
- > Deliver an international standard fellowship training programme for candidates from General Paediatrics.
- > Be integral to the establishment of a world class National Children's Hospital.
- > Deliver modern paediatric emergency care in what will be the largest paediatric ED in Europe.
- > Have a Consultant in PEM in place in each 24/7 EDs in which children are treated.
- > Play an integral role in the development and delivery of a national trauma network for children.

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