INNOVATING FOR A HEALTHIER FUTURE

Emergency Medicine Programme

Model of Care 2025

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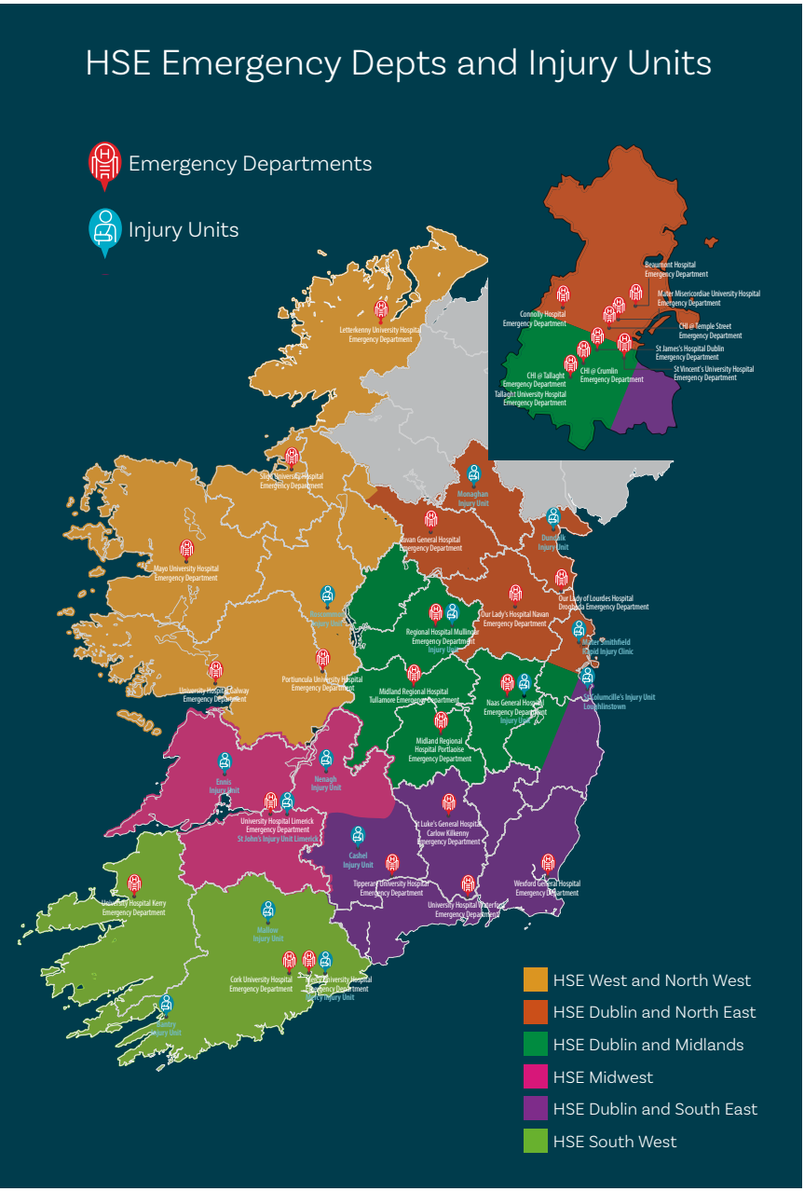
Contents

ABBREVIATIONS

AAP: American Academy of Pediatrics
ABF: Activity Based Funding
ACEP: American College of Emergency Physicians
ACP: Alternative Care Pathways
ADON: Assistant Director of Nursing
AED: Automated External Defibrillator
AFIS: Acute Floor Information System
AGS: An Garda Síochána
AMP: Acute Medicine Programme
AMAU: Acute Medical Assessment Unit
AMU: Acute Medical Unit
AP: Advanced Paramedic
APLS: Advanced Paediatric Life Support
APP: Alternative Pre-Hospital Pathway
ASAU: Acute Surgical Assessment Unit
ASTEM: Advanced Specialist Training in Emergency Medicine
BIU: Business Information Unit
CANP: Candidate Advanced Nurse Practitioners
CCCST: Certificate of Completion of Core Specialist Training
CDU: Clinical Decision Unit
CFR: Community First Responder
CHI: Children's Health Ireland
CLP: Consultation-Liaison Psychiatry
CNM: Clinical Nurse Manager
CNS: Clinical Nurse Specialist
CPD: Continuing Professional Development
CPH EMS: Copenhagen Emergency Medical Service
CSCST: Certificate of Successful Completion of Specialist Training
CSF: Clinical Skills Facilitator
CSP: Clinical Specialist Physiotherapist
CSTEM: Core Specialist Training in Emergency Medicine
DoH: Department of Health
DON: Director of Nursing
DSGBV: Domestic, Sexual or Gender-Based Violence
ECAP: Emergency Care Activity Profile
ECG: Electrocardiogram
ED: Emergency Department
EDITH: Emergency Department in the Home
EMEWS: Emergency Medicine Early Warning System
EMP: Emergency Medicine Programme
EMT: Emergency Medical Technician
FEDS: Feeding, Eating, Drinking and Swallowing
FFD: Frailty at the Front Door
FITT: Frailty Intervention Therapy Team
FRCEM: Fellow of the Royal College of Emergency Medicine
GEM: Geriatric Emergency Medicine
GP: General Practitioner
HCA: Health Care Assistant
HEMS: Helicopter Emergency Medical Service
HIQA: Health Information and Quality Authority
HIS: Health Information System
HIU: High-Intensity User
HSCP: Health and Social Care Professions/ Professionals
HSE: Health Service Executive
IAEM: Irish Association for Emergency Medicine
ICTS: Irish Children's Triage System
ICD-10: International Classification of Diseases 10th Revision
ICEMT: Irish Committee for Emergency Medicine Training
ICPOP: Integrated Clinical Programme in Older Persons
ICU: Intensive Care Unit
ID: Intellectual Disability
IFEM: International Federation of Emergency Medicine
IPATS: Irish Paediatric Acute Transport Service
IPC: Infection Prevention and Control
IR: Interventional Radiology
ISPTC: Irish Surgical Postgraduate Training Committee
IU: Injury Unit
KPI: Key Performance Indicator
LBBB: Left Bundle Branch Block
LBCT: Left Before Completion of Treatment
LGBTQIA+: Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, or Asexual
MAU: Medical Assessment Unit
MDT: Multidisciplinary Team
MICAS: Mobile Intensive Care Ambulance Service
MRCEM: Membership Examination of the Royal College of Emergency Medicine
MSW: Medical Social Worker
MTC: Major Trauma Centre
MTS: Manchester Triage System
NAS: National Ambulance Service
NCAGL: National Clinical Advisor and Group Lead
NCHD: Non-Consultant Hospital Doctor
NCP: National Clinical Programme
NCPPN: National Clinical Programme for Paediatrics and Neonatology
NDTP: National Doctors Training and Planning
NEOC: National Emergency Operations Centre
OT: Occupational Therapist
PAS: Patient Administration System
PAU: Paediatric Assessment Unit
PCC: Person-Centred Care
PCI: Percutaneous Coronary Intervention
PDSA: Plan-Do-Study-Act
PDU: Paediatric Decision Unit
PED: Paediatric Emergency Department
PEM: Paediatric Emergency Medicine
PET: Patient Experience Time
PFCC: Patient (Child) and Family-Centred Care
PHECC: The Pre-Hospital Emergency Care Council
POCT: Point-of-Care Testing
POCUS: Point-of-Care Ultrasonography
QQI: Quality and Qualifications Ireland
RANP: Registered Advanced Nurse Practitioner
RAT: Rapid Assessment and Treatment
RCEM: Royal College of Emergency Medicine
RCPCH: Royal College of Paediatrics and Child Health
RCPI: Royal College of Physicians of Ireland
RCSI: Royal College of Surgeons in Ireland.
SATU: Sexual Assault Treatment Unit
SAU: Surgical Assessment Unit
SDM: Senior Decision-Maker
SG: Staff Grade
SHO: Senior House Officer
SLT: Speech and Language Therapist
TSBTC: Time Seen By a Treating Clinician
TU: Trauma Unit
UCC: Urgent Care Centre
UEC: Urgent and Emergency Care
URG: Urgency-Related Group
WTE: Whole-Time Equivalent



Introduction

Welcome to the second edition of the *Emergency Medicine Programme (EMP) Model of Care*, which captures the significant change in the healthcare landscape since the original publication in 2012 (HSE). Over the past decade, significant developments have shaped Ireland's healthcare system. The introduction of Hospital Groups, the publication of the *Sláintecare Report* (DoH, 2017), and the establishment of Health Regions in 2025 have all marked key milestones. *Sláintecare* provides the overarching strategic framework for healthcare reform in Ireland, driving initiatives such as Enhanced Community Care. This approach prioritises delivering care as close as possible to the patient's home, provided it aligns with best practice for their needs. This strategy includes the development of community hubs to facilitate the management of chronic disease, contributing to ED avoidance through early intervention during any acute exacerbation of such conditions.

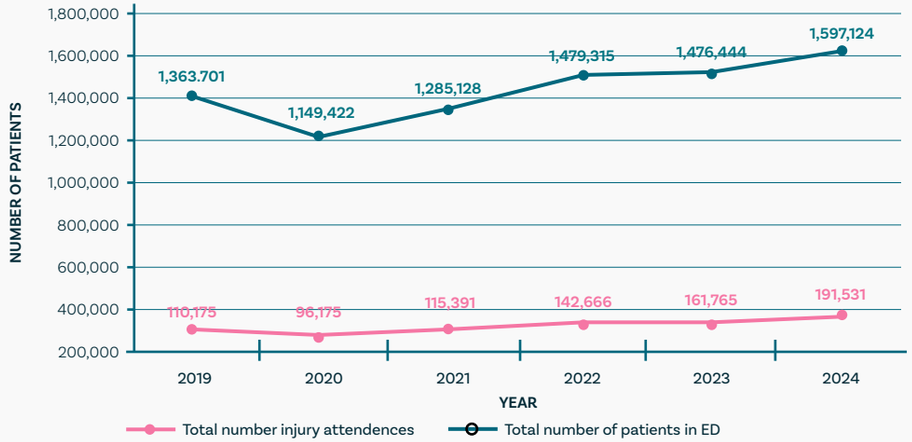
The central role of maintaining patient flow throughout the system has become increasingly recognised, as has the harm associated with keeping patients on ED trolleys for prolonged periods (Jones *et al.*, 2022). In the interest of patient safety and for successful implementation of this Model of Care, it is imperative to eliminate crowding in EDs, i.e. the accumulation of patients who have finished their ED episode of care and are awaiting transfer to an inpatient bed after the decision to admit. If a patient requires an overnight admission, they are always best served by being admitted to the appropriate ward as early as possible in their journey. Boarding of inpatients in EDs and Acute Floor units, which are not designed or staffed for inpatient care, results in poorer care at greater expense.

Since 2012, the population has grown by 15% (from 4.45 million to approximately 5.25 million in 2024). The greatest percentage increase is among those >70 years, with the number of those >85 years increasing by 25% since 2016 (CSO, 2023). This population increase has several effects, many of which place fresh demands on the Urgent and Emergency Care (UEC) system. The significant increase in the population of older adults and net inward migration is happening at a time when there is a widely

acknowledged national shortage of General Practitioners (GPs). In 2022, only one GP practice in five was in a position to take new General Medical Services (GMS) Scheme patients, and only one in four was able to take new private patients (ICGP, 2022).

The public health restrictions, changes in clinical practice, rapidly changing clinical guidelines and many other aspects of the COVID-19 pandemic combined to make it an unanticipated and immediate challenge to the delivery of healthcare, both for COVID-19-related conditions and for 'business as usual' in terms of the healthcare needs of the general population. Some benefits that have arisen from the adjustments in community and hospital care include the increased use of virtual consultation in the delivery of healthcare. However, some patients presenting to EDs report that they find the widespread use of virtual consultation less satisfactory than in-person consultation. This may be a further driver of increases in ED attendances (see *Figure 1*).

Figure 1 **Total number of ED attendances and Injury Unit attendances, by year (N=9,159,837)**
(Source: PET Data, BIU)



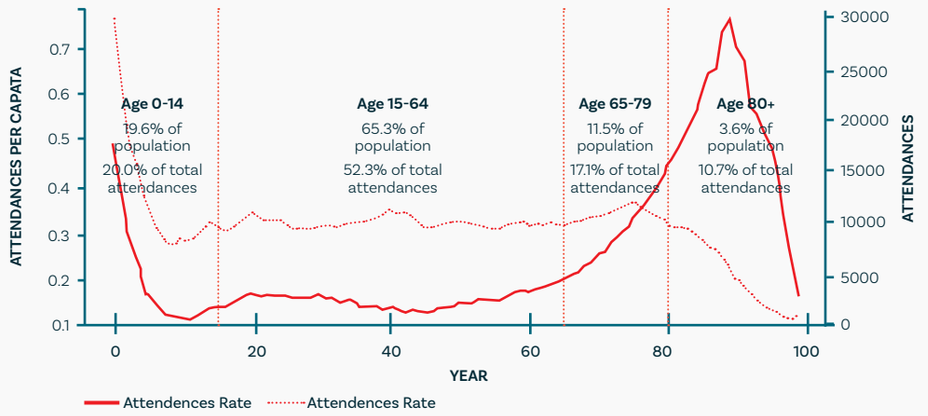
The "Better Data, Better Planning" study (Cummins *et al.*, 2022), funded by the Health Service Executive (HSE) as a collaboration between EMP and University of Limerick, is a cross-sectional, multi-centre study investigating the factors influencing patient attendance at EDs in Ireland. It develops a profile of ED attendees across rural and urban ED settings and looks at the reason for attendance from the perspective of the patient.

This work identified that the key variables in determining ED attendance are:

- Age;
- Socioeconomic status;
- Distance to GP;
- Public awareness of Alternative Care Pathways (ACPs), including Injury Units (IUs);
- Accessibility of diagnostic services.

Figure 2 shows age-specific ED attendance rates across the decades of age, illustrating a steep increase in older adults accessing ED.

Figure 2 **Age-specific ED attendances and rate per capita, 2022**
(Source: National Clinical Advisor and Group Lead Older Persons)



The delivery of care to the over 1.6 million patients (Business Information Unit (BIU) Patient Experience Time (PET) data) who presented to the 28 24/7/365 EDs and associated satellite units in Ireland in 2024 requires a highly structured approach, beginning with the recognition of the urgent clinical need for intervention at triage. Since the early 2010s, EMP has made recommendations in many key areas of the practice of Emergency Medicine (EM), emergency nursing and the increasingly multidisciplinary blended healthcare professional team now working in EDs. These recommendations include a structured clinical handover of the emergency patient from pre-hospital practitioners to hospital staff, a customised triage system for children (recognising that children become ill for different reasons than adults), a mental health triage tool for patients presenting with acute mental health needs, and regular board rounds and staff huddles to increase awareness of the different stages of the care journey for each patient in the ED. A large number of guidelines, relevant to the practice of EM, are available from the Irish Association for Emergency Medicine (IAEM).

The geographic distribution of the Consultant in EM workforce by Human Resources as of June 1st, 2024, is shown in *Table 1*. This breaks the workforce down by hospital type and also shows the ratio of consultants per 100k population. There has also been a significant increase in Registered Advanced Nurse Practitioner (RANP) numbers, from 42.6 to 145. In addition, there are 58.5 Candidate Advanced Nurse Practitioners (CANPs), and their areas of practice have been diversified within the ED. Furthermore, the Health Research Board-funded OPTIMEND study (Trépel *et al.*, 2024; Cassarino *et al.*, 2019) has clearly shown the many benefits of a team of Health and Social Care Professionals (HSCPs) intervening in the ED care journey of a select group of ED patients.

Table 1 **Regional distribution of Consultants in EM workforce (WTE) by hospital acuity level in publicly funded EDs, June 2024** *(Source: Health Service Executive, Doctors Integrated Management E-system)*

Health Region	Model 4	Model 3	Model 2	Specialist Paediatric	Other*	Total	Consultanst/ 100k**
Dublin & Northwest	18.55	17.76	0.46			36.8	2.99
Dublin & Midlands	16.49	15.53				32.0	2.79
Dublin & Southwest	14.92	7.29	0.46		0.50	22.9	2.99
South-Southwest	14.67	7.29	0.46		0.50	22.9	2.99
Midwest	11.64		0.36			12.0	2.82
West-Northwesy	5.14	21.70	0.36			27.2	3.50
CHI				21.34		21.3	1.99
National Ambulance Service					2.03	2.0	
Total	**81.4**	**74.2**	**2.2**	**21.3**	**3.0**	**182.1**	**3.57**

** 'Other' locations include academic institutions and the National Ambulance Service.*

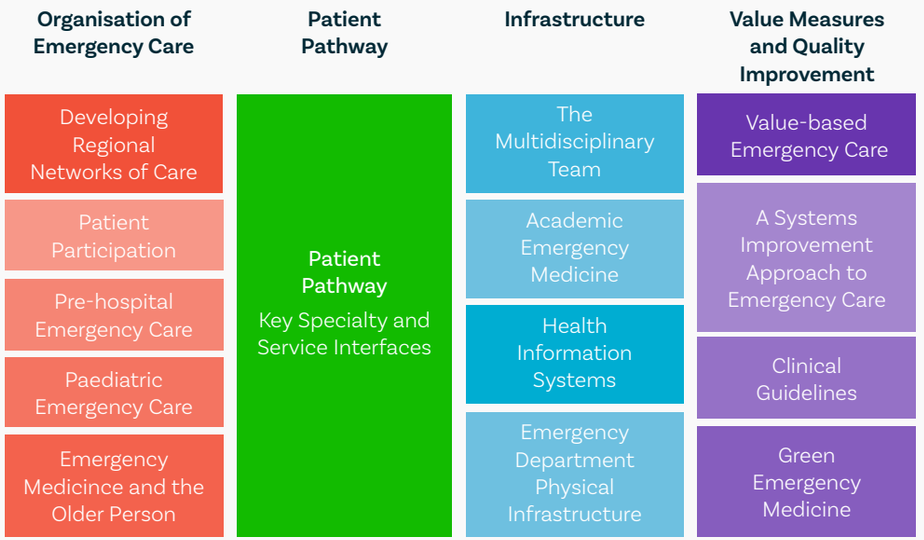
*** Consultants/population ratios were determined using the population for each HR as recorded by the Health Intelligence Unit of the HSE. [4]*

‡ The ratios for CHI were determined using the national paediatric population, i.e. the national U16 years of age.

In this update, we have merged some chapters from the 2012 publication (HSE, 2012), e.g. the Patient Pathway now incorporates a number of previously distinct chapters and others have been updated to reflect service developments in areas such as Children's Emergency Medicine, Trauma Networks, Acute Floor services, Pre-hospital Emergency Medicine, and Transport Medicine. We have also added some new chapters, particularly in the areas of emergency care of the older person in the ED and the Green ED.

While recognising that the core business of EM is the delivery of appropriately prioritised, high-quality emergency care to the patients who present to our EDs, sometimes in circumstances where the patient's past and recent medical history is not available to inform decision-making, the delivery of such care must be carefully planned for. Accordingly, we have divided this updated publication into four separate but interrelated pillars, as shown in *Figure 3*.

Figure 3 The four pillars of the EMP Model of Care



The EMP team would like to thank our many colleagues who have, together and individually, given their time and expertise to ensure that the contents of this update reflect current practice in EM and emergency nursing, and in the developing broader multidisciplinary team (MDT) delivering care to patients in EDs. It finishes with some thoughts on opportunities and challenges in the future. The EMP team hopes that you find this update of the *Model of Care* interesting and informative.

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Pillar One
Organisation of Emergency Care

Pillar One
Organisation of Emergency Care

Organisation of Emergency Care Summary

This section advocates for a region-based approach to emergency care in Ireland that integrates modern medical practices and specialised care pathways to improve patient outcomes and operational efficiency in EM.

The current and proposed structures for UEC within Ireland's public healthcare system are outlined. This section also details the networks and models designed to improve emergency care delivery and introduces standards across various specialised units and care modalities.

Image courtesy of the HSE © 2025

Developing Regional Networks of Care

Key points

Current system: The current public system of unscheduled emergency care includes general and specialised EDs, IUs and direct transfers to specialised units, bypassing local facilities when necessary.

Integrated emergency care: Emphasising the Sláintecare principles of "right care, right place, right time", Pillar One reflects the changes that have occurred across the health system, including the proposed Acute Floor model, integrated critical care services, development of trauma systems and a parallel focus on enhancing the role of smaller hospitals.

Specialised networks: The emergence of and demand for networks of specialised care, including Trauma, Reperfusion Services for Myocardial Infarction, Interventional Stroke Services, and Clinical Maternity Networks, is discussed. These networks are designed to streamline care in response to available evidence and emerging advances in medicine, ensuring that patients receive specialised interventions rapidly and efficiently.

Emergency care of people at the extremes of age: Specific sections are dedicated to optimising emergency care for children and older adults, reflecting tailored approaches to these demographics, including adjustments in medical staffing, clinical guidelines and patient-centred care standards.

Recommendation: Health Regions should establish regional networks of UEC that prioritise comprehensive models, ensuring widespread coverage and accessibility. These networks should be designed to effectively meet the needs of their communities, addressing both demand management and emergency care requirements.

Developing Regional Networks of Care

UEC, at its simplest, includes that which is delivered by the patient, their carer or a bystander, e.g. cleaning and covering a wound, application of pressure to control haemorrhage or the delivery of cardiopulmonary resuscitation, including the use of automated external defibrillators where appropriate. It spans the full spectrum from this locally delivered immediate care, through that delivered in IUs and Medical Assessment Units (MAUs), EDs and the direct transfer of patients by ambulance to units capable of meeting a patient's emergency needs (e.g. unhindered access to a Major Trauma Centre, cardiac catheterisation laboratory, obstetric unit or stroke thrombectomy centre). Such direct transfers bypass local units where the patient's needs cannot be met in that unit.

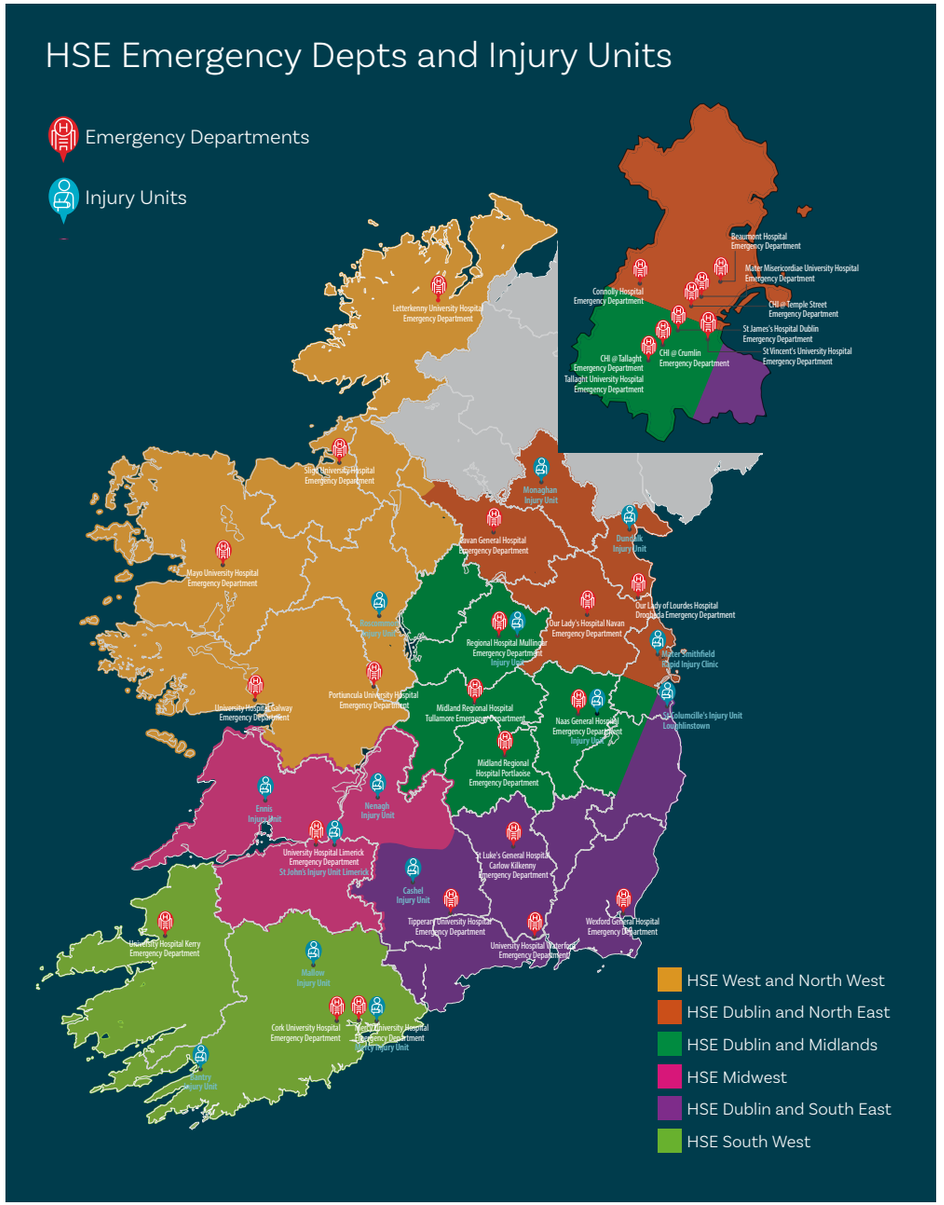
Current configuration of Urgent and Emergency Care delivery in the Irish public healthcare system

Patients can seek same-day appointments with their GP or local out-of-hours GP service, although they may not always be able to get a same-day appointment due to capacity issues in primary care.

A number of EDs in the greater Dublin region provide UEC to patients aged 16 years and older. Children seeking same-day unscheduled care in the greater Dublin region are seen in the two Paediatric EDs, one Paediatric Emergency Care Unit and one Urgent Care Centre (UCC), each run by Children's Health Ireland Hospital Group. Outside of the Greater Dublin Region, adults and children attend mixed EDs that cater for patients of all ages. Patients can self-refer or be referred by their healthcare practitioner.

There are 14 IUs in Ireland, to which patients can also self-refer or be referred by their healthcare practitioner if they have injuries that are neither life-threatening nor limb-threatening.

Patients with particular conditions may also be referred by their GP to one of the 15 Acute Medical Assessment Units (AMAUs), 7 Acute Medical Units (AMUs) or 5 Acute Surgical Assessment Units (ASAUs) in Model 3 or Model 4 hospitals or one of the



7 MAUs in Model 2 hospitals. Some hospitals outside of Dublin also run Paediatric Assessment Units (PAUs) or Paediatric Decision Units (PDUs), to which children needing urgent assessment and/or treatment for medical conditions can be referred by their GP or EM staff in some instances.

Since the early 2010s pre-hospital services have been enhanced, facilitated by appropriately specialised paramedics tasked by the National Emergency Operations Centre (NEOC), and the tasking of EM doctors (or relevant HSCPs) to go to the scene of the emergency when the patient's emergency need appears to be of lower acuity. Such services are aimed at dealing with the patient's emergency in a safe and satisfactory manner without the requirement to convey them to the ED by ambulance.

Current configuration of Urgent and Emergency Care delivery in the private healthcare system

Since the late 2010s, several private healthcare providers have opened facilities offering urgent care to patients. These units have various names, variable hours and days of opening and offer different types of services to selected groups of patients with urgent or emergency needs. These very heterogeneous services are outside the governance of the public healthcare system.

Important reports and recommendations

Smaller Hospitals Framework

The Health Information and Quality Authority report into the Mid-Western Regional Hospital (MWRH) Ennis (HIQA, 2009) highlighted the need for the Department of Health (DoH) and HSE to consider any required changes in hospitals with a similar profile to MWRH Ennis.

Securing the Future of Smaller Hospitals: A Framework for Development (DoH, 2013), was the DoH and HSE's response to HIQA's report. It outlined a Smaller Hospitals Framework that described the important role of Model 2 hospitals in the delivery of scheduled and unscheduled care. New care pathways were designed to minimise the risk to patients whose time-critical needs clearly exceed the capacity of such a hospital.

The establishment of Medical Assessment Units (MAUs) has enabled a defined cohort of patients with acute medical illnesses to be managed locally in Model 2 hospitals. This includes patients whose conditions have been assessed as safe for treatment by an appropriate healthcare professional, such as their GP, or by ambulance services for specific presentations. Similarly, the establishment of Injury Units (IUs) with clear criteria for treatment eligibility has demonstrated the ability of patients, carers, and ambulance services to identify suitable cases, ensuring that individuals with fractures, joint dislocations, or other forms of non-major trauma receive timely and appropriate care close to home. Attendance at IUs has grown steadily, with 191,531 patients treated in 2024, reflecting the success of these units in providing accessible and efficient care. The planned expansion and standardisation of operations across additional Injury Units (IUs) in the 2025 Programme for Government (Department of the Taoiseach, 2025) and National Service Plan 2025 (HSE, 2025) highlights the success and effectiveness of this care model.

A Trauma System for Ireland: Report of the Trauma Steering Group

A Trauma System for Ireland: Report of the Trauma Steering Group (DoH, 2018) recommended the establishment of the National Office for Trauma Services to implement the Inclusive Trauma Network Model recommended in the report. It recommended the establishment of two Trauma Networks. Each network will have a Major Trauma Centre tasked with the management of patients that have suffered major trauma, heading up a wider network of Trauma Units where EDs deliver trauma care for less complex cases. Local Emergency Hospitals will continue to provide Emergency Department services to patients with illnesses requiring urgent treatment and injuries of a lesser severity but will not manage major trauma cases. Injury Units will continue to provide treatment for broken bones, dislocations, sprains, strains, wounds, scalds and minor burns that are unlikely to need admission to hospital.

The National Paediatric MTC will be in the National Children's Hospital, with Regional Paediatric Trauma Units elsewhere in Ireland.

The National Trauma Strategy recommends the development of University Hospital Galway (UHG) as a Trauma Unit with Specialist Services (TUSS), given the breadth and depth of services provided and travel distance from the nearest MTC. It will have

additional resources and expertise above Trauma Unit status, providing specialist services in spinal and plastic surgery, and be equipped to manage most major injuries. The designation of UHG as a TUSS recognises the enhanced role the hospital plays in trauma care in the West and North West.

TUs will accept patients with traumatic injuries and will provide definitive care for the majority of these where appropriate resources and expertise are available. TUs will be able to resuscitate and stabilise injured patients, deliver definitive care when appropriate, and safely and efficiently transfer patients to an MTC or TUSS when required. Tallaght University Hospital and St Vincent's University Hospital will be the two TUs in Dublin. There will be eight TUs outside of Dublin: Our Lady of Lourdes Hospital Drogheda, University Hospital Waterford, Midland Regional Hospital Tullamore, Letterkenny University Hospital, Sligo University Hospital, Mayo University Hospital, University Hospital Limerick, and University Hospital Kerry.

Progressing the delivery of the TUSS and the TUs nationally will allow for a strategic alignment between trauma and scheduled care to deliver both in an efficient way, ensuring the realisation of improved efficiencies in patient flow throughout the Trauma System.

The national strategy recommends that patients with significant trauma are received by a Consultant-led trauma team. Furthermore, an individual rehabilitation prescription for every victim of major trauma will start as soon as possible after the incident, availing of local, regional and supra-regional expertise. The report highlights the need to invest heavily in the provision of seamless, efficient rehabilitation services that allow the trauma patient make the best possible recovery.

Networking recommendations from other National Clinical Programmes

The synergy of recommendations from various National Clinical Programmes has improved direct access to time-critical emergency care for all patients rather than just those living close to the particular hospital that delivers that service. Examples of such care include:

- A Networked Reperfusion Service for Myocardial Infarction has been established based on recommendations from the National Acute Coronary Syndrome Clinical Programme.
- Two national centres for Endovascular Thrombectomy have been set up, as recommended by the National Thrombectomy Service and the National Clinical Programme for Stroke. Further satellite thrombectomy services on the south side of Dublin or in the west of Ireland may be needed in the future depending on trends in demography and incidence. However, modelling of any future developments will consider the expertise and procedural volume required for safe effective services.
- *The Surgery for Ireland Report: Report of the Short-Life Working Group on the Provision of Emergency Surgery* published by RCSI in 2023 recommended the delivery of emergency surgery by a mix of 24/7/365 Emergency Surgery Centres (ESCs), which are analogous to hub EDs, and smaller networked units that have reduced hours of availability for less complex emergency surgery.
- The National Maternity Strategy – *Creating a Better Future Together 2016-2026* (DoH, 2016) describes a remodelling of the governance structure of Irish maternity services to become managed clinical maternity networks.
- *Developing an Acute Floor Model for Ireland* (HSE, 2017) outlined how Emergency Medicine, Critical Care, Acute General Surgery, and Acute Medicine are complementary systems of patient care. These services would, ideally, be co-located on an Acute Floor. Ready access to Trauma and Orthopaedics, Cardiology and Paediatrics is also considered important.

Networking of Urgent and Emergency Care

Since the first EMP Model of Care was published in 2012 (HSE, 2012) there have been many welcome developments in the delivery of UEC, with further improvements planned in the next few years.

At the **most complex end of UEC**, these developments include the ongoing implementation of Trauma Networks provision of pre-hospital critical care by specialist paramedics, doctors and nurses; unhindered access to 24/7/365 cardiac catheterisation units across Ireland; development of specialist stroke thrombectomy services and consultant-led inter-hospital transfers of patients requiring critical care.

At the **intermediate level of complexity**, these developments include the opening of a UCC for children requiring UEC on the campus of Connolly Hospital, Blanchardstown and robust and generally well-understood inclusion criteria for patients seeking to attend IUs (patients who would otherwise have attended EDs). Developments in the model of care delivered by the National Ambulance Service (NAS) include the delivery of high-quality care to certain groups of patients previously requiring an ED visit at the site where the need for care arises, be that at the roadside, workplace or home. These services include the Alternative Pre-Hospital Pathway (APP) car, the ED in the Home (EDITH) service, and the Pathfinder services. HIQA is currently completing a health technology assessment (HTA) of an alternative telephone pathway for acute, non-urgent care needs in the pre-hospital setting (HIQA, 2024).

The recommendations from the Model of Care for General Paediatric Surgery (HSE, 2024) about delivering networked care is an important contribution to the journey towards regional networks of emergency care.

The 2023 establishment of a National Clinical Programme for **Interventional Radiology** (IR) is another significant and welcome development in the journey towards networking of emergency care. The skill set of interventional radiologists has allowed life-threatening or other serious haemorrhage to be controlled by placing a catheter in the blood vessel in a growing number of cases rather than by more invasive open surgery. When successful, a speedier recovery is achieved, with less of the general deconditioning of body tissues, longer hospital stays and immobility associated with major surgery. Only two out of the six health regions have a full 24/7/365 out-of-hours IR service with a formal rota, and the IR programme recommends this to be established for each health region. Immediate access to invasive open surgery is essential when the agreed IR intervention is insufficient to completely control life-threatening or other serious haemorrhage, so such services will be co-located with Emergency Surgery Services. Clear pathways of care are needed to allow suitable patients in other hospitals to access IR via networks of emergency care.

Right care in the right place at the right time

The introduction of the Sláintecare (DoH, 2017) reforms with the aim of "equal access according to need, regardless of ethnicity, gender, age, social status or ability to pay" has paralleled the developments described above. One of Sláintecare's driving principles is that of providing the right care in the right place at the right time.

ENHANCED COMMUNITY CARE

The Enhanced Community Care initiative aims to avoid hospital admission through initiatives that see care delivered within the community, at or near a person's home insofar as possible.

PRE-HOSPITAL CRITICAL CARE PROVISION

This is critical care provided at the site of the incident by some specially trained GPs, all advanced paramedics and some EM and critical care doctors and nurses, when tasked to attend by the NAS.

INTER-HOSPITAL CRITICAL CARE PROVISION

This is a Consultant-led service operating out of hubs in Dublin, Cork and Galway. It provides inter-hospital transfers of patients who have experienced unexpected deterioration requiring critical care interventions while in a hospital that does not have the capacity to provide the required level of care. Its availability should not be used as a reason to bring patients who clearly need such a level of critical care to a hospital not equipped to provide it.

Regional Networking of emergency care

Bringing resuscitative skills to the scene of the emergency, assessing and determining the patient's needs and then transporting them to the hospital that can meet those needs clearly leads to better patient outcomes for particular emergencies. EMP recommends the networking of emergency care. The establishment of health regions with the intention of providing as much emergency care as possible within the health region but also clearly identifying those patients who need to go to particular hospitals to meet their needs, even if outside the health region, is welcome.

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EMP Recommendations

The modernisation of Ireland's emergency care system, as outlined in this pillar, marks a transformative step toward delivering high-quality, equitable, and patient-centred care. By integrating regional emergency networks aligned with *Sláintecare* principles, the system is moving toward ensuring the right care is delivered in the right place at the right time. Initiatives such as the development of the Trauma Network and the Enhanced Community Care programme have already demonstrated their potential to improve patient outcomes and operational efficiency. However, the growing and evolving demands of healthcare require continued investment in regional infrastructure, accreditation processes and the development of specialised care pathways. HIQA is currently completing a health technology assessment (HTA) of an alternative telephone pathway for acute, non-urgent care needs in the pre-hospital setting (HIQA, 2024).

Addressing the needs of vulnerable populations, such as children and older individuals, through tailored care pathways and age-appropriate clinical guidelines will ensure that the system remains inclusive and responsive. Age-specific considerations, such as staffing and patient-centred standards, will play a critical role in improving outcomes for these groups.

A data-driven approach to decision-making is essential to support the continuous improvement of regional emergency networks. Systems to monitor patient outcomes, resource utilisation, and service efficiency will provide critical insights for future planning and policy development.

By adopting a collaborative, networked, and inclusive approach, Ireland's emergency care system can become more resilient and efficient. Implementing these recommendations will enhance patient safety, optimise resource use, and support the realisation of *Sláintecare's* vision of universal and equitable access to care.

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Patient Participation in Emergency Care

EMP advocates for a system of emergency care organised around patients' needs that provides high-quality care no matter when or where patients seek emergency help. Patient advocates have been consulted during the development of the *Model of Care*, and implementation of the programme's recommendations will ensure ongoing patient participation in the provision of emergency care and its future strategic development.

Patient experience of Emergency Department care

Patient experience describes the collection of individual patients' experiences of care through surveys that do not rate satisfaction (on the basis that satisfaction is not a clearly defined term) but instead ask people to indicate whether particular interactions, events or processes occurred during their episode of care (The Society for Cardiothoracic Surgery in Great Britain and Ireland, 2011). The *National Inpatient Experience Survey 2022* (HSE, 2022) only included ED patients who were admitted to hospital, not the majority (75%) who were discharged from the ED. Of those who attended the ED and were subsequently admitted, 80% said they were always treated with respect and dignity in the ED. However, long waits for admission were highlighted, with just 28.9% of people (2,141) saying they were admitted to a ward within the HSE's target of 70% of patients being admitted or discharged within 6 hours. In total, 334 people (4.5%) said they waited 48 hours or more before being admitted to a ward. To further understand the patient experience, EMP recommends that an experience survey be offered to all ED patients rather than only those who were admitted to hospital.

A 2018 study found that the most commonly identified drivers of ED patient experience include communication, wait times and staff empathy (Sonis *et al.*, 2018). This was corroborated in an Irish study which looked at the factors that affect ED patient experience (Swallmeh *et al.*, 2018).

Patient experience is a key outcome measure for health services, and patients can send feedback on their experience of any HSE service through Your Service Your Say.

Standards of care

The *National Standards for Safer Better Healthcare* (HIQA, 2012) require that services are provided in a patient-centred manner that respects patients' values, preferences, needs and rights and actively involves them in the provision of care. In 2018, the Department of Health published *Supporting a Culture of Safety, Quality and Kindness: A Code of Conduct for Health and Social Service Providers* (DoH, 2018), which aims to:

> ensure the safety of those that access our services, simultaneously striving to ensure that the quality of these services is always improving and establishing that the primary obligation of anyone working in health or social services is to proactively advocate within their organisation in the best interest of service users, treat them as they would a family member and challenge others to do the same. (p. 3)

The guiding principles for care standards are:

- **Patient centeredness/putting people first;**
- **Kindness, dignity and respect;**
- **Openness and transparency, honest communication, learning and accountability;**
- **Excellence, effectiveness and efficiency;**
- **Working together/teamwork and patient/family involvement.**

Patient participation in emergency care

Patient representation is recommended at both national and hospital levels. EMP recommends that hospitals engage with service users in a structured and regular manner and that quality improvement initiatives based on service-user feedback are successfully completed. EMP recommends that ED/IU responses to service users' complaints, feedback or compliments be reviewed as part of the unit's routine clinical governance function. Clinical guidelines and protocols will enhance the provision of equitable standards of care for patients in all emergency care settings, while patient representatives enhance their development.

EMP Recommendations

EMP recommends that patients be encouraged to become partners in the delivery of high-quality emergency care through patient representation at national and hospital level.

To further understand the patient experience, EMP recommends that an experience survey be offered to all ED patients rather than just those who were admitted to hospital.

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Pre-Hospital Emergency Care

The term pre-hospital emergency care is now regarded as something of a misnomer as it implies that the patient journey will always result in a journey to hospital. Increasingly, patients are transported to destinations other than EDs or not transported at all.

Stakeholders in the development of pre-hospital emergency care include EM as well as other specialties, the Pre-Hospital Emergency Care Council (PHECC), the statutory ambulance services – the NAS and Dublin Fire Brigade – voluntary ambulance services, private ambulance services, the Defence Forces, and CFRs.

Progress to date in the field of pre-hospital care

Significant progress has been made in pre-hospital care services since the first EMP Model of Care (HSE, 2012). These include:

- The NAS undergoing significant reorganisation and aligning with HSE health region structures. In addition to an enhanced management structure, clinical governance has also been enhanced with the appointment of a full-time Clinical Director, three part-time Deputy Clinical Directors, a Director of Paramedicine, Senior Clinical Pharmacist and others to support the development and delivery of pre-hospital care.

- ACPs have been developed in collaboration with EM and other acute services, including:
  - ~ Pathfinder – a model where a Clinical Specialist Occupational Therapist (OT) Physiotherapist and NAS Advanced Paramedic seek to avoid hospital admission where appropriate in older patients with low-acuity presentations. As of 2024, Pathfinder is operating from eight sites;
  - ~ Alternative Pre-Hospital Pathways – a middle-grade doctor in EM and NAS Emergency Medical Technician (EMT), seeking to avoid hospital admission in suitable patients who call 999/112;
  - ~ EDITH runs as a 7-day service seeking to avoid admission and identify alternative care options, primarily for frail older patients in the community.
- PHECC and the NAS have developed specialist paramedic roles (particularly Community Paramedic and Critical Care Paramedic roles) which will further enhance the delivery of pre-hospital care across the full spectrum of patient presentations.
- The NAS has developed an aeromedical strategy describing the future role of aeromedicine in the provision of Helicopter Emergency Medical Service (HEMS) (primary scene response), retrieval and international medical transport.
- The PHECC has developed and published updated clinical practice guidelines, including protocols for the non-conveyance of certain patients to the ED.
- The NAS is piloting alternative models of patient transport, including:
  - ~ Transport of selected cases to an MAU or IU;
  - ~ Self-conveyance in appropriate cases.
- The NAS has developed a clinical hub in the NEOC which aims to identify an appropriate response to low-acuity calls (including not dispatching an emergency ambulance where appropriate) and to upgrade low-acuity calls using clinical judgement and validated protocols. The clinical hub is staffed by specialist paramedics, nurses and doctors, and has the potential to enhance the availability of online decision support in the NEOC.
  - ~ A National Out-of-Hospital Cardiac Arrest Strategy has been developed to increase the survival rate from out-of-hospital cardiac arrest. An implementation plan has been funded, including provision of:
    - Automated external defibrillator (AED) for CFRs;
    - A national AED registry.
- The National Trauma System has commenced development. A Trauma Triage Tool has been developed to guide primary patient reception destination when MTCs and TUs are operational. The 1800 TRAUMA telephone contact process managed by the NEOC is facilitating inter-hospital referral of patients to MTCs.
- The NAS also provides a comprehensive inter-hospital retrieval service via the NAS Critical Care and Retrieval Services (NAS CCRS), which operates the National Neonatal Transport Programme, the Irish Paediatric Acute Transport Service and the Mobile Intensive Care Ambulance Service (MICAS). MICAS and Irish Paediatric Acute Transport Service (IPATS) have expanded to 7-day operations.
- During the COVID-19 pandemic, the NAS provided significant assistance to the HSE in the roll-out of swabbing and mass vaccination while maintaining usual ambulance activity. While this posed significant challenges to the service, it demonstrated the versatility of a professional mobile healthcare resource.

Current opportunities and challenges

Opportunities

- The COVID-19 pandemic increased demand on healthcare generally and the consequent demand on pre-hospital resources forced new ways of thinking and working. This provides an opportunity to develop an enhanced pre-hospital emergency care system.
- ACPs will continue to be a necessary and growing part of this system along with new roles such as community paramedicine.
- Specialist paramedicine roles will require support from the wider health service in training and ongoing competency maintenance. This presents the opportunity for new models of working with part of a paramedic's time spent in non-traditional settings such as primary care, critical care or the ED.

- The reorganisation of the HSE into six health regions, along with centralised specialist care (in areas such as trauma, paediatrics, stroke thrombectomy and acute cardiac care) presents an opportunity to enhance the pre-hospital emergency care system to enable these models of care.
- The Sláintecare Report (DoH, 2017), encourages the delivery of patient care at the lowest suitable level of complexity closest to the patient's home. There are opportunities for pre-hospital emergency care to enable this by:
  - Non-conveyance, where appropriate;
  - Conveyance to an IU or MAU, where appropriate;
  - Delivery of critical care at scene and in transit to enable conveyance to a specialist centre;
  - Repatriation of the patient to a facility closer to their home as soon as clinically appropriate.
- Additional career models in the paramedicine profession will enhance recruitment and retention of staff, including HSCPs.
- There will be opportunities for EM doctors to train and work in components of the pre-hospital emergency care system. Doctors are already employed in NEOC, the NAS Clinical Directorate and Critical Care Retrieval Services. Fellows have been appointed in both NEOC and the Critical Care Retrieval Services, and several Consultants in EM have split appointments or secondments with various components of the NAS.

Challenges

- Healthcare demand is increasing globally, and the effect is felt earliest in the emergency care system and pre-hospital arena. It is not sustainable to attempt to expand the traditional model of pre-hospital emergency care exponentially in order to keep pace with demand.
- New models of care, as described above, are essential components in moving from a traditional Emergency Medical Service to a 'Mobile Medical Service'. This aligns with the NAS Strategic Plan and recognises that patients who call 999/112 will not always require or receive an ambulance response, much less automatic conveyance to an ED.
- Ireland's population is ageing. There are 806,300 people aged 65 and over living in Ireland (April 2023) (CSO, 2023), and this number has increased by 153,900 (23.6%) since 2017. This is more than three times the rate of growth in the overall population and faster than elsewhere in the European Union. Population growth projections for older people suggest that the proportion of Irish people aged 65–84 years will increase by 60%, and aged ≥85 years by 149% by 2042. Pre-hospital care will have to evolve to meet this demand by having a workforce that understands frailty, chronic disease and polypharmacy, developing pathways that allow older people to be treated in or close to their home, and building relationships with older person services in both hospitals and the community.
- Demands on acute hospital capacity impact on ambulance turnaround times. It is an inefficient use of ambulance resources to be delayed in the ED waiting to hand over a patient; that ambulance and crew are unavailable for further emergency calls until the handover has taken place. Hospital crowding is recognised as the root cause of ED crowding and ambulance turnaround delays. Nonetheless, local initiatives to improve turnaround times have shown an impact, and EMP recommends that this focus continues and expands.
- Ireland's geography is rural and dispersed. This poses challenges in ensuring equity of access to care. The role of alternative models of response, including volunteers such as CFRs and off-duty healthcare providers, have an important role in supplementing statutory ambulance response. Equally, the ambulance services have an important role in enabling patient access to care in both specialist centres (where necessary) and in repatriation closer to home (when appropriate). This will require additional resourcing of both land and air resources.
- Ireland's health infrastructure lacks widespread access to HEMS and retrieval at receiving hospitals. Investment in appropriate helipad infrastructure is required at all acute hospitals where patients may be transferred in or out.
- To support the National Trauma System and other models of centralised specialist care, pre-hospital care will need increased staff numbers, increased facilities for deployment (by land and air) and an enhanced clinical skill set (including critical care).

- To prepare for the possibility of a future multiple-casualty incident in Ireland, it is essential to develop and maintain robust Major Emergency Plans. These plans require an integrated approach to planning and coordination among the acute hospital system (including Emergency Medicine), the National Ambulance Service (NAS), and the National Steering Group for Major Emergencies. This collaboration will ensure a cohesive and effective response to complex emergencies, prioritising preparedness, resource allocation, and communication.
- Care at events remains an area where updated guidance is necessary for organisers, care providers and members of the public in attendance.
- Cross-border working – mutual support between the NAS and the Northern Ireland Ambulance Service (NIAS) on either side of the land border with Northern Ireland has long been a feature of the health services in both jurisdictions. Brexit and the Windsor Framework have presented some issues which will require resolution, e.g. in the areas of professional practice and medication supply.

The impact of the current drive to shift care to the community

Moving care into the community will result in a shift in thinking and operations from an Emergency Medical Service to a Mobile Medical Service. Where community care is the preferred option, networking of emergency care and the pre-hospital emergency care system can enable this by providing the ACPs described above.

Where such care in the community cannot be successfully achieved, it is important that other community and potentially secondary care resources are brought to bear and that care does not automatically default to the NAS or the ED to provide the safety net for that patient. Where emergency pre-hospital care or transport is required, however, calling the ambulance service is appropriate.

Pre-hospital Navigation

Galway University Hospitals (GUH) has successfully piloted the Acute Integrated Pre-admission Navigational Hub, a programme designed to reduce Emergency Department (ED). The hub enables General Practitioners (GPs) to refer patients to a virtual navigation centre, where they are directed to the most appropriate care pathways, avoiding unnecessary ED visits. Alternative pathways included direct referrals to hospital services, urgent outpatient appointments, or community specialist hubs.

Similarly, the Urgent Virtual Care (UVC) service, introduced by the Health Service Executive (HSE) South West, enhances patient experience through a centralised hub at Cork University Hospital. UVC enables GPs and paramedics to consult senior clinicians via phone or video, ensuring timely care in appropriate settings, including home care or community services. These initiatives exemplify the principles of "right person, right place, right time, first time." Both models highlight the importance of integrated care pathways, ensuring patients receive tailored, clinically safe, and efficient care, while safely diverting people to appropriate alternative urgent care.

The future of pre-hospital care

The future of pre-hospital care will include a multi-professional, multi-skilled model delivering a wide spectrum of care from 'hear and treat' to critical care transport. This will include a move away from the traditional model of ambulance conveyance to ED, although this will still be appropriate for many patients.

An increasing professionalisation of the paramedic workforce will result in degree-educated paramedics (already a PHECC policy) and opportunities for subspecialisation in different facets of care. There are opportunities to develop the roles of the NAS and HSCPs and to offer career progression to HSCP through advanced practice, thus ensuring broad senior decision-making among the paramedical MDT.

- Enhanced community services will enable care for patients in their own home by Community Paramedics and ACP teams in collaboration with the patient's GP, Integrated Care Programme for Older People, Public Health Nursing and local acute services (including the ED where necessary).
- Enhanced pre-hospital emergency care will ensure the best chance of survival for patients with OHCA and other life-threatening presentations. Increasingly, paramedics will be able to provide all the necessary care for a patient in the pre-hospital phase of their healthcare journey without recourse to a higher level of practitioner.

- Finally, enhanced pre-hospital critical care will allow complex life-saving care to be delivered to a small proportion of patients who require this before they reach hospital or who require this to enable a safe transport to a more distant destination, such as an MTC. This skill set will also enable safe inter-hospital retrieval of patients.

All the above developments will require multidisciplinary input into the development of new paramedicine roles and ways of working as well as presenting opportunities for collaboration in service delivery and governance.

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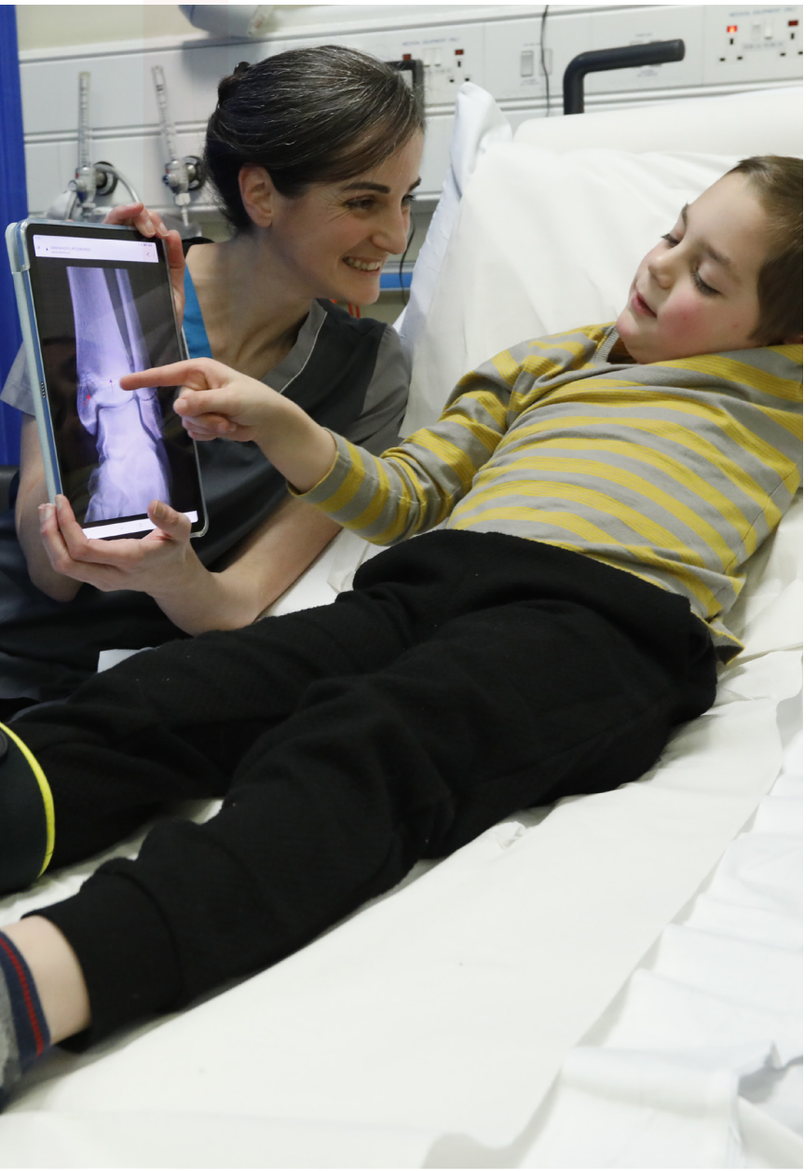

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Paediatric Emergency Medicine

Introduction

Paediatric Emergency Medicine (PEM) is the field of delivering acute unscheduled care to ill and injured children and spans the fields of both Emergency Medicine (EM) and Paediatrics. In keeping with guidance from EMP and the National Clinical Programme for Paediatrics and Neonatology, the HSE regards children and young people as paediatric presentations up to the eve of their 16th birthday. In Ireland, PEM has undergone significant evolution and change since the publication of the first EMP Model of Care (HSE, 2012). In 2012, PEM was relatively new in the Irish healthcare setting, with just six whole-time equivalent (WTE) Consultants in PEM in Ireland. By June 2023, there were 23 WTE Consultants in PEM in Children's Health Ireland (CHI) and 1.2 WTE Consultants in Cork University Hospital, with further posts in development. The updated training guidance document is *Paediatric Emergency Medicine in Ireland – Development to Date and Future Direction* (EMP, 2021a). A fellowship in PEM for candidates who have been awarded a Certificate of Successful Completion of Specialist Training (CSCST) has been developed for advanced training and a number of PEM specialists have completed such fellowship training.

The benefits of Consultants in PEM in the provision of high-quality paediatric emergency care (Geelhoed and Geelhoed, 2008; Pearson, 2008; Royal College of Paediatrics and Child Health (RCPCH) 2007; AAP, 2001; Davies, 2001) is now well established. EMP strongly supports the application seeking recognition of PEM as a specialty on the Register of Medical Specialists in Ireland. It is also supported by the Irish Committee for Emergency Medicine Training (ICEMT), the Irish Association for Emergency Medicine (IAEM), and the Faculty of Paediatrics Royal College of Physicians of Ireland (RCPI). EMP has also advocated for the expansion in RANP roles in PEM.

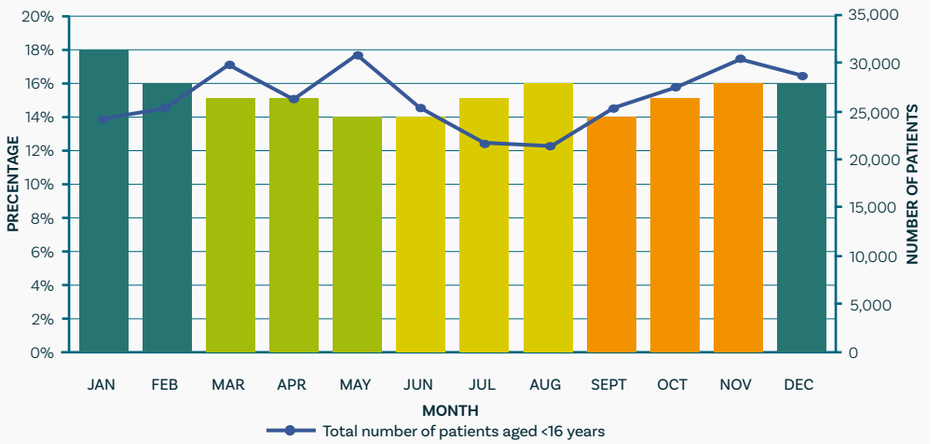
This chapter provides an overview of the current status of emergency care provision to children in Ireland and makes recommendations about its future development.

The delivery of unscheduled care to children in Ireland

In Ireland, the delivery of unscheduled care to children is provided in dedicated Paediatric Emergency Departments (PEDs) under the governance of the Children's Health Ireland (CHI) Hospital Group in the greater Dublin region and mixed EDs seeing patients of all ages outside the greater Dublin region. In 2022, the 18 mixed EDs saw 211,157 children attendances while there were 153,298 attendances to emergency and urgent care services across CHI. In June 2024 the Mercy University Hospital transferred acute and inpatient children's services to Cork University Hospital and became an adult-only ED.

Of note, the proportion of children who are admitted (conversion rate) from ED is significantly lower than the admission rate for adults who attend ED. This reflects the fact that children become unwell for different reasons than adults. *Figure 4* shows that the conversion rate varies little across the 12 months (despite significant variation in attendance numbers). Clinician experience suggests that the reason for admission in winter is largely infectious illness and sepsis, whereas the summertime sees a greater proportion of children with injuries requiring admission.

Figure 4 **Proportion of younger patients who were admitted, by month, 2023 (N=315,884).**
(Source: PET Data, BIU)



DUBLIN

- Two Paediatric Emergency Departments (PEDs) in standalone paediatric hospitals provide emergency care for children and young people 24 hours a day, 365 days per year. These services are operated by CHI at Crumlin and CHI at Temple Street.
- The Paediatric Emergency Care Unit (CHI at Tallaght) treats undifferentiated illness and injuries 24 hours a day, 365 days per year. It is bypassed for ambulance-borne children who have suffered major trauma.
- A Paediatric Urgent Care Centre (UCC) that is open 365 days per year, up to 17:00, and treats children by appointment with injuries and minor illnesses that are not life-threatening (CHI at Connolly).

OUTSIDE OF DUBLIN

EDs	• A Children's ED in Cork University Hospital which provides emergency care for children and young people 24 hours a day, 365 days per year • An audiovisually separated Children's ED in University Hospital Limerick • As of 2024, 17 other mixed EDs outside Dublin provide unscheduled care for patients of all ages, including children. Approximately 20–30% of all attendances in these units will be children. On 25 June 2024 the Mercy University Hospital became an adult-only ED upon transfer of acute and inpatient Paediatric Services to Cork University Hospital.
Other units	• Paediatric Assessment Units (PAUs) or Paediatric Decision Units (PDUs) are facilities run by paediatricians supported by children's nurses where children can be seen, treated and investigations performed in a timely fashion. The majority of the caseload in these units is elective (e.g. for investigations/infusions booked in by Consultant Paediatricians) although in many sites children with unscheduled care needs are also seen in the PAU. • Injury Units (IUs) provide unscheduled emergency care for patients with neither life-threatening nor limb-threatening injuries. The lower age limit for most IUs is age 5 years, for reasons of safety, but higher in IUs linked to adult-only EDs.

EMP recommends the standardisation of care to deliver an equitable service for children throughout Ireland. Every service providing UEC to children should have clearly defined governance structures. The long-term vision agreed by EMP, the National Clinical Programme for Paediatrics and Neonatology (NCPPN), and the National Clinical Advisor and Group Lead (NCAGL) for Children and Young People is for children requiring same-day attendance at a hospital to have access to consistent, high-quality services led by a Consultant in PEM. The delivery of medical care for acutely unwell children requiring resuscitation on presentation to the hospital should always be in the ED.

Table 2 shows the average daily attendances of children at EDs in order of numbers seen. As of 2024, the national picture for the provision of unscheduled care to children is heterogeneous, with significant contrast between standardised access for children in Dublin and Cork through PEM-governed and delivered care, and models which are in place elsewhere arising from service need and available resources at the time of their development. The NCPPN has undertaken a piece of work to assess PAU services nationally with a view to developing Guiding Principles to support standardisation of PAU services nationally. EMP, NCPPN and the NCAGL for Children and Young People have agreed to establish a working group to develop a strategy outlining the national model of service for children with UEC needs.

Table 2 **Paediatric attendances at EDs in 2024 (not including CHI at Connolly Urgent Care Centre or Injury Units)** *(Source: Health Service Executive, Doctors Integrated Management E-system)*

Provider	Average daily attendances <16 years	Annual attendances <16 years	Total annual attendances	Aged <16 years Percentage of overall attendances
Children's Health Ireland				
CHI at Temple St	123	44,917	46,140	97%
CHI at Crumlin	107	39,037	40,084	97%
CHI at Tallaght	101	36,863	37,727	98%
EDs seeing patients of all ages				
Cork University Hospital	58	21,239	87,409	24%
Our Lady of Lourdes Hospital	52	18,864	72,365	26%
University Hospital Limerick	49	18,045	87,190	21%
Galway University Hospital	44	16,050	81,197	20%
Midland Regional Hospital Portlaoise*	39	14,208	46,768	30%
Regional Hospital Mullingar*	35	12,902	46,228	28%
Wexford General Hospital	35	12,893	57,064	23%
University Hospital Waterford*	35	12,888	72,243	18%
St Luke's General Hospital Kilkenny*	34	12,411	51,265	24%
Letterkenny University Hospital	31	11,235	54,448	21%
Mayo University Hospital*	26	9,630	43,863	22%
Cavan General Hospital*	24	8,698	40,087	22%
Portiuncula University Hospital	23	8,374	32,535	26%
Sligo University Hospital	23	8,298	46,273	18%
University Hospital Kerry	23	8,258	45,022	18%
Tipperary University Hospital*	22	7,960	37,729	21%
Midland Regional Hospital Tullamore	13	4,745	45,072	11%
Mercy University Hospital	5	1,969	33,076	6%

Data source: BIU
**Figures include attendances at Paediatric Assessment Unit.*

The particular challenges in the ED in relation to migrant child health and other marginalised groups include:

- High rates of ED attendance;
- A requirement for support to ensure they have a GP;
- Access to interpreters;
- Liaising with paediatric inclusion health teams/clinics where available.

A national survey carried out by EMP in 2020 revealed that one-half of mixed EDs do not have an audiovisually separate treatment area for children. Depending on the hospital, children who present for emergency care are directed to the general ED, the PAU/PDU or the paediatric ward for management. Depending on local policy, children presenting with presumed surgical presentations or trauma may be seen by the EM team while children with presumed medical conditions may be seen directly by the paediatric team. Where there are emergent social concerns outside of office hours, access to a paediatric inpatient bed and social work input (same or next day) as a temporary emergency measure may be required. EDs and Paediatric wards are wholly unsuitable locations for children awaiting emergency placement over a prolonged period and should never be used for this purpose. When this happens, it should be considered as a serious reportable event.

Medical staffing and training

Appropriate and adequate medical and nursing staff are integral to the delivery of quality paediatric emergency care (EMP, 2021; Pearson, 2008).

EMP recommends that each ED that treats children has at least one Consultant in PEM to lead out on optimising the quality of emergency care delivered to children, standard setting, ensuring appropriate care environments and adherence to the Children First Act 2015. EMP recommends that Consultants in PEM also take a role in PEM research locally or via collaboration with PEM research groups like Paediatric Emergency Research in the United Kingdom & Ireland (PERUKI).

As of September 2024, Consultants in PEM have only been appointed in CHI sites and Cork University Hospital, although posts have been approved for University Hospital Galway, Our lady of Lourdes Hospital Drogheda and University Hospital Limerick.

Junior medical staffing for children in the ED should consist of trainees in EM and paediatrics in accordance with agreed local practice. Non-EM trainees and other junior medical staff on rotation through ED, e.g. trainees in general practice should receive regular education and training in PEM as part of a general departmental education programme.

The training of Consultants in PEM (for trainees in both Emergency Medicine and Paediatrics) is outlined in *Paediatric Emergency Medicine in Ireland – Development to date and future direction* (EMP, 2021a), which is endorsed by the IAEM, ICEMT and the RCPI Faculty of Paediatrics. The document highlights that:

- A 6-month rotation in PEM is mandatory as part of both basic and higher specialist training in EM, but not yet for Paediatrics at either basic or higher specialist training levels.
- Specialty training in PEM requires 18 months' additional training in PEM and paediatric critical care. Both components of PEM training (as part of general EM training and subspecialty training) are supported by clearly defined competencies and a validated curriculum.
- A National Doctors Training and Planning (NDTP) approved post-Certificate of Completion of Specialist Training (CCST) fellowship in PEM for trainees from EM is now well established, but as of 2024 there is currently no parallel fellowship for trainees from paediatrics. It is anticipated that appropriate post-CCST training for Paediatricians in PEM will be deliverable when the new National Children's Hospital (which will incorporate the paediatric MTC) has opened.

Nursing staffing and training

Nurses working in emergency care settings in which children are seen should have the training and competence to manage children and their families. This necessitates the following considerations:

- Nursing training in paediatric emergency care can be provided through formal education programmes at postgraduate level and through needs-based in-service education as part of the continuing professional development of the MDT. Specifically, the recognition of serious illness, basic life support, pain assessment and identification of vulnerable patients should be addressed.
- EMP recommends that every ED treating children has a minimum of one nurse trained in paediatric emergency care on every shift – either a Registered Children's Nurse or a nurse specifically educated and trained in paediatric emergency care (Quality and Qualifications Ireland (QQI) Level 9).
- EMP recommends that all EDs receiving children have a paediatric-trained Clinical Nurse Manager (CNM) 2 for the care of children and young people and a lead nurse responsible for child protection to liaise with the Medical Social Worker.
- EMP recommends that all EDs seeing children as a minimum have access to a Clinical Skills Facilitator with specialist paediatric experience for the education and training of staff in the recognition of serious illness, basic life support, pain assessment and identification of vulnerable patients.
- RANPs in PEM and General Emergency Medicine have a role in each of the emergency units that see children.
- Currently, access to the Level 8 Foundation Programme in Children's Emergency Nursing is restricted to nurses in CHI. This needs to be expanded to mixed EDs to assist in the upskilling of nurses in children's emergency care.
- EMP recommends that a staffing and skill mix framework for children's emergency care be developed.
- Children should have access to mental health nursing on the same basis as adults with clear pathways for 24/7 assessment. On the rare occasions where admission is needed, a clear and expedited process is needed for this to occur.
- EMP recommends that Community Liaison Nurses specifically for children are appointed in each ED/urgent care facility which sees children. These nurses facilitate communication with GPs and community services following discharge.

Other staff groups

Many other HSCPs play an important role in the management of acutely ill or injured children. The key roles are listed below, and EMP recommends that they be available to work as part of the EM team in all EDs where children are treated:

- Medical Social Workers play a key role in properly handling the various issues which relate to children, e.g. child protection, parental and family support, death in children, and refugees and international protection applicants.
- Play Specialist roles are needed in units where large volumes of children attend (see *Table 3*).
- Ready access to Physiotherapy, Occupational Therapy, Dietetics, Clinical Pharmacy, Psychology and other HSCPs is very important to the care of children in EDs.
- Health Care Assistants, Multi-Task Attendants, and administrative and clerical staff all make important contributions to the safe care of children and their families.

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Table 3 Daily attendances to paediatric and mixed EDs in order of absolute numbers seen 2024

Provider	Age <1 year		1–5 years		6–15 years	
	Daily avg	Annual	Daily avg	Annual	Daily avg	Annual
CHI at Crumlin	11	4,123	40	15,094	54	19,820
CHI at Tallaght	17	2,643	40	14,634	54	19,586
CHI at Temple Street	13	4,714	48	17,676	62	22,527
Cavan General Hospital*	2	831	23	8,471	12	4,331
Cork University Hospital	6	2,216	15	5,577	29	10,552
Galway University Hospital	4	1,582	10	3,570	24	8,891
Letterkenny University Hospital	3	928	9	3,396	18	6,737
Mayo University Hospital*	2	813	2	710	15	5,421
Mercy University Hospital	0	37	14	5,192	3	1,222
Midland Regional Hospital Portlaoise*	4	1,347	21	7,579	20	7,396
Midland Regional Hospital Tullamore	0	15	2	640	11	4,090
Our Lady of Lourdes Hospital	5	1,764	10	3,478	26	9,521
Portiuncula University Hospital	2	835	8	2,862	11	4,061
Regional Hospital Mullingar*	3	1,263	15	5,465	18	6,447
Sligo University Hospital	2	612	12	4,507	13	4,824
St Luke's General Hospital Kilkenny*	3	1,144	8	2,954	19	6,760
Tipperary University Hospital*	2	671	8	2,797	12	4,335
University Hospital Kerry	2	627	20	7,130	13	4,834
University Hospital Limerick	5	1,787	11	3,913	25	9,128
University Hospital Waterford*	3	931	13	4,678	22	8,044
Wexford General Hospital	3	1,186	23	8,471	19	7,029

Data source: BIU
**Figures include attendances at PAU.*

What standards should be used?

EMP endorses the long-standing RCPCH *Standards for Children in Emergency Care Settings*, published in 2012 and most recently updated in *Facing the Future: Standards for children in emergency care settings* (RCPCH, 2018). Some key standards have been adapted to the Irish setting:

- Emergency care settings are designed and provided to accommodate the needs of children and their parents, carers or guardians.
- Every ED treating children should be staffed with a Consultant in PEM.
- Every ED treating children must have a minimum of one nurse trained in paediatric emergency care on every shift.
- Every ED treating children must have a member of staff with Advanced Paediatric Life Support (or equivalent) training on duty at all times.
- All children who are streamed away from an emergency care setting must be assessed by a clinician with paediatric competences and experience in paediatric initial assessment within pre-agreed parameters, including basic observations. There should be an ongoing audit of outcomes for children who are streamed away from EDs.
- Every ED should have policies in place for the escalation of care for critically unwell children.
- All emergency care settings require a written Child Safeguarding Statement that specifies the service being provided and the principles and procedures to be observed in order to ensure, as far as practicable, that a child availing of the service is safe from harm in accordance with Children First: National Guidance for the Protection and Welfare of Children (Department of Children and Youth Affairs, 2017).
- Access to the National Child Protection Register should be consistently facilitated for appropriate healthcare professionals.
- Adequate and appropriate space should be available for children and families in crisis and should include a safe space with suitable supervision by ED staff.

- When there is a delay of more than 4 hours for a child to be admitted to a mental health inpatient bed, it is recommended that they be looked after in a suitable paediatric centre, with appropriate inpatient facilities, regular Child and Adolescent Mental Health Services (CAMHS) review, trained Registered Mental Health Nurses and paediatric nursing support.
- Consideration of early escalation for senior review when treating a child with complex medical needs should be emphasised in all training and induction programmes.
- All EDs caring for children should have local agreed policies in place for responding to the unexpected death of a child.
- In addition to the RCPCH standards, EMP recommends that each hospital where unscheduled care is delivered to children should have an agreed written policy in place for children who do not wait to be seen. This should include an identified responsible staff member to review such attendance records regularly, with follow up as indicated.

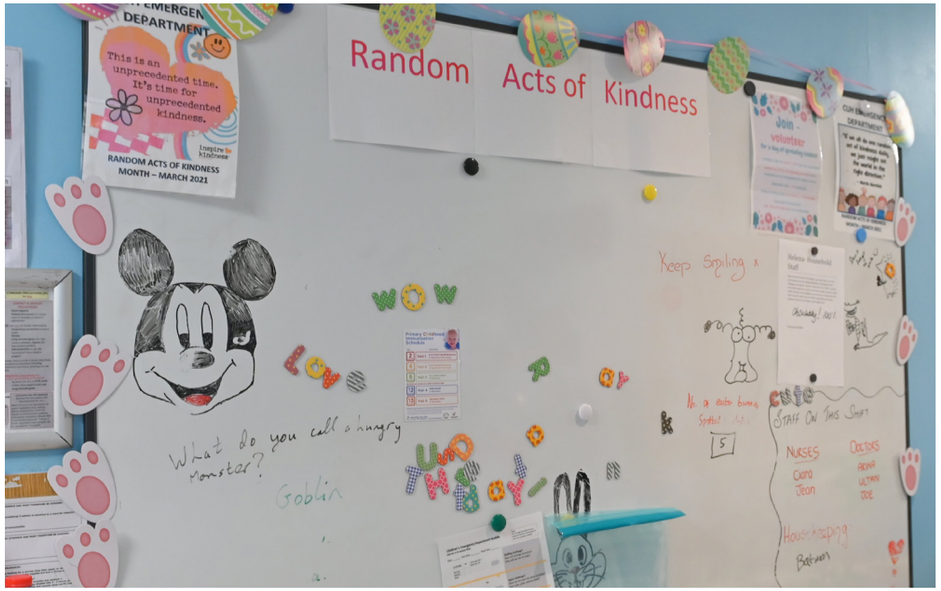

Image courtesy of the HSE © 2025

Clinical Guidelines

The IAEM Clinical Guidelines Committee have developed specific paediatric clinical guidelines. Parental information leaflets for discharge have been developed in parallel with clinical guidelines for relevant diagnoses. Escalation of care to tertiary centres for critical care when needed is available via IPATS using a standardised telephone referral.

Patient- and family-centred care

Patient and family-centred care (PFCC) is an approach to the planning, delivery and evaluation of healthcare of children that is grounded in a mutually beneficial partnership between patients, families and healthcare professionals. PFCC ensures the health and well-being of children and their families through a respectful patient and family-professional partnership.

There are significant challenges to providing PFCC for children in the ED. The lack of a previous relationship between the patient and family and ED healthcare professionals, as well as the acute nature of many events that prompt an ED visit, can limit the ability to create an effective partnership. In addition, many cultural and social variations affecting the constitution of families compound the difficulty in identifying with certainty who is a child's legal guardian. Situations particular to the ED include: the arrival of a child by ambulance without a family member accompanying them; an unaccompanied minor seeking care without the knowledge of their family; visits related to abuse or violence; time-sensitive invasive procedures, including attempted resuscitation and responses to unanticipated critical illness. Dealing with the injury or death of a child requires thoughtful advanced planning, and ED crowding challenges the ability to deliver PFCC.

Despite these challenges, achieving excellence in the provision of PFCC is possible in the ED. This has long been a focus of the American Academy of Pediatrics (AAP) and the American College of Emergency Physicians (ACEP) PEM committees; their most recent report (AAP/ACEP, 2015) offers excellent guidance on aspects of emergency care that can reflect the practice of PFCC and its benefits. These include family presence during resuscitation and procedures, access to language interpretation services, communication with the child's primary care team, the challenges of adolescent care, and cases of dispute regarding care plans.

Clinical Decision Units

A paediatric Clinical Decision Unit (CDU) is an area adjacent to the ED which provides for a period of inpatient observation, assessment or course of therapy, under the care of a Consultant in PEM, for patients who no longer require active ED care. CDUs for children have yet to be formally developed in Ireland. Some patients who would be suitable for CDU care are managed in Paediatrician-led PAUs in particular hospitals but are admitted as inpatients in others.

Outside Dublin a number of Paediatrician-run medical PAUs have developed organically. These units are not CDUs and should not be regarded as an alternative to a PEM service. With the imminent opening of the National Children's Hospital, there will be a 12-room CDU in the ED under the governance of Consultants in PEM.

Child safeguarding

It is the responsibility of every healthcare professional working with children to be vigilant for possible signs of child welfare issues. The Children First Act 2015 (Government of Ireland, 2015) conferred a statutory obligation on healthcare professionals treating children to act and report in addition to their moral and ethical obligations. Recognition of suspected child abuse and the requirement to sensitively investigate and notify concerns requires training and skill. The *Children First: National Guidance for the Protection and Welfare of Children* (Department of Children and Youth Affairs, 2017) which preceded the Children First Act 2015 was most recently updated in 2017. This guidance offers detailed descriptions of definitions of the various forms of child abuse and outlines the steps which should be taken to notify suspected child abuse to Tusla – Child and Family Agency, which is the statutory authority with responsibility for child protection. In addition to understanding these obligations, all healthcare workers who come into contact with children, including doctors in training and Consultants in EM/PEM, are obliged to undertake training in Children First, which is available on the HSE's education platform.

The Children First Act 2015 also specifies mandated persons who have two legal obligations:

1. To report harm of children above a defined threshold to Tusla.
2. To assist Tusla, if requested, in assessing a concern raised by a mandated person.

Under the Act, a Registered Medical Practitioner, Registered Nurse, Midwife, Physiotherapist or Social Worker is a mandated person, thus all members of the EM/PEM team are mandated persons with statutory responsibilities.

Recommendations for child protection

All EDs where children are seen must adhere to the Children First Act 2015.

All ED staff (clinical and non-clinical) must receive training in safeguarding children appropriate to their post and must complete the HSE-provided Children First training on the HSE's education platform.

All EDs should nominate a lead Consultant and lead nurse responsible for safeguarding children within the ED, remembering that all medical, nursing and HSCP professionals working with children are mandated persons.

All EDs must have guidelines for safeguarding children.

All EDs must be able to access child protection advice from a Paediatrician and Social Worker 24 hours a day. Direct or indirect access to the National Child Protection Register should be available.

Systems should be in place to identify children who attend frequently.

The child's primary care team, including GP and Public Health Nurse where appropriate, should be informed of each attendance – this would be best facilitated by the appointment of a Community Liaison Nurse in each ED or urgent care facility which sees children.

EDs and paediatric wards are wholly unsuitable locations for children awaiting emergency placement over a prolonged period and should never be used for this purpose. When this happens, it should be considered as a serious reportable event.

EMP Recommendations

EMP recommends that consistent high-quality services for children led by a Consultant in PEM be developed in each 24/7/365 ED where children are seen.

EMP recommends ready access to Physiotherapy, OT, Clinical Pharmacy, Community Liaison Nursing, Psychology, Play Specialists and other HSCPs regardless of where the child presents for unscheduled care.

EMP recommends that all ED teams liaise closely with local pre-hospital, primary care and community-based services, particularly social care and child protection services.

Patient- and family-centred care as described above should be a cornerstone of PEM practice nationally.

A national Children's Early Warning System is currently being considered, and EMP recommends implementation where children are seen in an ED.

EMP recommends a zero-tolerance approach to boarding admitted children in the ED.

Prompt access to on-site on-call mental health services or dedicated mental health beds for children and young people is needed to serve the increasing numbers of children with mental health presentations to EDs.

EMP recommends an integration of service delivery models across the specialties of PEM, EM, general paediatrics, paediatric trauma and orthopaedic surgery, paediatric general surgery and paediatric diagnostic imaging to provide the best quality of care for children in need of UEC. This should be reflected in national care pathways, protocols and agreed standards of care.

EMP recommends the standardisation of care to deliver an equitable service for children throughout Ireland. Every service providing UEC to children should have clearly defined governance structures. EMP, NCPPN and the NCAGL for Children and Young People have agreed to establish a working group to develop a strategy outlining the national model of service for children with UEC needs.

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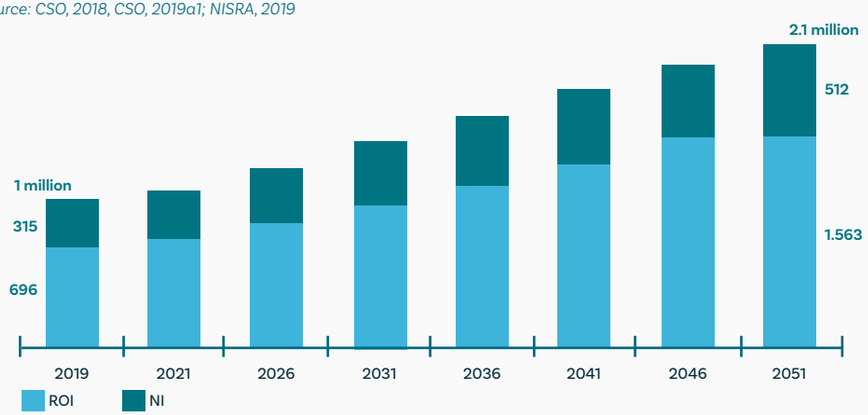
Emergency Medicine and the Older Person

Introduction

Since the 1920s the average life expectancy at birth in Ireland has increased significantly to 80.4 years for men and 84 years for women. It is important to ensure that these added years are characterised by good health and active participation in society to the fullest possible extent for each individual.

In common with global trends, Ireland is experiencing a growth in its older population and by 2028 those aged 65 years and over will outnumber those aged 0–14 years (WHO, 2022; Sheehan and O'Sullivan, 2020; see *Figure 5*).

Figure 5 **Projected number of people aged 65 years and over, thousands, 2019–2051.**
Source: CSO, 2018, CSO, 2019a1; NISRA, 2019

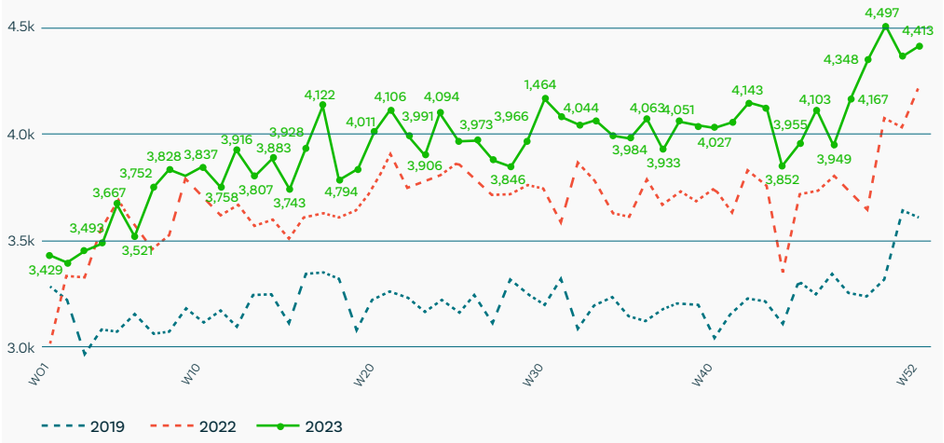


Understanding ageing

Ageing is associated with a decrease in physical and mental capacities brought about by cellular damage accumulated over time. Although the term 'older people' is used to refer to those ≥65 years, ageing is not a linear process. This chapter generally uses the term 'older people' (or 'older adult') to refer to people ≥75 years. Ageing involves a complex interplay of biological, environmental and personal factors. A frailty model, rather than a strict age cut-off, is therefore more appropriate in assessing the type of emergency care required.

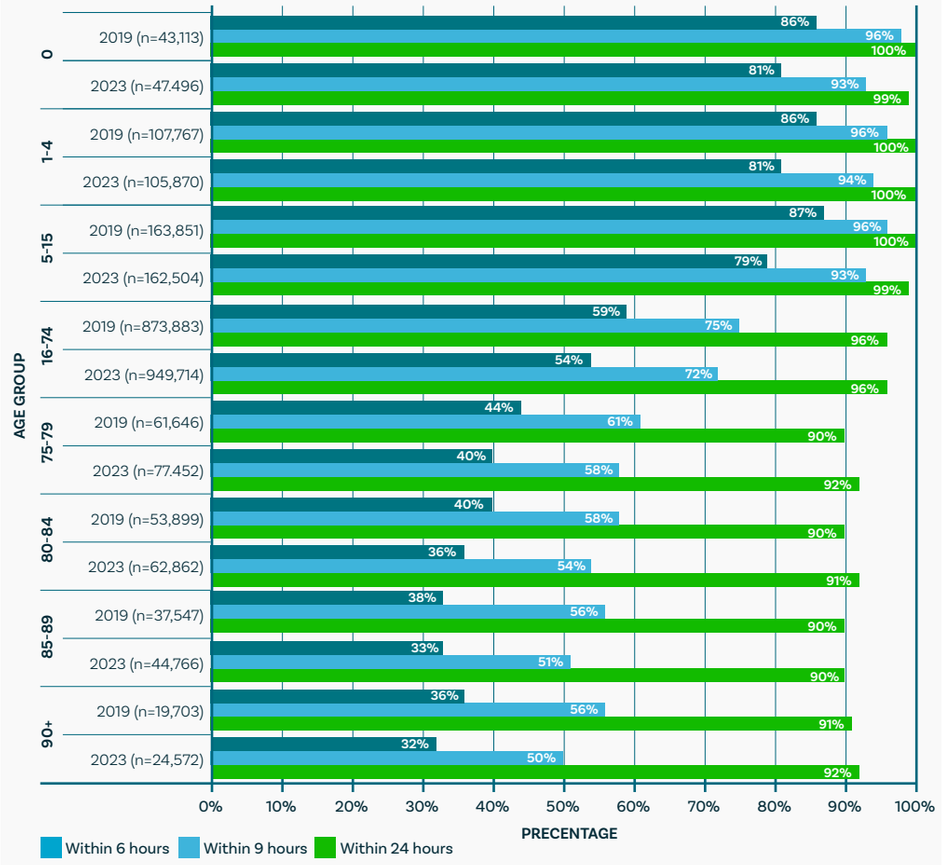
The National Service Plan 2025 (HSE, 2025), focuses on enabling increased access to care and supports in the community to promote independence and discharge from acute hospitals. The community service provide specialist care closer to home when safe and right to do so. Older adults attend ED because they need immediate or urgent care. *Figure 6* shows the attendance patterns for older adults aged 75+ years. .

Figure 6 **ED attendances for patients ≥75 years** *(Source: Urgent and Emergency Care Performance Update Report (week ending 31st December 2023). Performance Management and Improvement Unit, Operational Performance and Integration, HSE)*



On average, 560 people aged ≥75 attend an ED each day, representing 19% of adult attendances (within a range of 12.5-22.5% between EDs). Older adults have longer PETs (see *Figure 7* below) and are more likely to be admitted to hospital because of their ED visit. They also have longer lengths of stay when admitted. The conversion rate for adults ≥75 years ranges from 37% to 66% in different EDs. Older adults benefit from ED care and, like everyone else, can be harmed when getting the wrong care or waiting for the right care.

Figure 7 **PET by age and year (N=2,837,508).** *Source: PET Data, BIU*



Current national key performance indicators (KPIs) include:

- 95% of patients aged ≥75 years attending ED to be discharged or admitted within 6 hours of registration (HSE, 2021);
- 99% of patients aged ≥75 years attending ED to be discharged or admitted within 9 hours of registration (HSE, 2021);
- Zero tolerance for stays of greater than 24 hours for those aged ≥75 years attending ED (HSE, 2023).

Current challenges in the Emergency Department and recommendations for improvement

EM is an important source of unscheduled care for older people with medical, psychological and social crises. As discharge coding becomes more prevalent, EMP recommends analysing the data for older adults to better understand the reason for attendance and plan accordingly. Indeed, this group constitute 19% of all adult ED attendances and are the group most likely to be admitted.

In alignment with the work already undertaken in the *Urgent and Emergency Care Operational Plan 2023* (HSE, 2023) and *Our National Service Plan 2024* (HSE, 2024), it is essential to address the specific needs of older adults in the ED by focusing on their acuity levels. Data from the UEC indicate that older adults frequently present with high-acuity needs. This demographic often requires more intensive assessment and intervention due to their higher risk of deterioration and complex health profiles.

Ensuring a high standard of care for older persons in the ED involves adopting a holistic, patient-centred approach that addresses both immediate medical needs and broader health determinants. EM can optimise the approach to older adults presenting to ED to ensure that those at risk of deterioration or death are identified at the earliest opportunity while providing patient-centred care that reflects both need and patient preference. These refinements include modification of the current triage system, reduced focus on the traditional medical model of care and implementation of a holistic model of care as outlined below.

Modification of the current triage system

Currently, EDs use the Manchester Triage System (MTS) to identify and deal with the most urgent adult patients in a timely fashion, meaning that those with less urgent needs are required to wait, sometimes for extended periods. However, MTS has been shown to under-triage older adults, particularly those with delirium and low-velocity major trauma (Lucke *et al.*, 2022; Blomaard *et al.*, 2020; Brouns *et al.*, 2019; Zachariasse *et al.*, 2017; Farrohknia *et al.*, 2011). A modified triage aims to identify those older adults at increased risk of death or deterioration. Recognition of high-risk patients is more difficult in older people because they often present with non-specific complaints (e.g. weakness or falls) as signals of evolving serious illness.

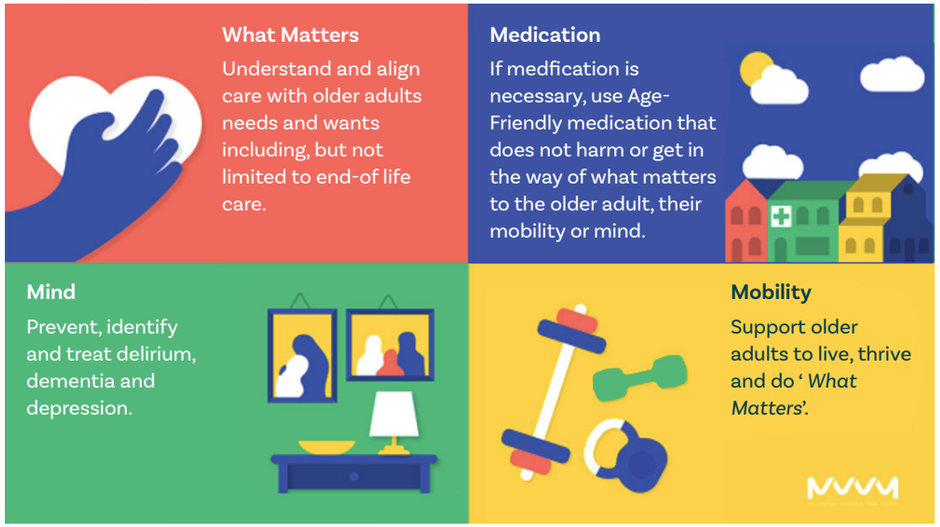
Interpretation of vital signs is complicated by altered physiology, comorbidity and polypharmacy, which may attenuate the usual physiologic responses to illness.

EMP recommends the addition of any change in the level of consciousness (as measured by the Glasgow Coma Scale Score) as an additional trigger in older adults, as well as those triggers identified in the Emergency Medicine Early Warning System (EMEWS). The '4AT' delirium detection tool and the older adult's trauma triage safety net tool also need to be completed on all MTS triage category 3, 4, 5 patients aged ≥75 years. Although the national guideline states >65 years, experience shows that patients aged ≥75 years benefit most from these tools. EMP recommends that frailty assessments and falls risk assessments also be carried out. Some frail adults aged <75 years may also benefit from these assessments, but the focus of this triage modifier initiative is for patients aged ≥75 years.

Given the high risk of functional decline, morbidity and mortality associated with ED attendance of older people, assigning triage categories 4 and 5 is rarely appropriate. EMP therefore recommends that triage category 3 be the lowest/least urgent triage category used for those aged ≥75 years.

Modification of the traditional medical model of care to a more holistic one

The traditional model of medical care focuses on single-organ illness. Moving to a holistic model encompasses the entire range of older persons' needs and preferences and is more likely to suit the needs of older adults who do not require emergency intervention to save life, organ or limb. Use of the '4Ms' model (shown below) is recommended to frame care delivery pathways within the ED.



Improving the experience of those living in residential care

Patients transferred from Residential Care Facilities (RCFs) to the ED often present with complex health needs, making effective communication essential. The Irish National Transfer Document, which should be used when an older person is transferred from an RCF to an acute hospital and imminent implementation of the Residential Older Persons Early Warning Score will further improve communication into the ED. These tools ensure that healthcare providers have access to accurate and comprehensive medical histories, current medications, and specific care requirements, including any advance care plans. Documentation sent from EDs to nursing homes needs to be equally robust, and the Return Transfer Document which was tested in 2024 supports bi-directional communications between services. EDs should also consider putting a system in place to ensure that patients are provided with a discharge summary electronically or on paper, including upon discharge to a residential care facility.

RCFs should have a range of options open to them when an emergency need for medical intervention is appreciated. This should include but is not limited to options such as timely access to GP review, timely access to psychiatry of old age, assessment in RCF by CSP/EDITH/APP/Pathfinder/community paramedics/ community palliative care/OPAT/virtual wards medicine as needed. Alternatives to ED such as same day emergency care, Medical Assessments Units, Injury Units and rapid access clinics should be accessible for conditions that can be managed in these settings.

Incident management including outbreak management should be considered as part of a systems wide response to avoid mass transfer of residents where alternative options may be possible such as deployment of acute staff to RCF.

The central principals in all care decisions should be based on resident preference, care needs and in consideration of any existing advanced care plans – what matters most.

Navigating risk

A key challenge in the ED care of older people living with frailty is balancing the risk of admission versus discharge, especially when the prognosis is uncertain and information may be incomplete. Central to this challenge is ensuring that the patient's voice is heard and valued in the decision-making process. Supported decision-making involves healthcare providers, patients and community caregivers working together to make informed choices that align with the patient's preferences and values. It requires honest communication about the limitations of treatments and the inherent risks of both hospital admission and discharge. By involving all stakeholders in a transparent discussion, healthcare providers can better navigate the complexities of risk tolerance and make balanced decisions that prioritise the patient's well-being and autonomy (Rockwood, 2021).

Overcoming structural barriers

The ED is an interface between hospital and community specialties, and effective planning for older people with complex needs requires integration of care. A change in the care of older people who present to the ED requires a change in how all providers view referrals from the ED and the community to ensure all steps in the journey demonstrate value to the patient.

Processes (e.g. blood tests, definitive diagnostic imaging, screening, initiation of treatment, discharge planning and specialty review) need to occur in parallel in order to ensure efficiency and minimise long waits for assessment. EMP recommends that discharge planning begin within the ED, even for those requiring admission.

An early decision as to where the patient is likely to go after their emergency needs have been met in the ED will minimise time spent there and reduce harm from pressure ulcers, falls, delirium, deconditioning and distress in an unfamiliar and unsafe environment (van Loveren *et al.*, 2021; O'Donnell *et al.*, 2019; Bo *et al.*, 2016; Imison *et al.*, 2012).

For those requiring hospital admission, a clear pathway is needed to the right care and the specialty that best meets their needs. A perception of difficulty in accessing diagnostic imaging or specialty consultations for inpatients leads to prolonged waits in the ED (Kruis and McNamara, 2023). Where there is ambiguity or several concurrent diagnoses that require intervention (e.g. hip fracture with stroke), ED waits are often prolonged while specialty teams debate who should take over the patient's care. Admitting people to the wrong hospital location, necessitating further movement around the hospital, increases hospital length of stay and the incidence of falls (Toye *et al.*, 2019; Webster *et al.*, 2016).

Those discharged from the ED face other barriers because managing complex care in the community requires specialist skills and support from acute specialist teams. The establishment of community specialist team hubs should be of great benefit in facilitating safe discharge as well as their primary purpose of reducing the need for older people to attend the ED in some circumstances.

While current KPIs are valid and important, tackling the challenges of delivering care to the older person and improving the model of care delivery requires a broader view of emergency care delivery. There are an increasing number of community and pre-hospital services operating to better meet the needs of older people, and collaboration and integration with them is important for the MDT in the ED.

Older persons and emergency nursing

With an increasing number of older adults presenting for care to EDs, emergency nursing has had to enhance its clinical assessment 'toolkit' to meet these demands, with many additional assessments occurring in the post-triage phase of care, e.g. 4ATs. Some EDs have introduced Clinical Nurse Specialists in Frailty and RANPs for Emergency/Older Persons to improve the quality of patient care. Some RANPs' scope of practice includes reviewing the patient in their residence, potentially negating the need for ED transfer. These roles form part of wider MDTs endeavouring to provide age-attuned comprehensive geriatric assessment.

Health and Social Care Professionals in the Emergency Department

In Ireland, the development of Frailty at the Front Door (FFD) teams has addressed some of the barriers to delivering gerontologically attuned assessment of older people using a more comprehensive approach. HSCPs in the ED play a crucial role in providing comprehensive care to older adults. Their responsibilities extend beyond immediate medical treatment to include holistic assessments that address physical, mental and social needs. These professionals work collaboratively to ensure that patients receive timely and appropriate interventions, from initial triage to discharge planning. They are instrumental in identifying frailty syndromes, managing delirium and maintaining patients' independence, thus mitigating risks associated with prolonged hospital stays. By integrating hospital teams, community resources and support services, HSCPs facilitate smoother transitions from the ED to the patient's home or other care settings, ensuring continuity of care and enhancing patient outcomes.

Alternatives to Emergency Department attendance

Pre-hospital and community-based care options have been shown to be of benefit to older people in crisis. EMP recommends that rapid-access geriatric clinics and community specialist teams hubs be accessible from primary care as well as continence services, movement disorder clinics and psychiatry of old age services, etc.

First-contact healthcare professionals (community, pre-hospital and ED) should be enabled to access community services in order to avoid unnecessary acute hospital admission. Each health region needs a clear plan for social or care crises (e.g. carer illness) that does not default to the ED.

Better information

Precise data on older people's utilisation of ED services are needed for efficient resource allocation and as a foundation for research that drives evidence-based practices. EMP recommends that these data encompass metrics like hospital admission rates, duration of hospital stay, repeat ED visits, hospital readmissions and mortality rates. Data on transfers from care facilities to EDs are also important for service planning.

Emergency Medicine and the older person in the future

In EM systems in other countries, specific strategies tailored for older people have been introduced to enhance outcomes for this susceptible patient population.

There is an ongoing need to develop dedicated Older Persons Emergency Care Teams who have the competencies and experience to deliver emergency care to an undifferentiated population of older adults.

Consideration should be given to:

- **Recognition of harm during attendance at an ED to vulnerable older adults**
  - ~ Refining of ED design to address physical environment needs;
  - ~ Support of sensory vulnerabilities – hearing aids and quiet environment; visual aids and orientation prompts, including day-night orientation, etc.
- **ED processes**
  - ~ Maintenance of independence and dignity – early mobilisation, hydration, nutrition and basic hygiene;
  - ~ Inclusion of family, friends and caregivers.
- **Staffing and training issues**
  - ~ Training for ED staff in gerontological assessment and holistic care delivery;
  - ~ Training for in-hospital specialist and FFD teams in the emergency assessment and objectives of care in the ED;
    - Availability of expertise for every ED in specific conditions, including:
      - ~ Polypharmacy and recognition of adverse drug reactions;
      - ~ End-of-life care;
      - ~ Delirium care;
      - ~ Older adult major trauma;
      - ~ Safeguarding older adults.
- **Further Geriatric Emergency Medicine development**
  - ~ Development of training, utilising the European Curriculum for Geriatric Emergency Medicine;
  - ~ Requirement for protected resourcing to develop robust evidence-based protocols and pathways for older people in Ireland.

Summary

The demand for EM services and urgent care in Ireland among the older population is on a steady rise, reflecting the demographic shift towards an ageing society. This brings with it an urgent need to reassess and adapt our approach to older adults care in emergency settings.

Currently, approximately 560 individuals aged ≥75 years seek care in EDs in Ireland daily (approximately 15% of all attendances), constituting a significant proportion of ED attendances and highlighting the key role that EM plays in the care of our older population. Despite the increasing emphasis on community-based urgent care services, older adults continue to attend EDs in ever-increasing numbers.

The challenges posed by an ageing population demand a comprehensive, multidisciplinary and forward-thinking approach to emergency care for older adults in Ireland.

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EMP Recommendations

- Adapt services to address the unique healthcare needs of older adults.
- Complete frailty and falls risk assessments for patients aged ≥75 years.
- Implement a modified triage process for patients aged ≥75 years.
- Begin discharge planning in the ED through initiation of multidisciplinary holistic assessment.
- Educate staff on recognising and managing frailty syndromes and delirium and develop strategies for maintaining the independence of older persons.
- Older adults with complex care needs should be admitted to a cohorted specialist gerontology ward for older people unless they have a single-organ condition, or one that requires an alternative specialist ward such as a coronary care unit.
- Improve the accessibility of the ED to better accommodate older adults, ensuring that it is designed to support their mobility and comfort.

It is agreed that no admitted patient aged >75 years should wait 24 hours for an inpatient bed.

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Pillar Two
Patient Pathway

Pillar Two: Patient Pathway

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Emergency Department Patient Pathway Summary

Pillar 2 provides an in-depth overview of the patient pathway through the ED, focusing on optimising patient flow and enhancing care quality. The necessity of continuous improvement in patient management protocols and integrated care pathways to enhance both patient outcomes and departmental efficiency is a key point of emphasis.

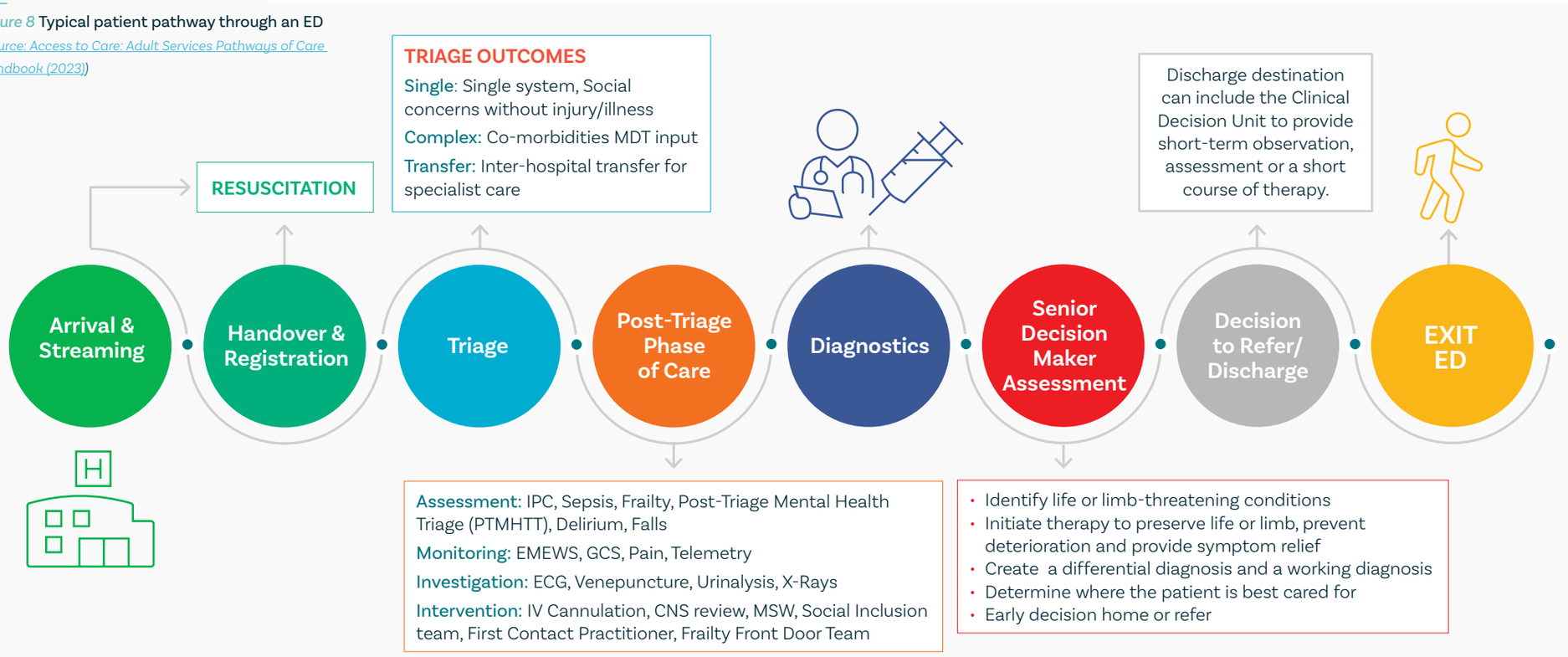
Pillar 2 also reviews the pathway for patients who attend an Injury Unit (IU).

Finally, Pillar 2 describes the collaborations that are often necessary to deliver the complete care journey for ED patients. These include primary care, hospital-based specialties, diagnostics and psychiatry.

Emergency Department Patient Pathway

Figure 8 below provides a high level overview of the typical patient pathway through an ED.

Figure 8 **Typical patient pathway through an ED**
(Source: Access to Care: Adult Services Pathways of Care Handbook (2023))



Introduction

In this chapter we describe the patient journey/pathway and the importance of timeliness in assessment and treatment. Each stage following 'Arrival' currently requires a period of waiting, the length of which depends on many different and interrelated factors, including the time of day, day of week, triage category, number of patients in the ED, staffing levels, access to facilities on site, availability of on-site specialties, and access to hospital beds. EMP recommends that almost all patients (95% of attendances) have their episode of care in the ED completed within 6 hours. This allows time for the patient to be triaged, assessed by a clinician, undergo investigations if required, be reviewed and be admitted to a hospital bed, if necessary. Some patients with more complex or critical conditions may require a longer period to complete their emergency assessment. The process measures, or KPIs, recommended by EMP (HSE, 2012) are:

- Almost all patients (95%) attending ED complete their episode of care in 6 hours.
- All patients attending ED complete their episode of care in 9 hours.

A comprehensive document on internal ED processes, "*It's about time*": *Efficient Emergency Department Care in Ireland* (EMP, 2021) was written by a collaboration of frontline ED staff. It describes in detail the current stages of waiting as a patient moves through the assessment, treatment and decision-making phases of care. The document offers suggestions for new, more efficient ways of working at each stage and is the blueprint for the role of the ED in the Acute Floor and the end-to-end integrated pathway of unscheduled care.

Patients with acute and emergency medical problems should experience a continuum of high-quality medical care from their first point of contact through their entire pathway of care to safe discharge from hospital. As recommended in the HSE Escalation Policy, 2023 (HSE, 2023a) a local hospital escalation framework, focusing on patient flow in the ED with agreed triggers, actions, escalation and control should be developed and implemented in each hospital.

Patient arrival and streaming

Patients may self-refer or be referred to an ED by a GP or other healthcare provider. On average, 20% will arrive by ambulance (ranging from 6% to 29% by hospital) or by their own transport. Typically, children are likely to be brought by a parent or relative rather than come by ambulance. Ambulances will pre-alert the ED if the patient needs to be received emergently by a clinical team, e.g. following a positive result after using the Trauma Triage Tool (Trauma Care Ireland, 2022). When an ambulance-borne patient is determined to require immediate intervention on arrival at an ED, the receiving ED staff need to be pre-alerted (as outlined in the *National Pre-alert Guidelines Standard* from the PHECC).

Streaming is a 'hands-off' process that involves asking the patient what their presenting complaint is and identifying any major risk factors to inform a decision regarding which zone of the ED or other assessment area the patient will be directed to (e.g. Acute Medical or Acute Surgical Assessment Units, co-located primary care, Ophthalmology Emergency Unit, Urgent Cardiac Assessment Unit). It needs to be performed by a trained clinician who allocates patients to different physical areas/services, pathways or processes to improve efficiency and effectiveness. It is incumbent upon the person streaming to understand the process and be assured that the area to which they have streamed the patient is appropriate and open, and has capacity to receive them. It may involve guiding patients to co-located or specialist services.

Redirection is the process of advising a patient that there are other options for accessing healthcare for their presenting complaint, e.g. GP, Pharmacist, Dentist or referral to an outpatient clinic. EMP recommends that consideration be given to the facility to refer a patient to an appropriate GP service at the point of triage. Redirection should only be performed with the support of an appropriately trained specialist.

The main objective of streaming is to ensure that the patient is directed to the correct location and service and to the correct clinician to manage their clinical needs at the earliest appropriate opportunity. This saves time, reduces duplication, decreases clinical risk and improves outcomes for patients. It facilitates the delivery of the right care, in the right place, at the right time by the right team, according to the *Sláintecare Implementation Strategy and Action Plan 2021–2023* (DoH, 2021).

In the National Health Service (NHS) in the UK, Same Day Emergency Care (SDEC) was developed as a framework for same day emergency care services. SDEC allows specialists, where appropriate, to assess, diagnose and treat patients on the same day of arrival who would otherwise have been admitted to hospital.

Under this care model, patients presenting at hospital with relevant conditions can be rapidly assessed, diagnosed and treated without being admitted to a ward, and if clinically safe to do so, will go home the same day their care is provided.

Ambulance handover and registration

The care of patients who arrive by ambulance should be accepted by the ED team immediately upon patient arrival. The formal handover of ambulance patients from the pre-hospital practitioner to ED staff follows a standard national protocol (EMP, 2013). A target of 95% of all patients to be handed over within 20 minutes of ambulance arrival at the ED applies.

All patients must be registered so that there is a record of their attendance at the ED or hospital. Registration also involves matching a patient to their pre-existing hospital record and the collection or checking of a range of demographic and other healthcare-related data. Triage and registration occur concurrently for the most severely ill and injured patients. Triage, ambulance patient handover time and registration time/ED arrival time will be almost identical for resuscitation patients. For ambulatory patients, most EDs currently undertake registration before triage. Self-registration, either with a smartphone application prior to arrival or using a touchscreen terminal in the ED waiting area, may help to reduce queuing for registration and allow registration staff more time for patients who require assistance with the registration process.

Triage

Triage is the preliminary assessment of patients to determine the urgency of their need for treatment and the nature of the treatment required. Triage is necessary when there is a mismatch in quantity, time or location between the needs of patients and available resources but is rendered unnecessary if there is a doctor or RANP

available to see a patient without delay. The triage systems validated in Irish patient populations and recommended for use in EDs by EMP are:

- Manchester Triage System (MTS) for patients ≥16 years
- Irish Children's Triage System (ICTS) for patients < 16 years

Both triage systems are five-tier systems employing two key principles:

1. Recognition of the presenting complaint and use of the relevant flowchart;
2. Use of reductive discriminators to identify clinical priority.

EMP recommends a modified triage process for patients presenting aged ≥75 years. It also recommends that no older patient be triaged as less urgent than category 3 and that a defined suite of assessments be performed in the post-triage phase. These assessments may result in a patient who had been triaged as category 3 under MTS being recategorised as category 2.

Triage is not employed in IUs as patients either self-triage as suitable for an IU or are referred by their GP. An appropriate assessment of patients whose presenting complaint does not meet the inclusion criteria for treatment at the IU will be conducted and the patient will be advised as to their best alternative care option.

EMP and the National Centre for Clinical Audit conducted a HSE *National Clinical Audit of Emergency Department Triage* (HSE, 2023b) of ED attendances to determine the timeliness, completeness and accuracy of the triage category designation of patients who attended EDs in 2022. The audit found that 81% of patients had the correct triage category assigned and 93% of patients had the correct presentational flowchart used. There was wide variation in timely triage (within 15 minutes), with overall timely triage ranging from 21% to 76%. All EDs have been issued with feedback and advice in addition to the full audit report.

All patients undergo infection prevention and control assessment at triage as described in *Emergency Department Infection Prevention and Control (IPC) at Triage for Adults.*

Emergency Medicine Early Warning System

The Emergency Medicine Early Warning System (EMEWS) is one of a suite of well-aligned national early warning systems focusing on the early identification of clinical deterioration that is specific to the unique environment of the ED. The EMEWS was developed in response to concerns that ED patients have undifferentiated, undiagnosed conditions with the potential for rapid change in their physiological status and are therefore at risk of clinical deterioration between the time of triage and the time they are assessed by a treating clinician.

The *Emergency Medicine Early Warning System (EMEWS): National Clinical Guideline No. 18* (DoH, 2018) was launched in October 2018 and subsequently mandated for implementation in all EDs, with eLearning available in the Clinical Skills catalogue of the HSE's online learning platform.

The Resuscitation Room

Every ED has a dedicated area known as the Resuscitation Room/Area (Resus). This area should be reserved for patients with compromise of one or more of the airway, respiratory, cardiovascular or neurological systems and who require intensive resuscitation, including simultaneous assessment and treatment by multiple medical and nursing staff. The area necessitates sufficient space around each resuscitation trolley to allow several members of the resuscitation team access to monitoring equipment equipment and equipment for critical care interventions. All category 1 patients and many in triage category 2 will begin their ED journey in the Resuscitation Room. Typically, these patients will have been brought directly to the Resuscitation Room by the transporting ambulance crew or by the triage nurse who identifies the need.

Rapid Assessment and Treatment

Rapid Assessment and Treatment (RAT) provides early senior assessment of undifferentiated patients. While the model has been implemented in a number of EDs in Ireland and the UK, with considerable benefits for patient safety and satisfaction, implementation can be difficult, particularly in poorly staffed departments.

Senior clinicians who lead RAT teams may find the intensity of the work difficult. Persisting exit block in the ED also presents a challenge, and rapidly assessing a patient and promptly determining that they require admission can lead to frustration when no bed is available. There are multiple terms in the EM literature to describe RAT, including Advanced Triage and Senior Intervention Following Triage.

Post-triage phase of care

The post-triage phase of care is described extensively in "*It's about time": Efficient Emergency Department Care in Ireland* (EMP, 2021b). This paper addresses the issue of triage drifting from appropriately being a process used to determine the urgency of assessment to becoming a process of initiation of investigations and care which slows down and fundamentally alters the purpose of triage. It is necessary that time at triage be minimised. Following triage, the patient may be placed on particular care pathways, including standardised care bundles, and undergo parallel assessments (see interventions listed below).

Examples of patient care in the post-triage phase include:

- **Assessment:** Infection prevention and control, sepsis, frailty, post-triage mental health triage, delirium, falls;
- **Monitoring:** EMEWS, Glasgow Coma Scale, pain, telemetry;
- **Investigation:** Electrocardiograph, venepuncture, urinalysis, X-rays;
- **Intervention:** Intravenous cannulation, Clinical Nurse Specialist review;
- Specialist intervention services should begin patient assessment before or in parallel with EM assessment to maintain patient flow. These specialist services would include FFD Teams, Consultation Liaison Psychiatry (CLP), Clinical Pharmacists, social inclusion teams and HSCPs, e.g. Medical Social Workers (MSWs), Physiotherapists, Dietitians, Speech and Language Therapists (SLTs) and OTs.

Parallel assessment plays an important role in the care of high-intensity ED service users.

Diagnostics

Diagnostic imaging is of fundamental importance in delivering safe and efficient emergency care. The successful use of care bundles and pathways ensures timely access to investigations, thus reducing the incidence of unnecessary hospital admission and the risk of having patients wait in EDs overnight for imaging to support their admission, referral or discharge decision. (Appendix 14 of "*It's about time": Efficient Emergency Department Care in Ireland*; EMP, 2021b).

EMP recommends that consideration be given to child-friendly diagnostic infrastructure, with staff in these areas having undergone specific training in the care of children. There is expanding evidence that point-of-care testing (POCT) has particular benefits in the paediatric setting, particularly in the diagnosis of seasonal viral infections (Mintegi *et al.*, 2009; Abanses *et al.*, 2006; Iyer *et al.*, 2006).

Senior Decision-Maker assessment

EMP recommends that a Senior Decision-Maker (SDM) be involved in the patient's care plan as soon as possible. SDMs in blended multidisciplinary ED teams include Consultants, Specialist Registrars and other middle-grade doctors, RANPs, CNMs and some HSCPs. They balance risk and cope with decision density and high levels of uncertainty coupled with limited clinical information to achieve the best outcome for the patient. EMP recommends monitoring of the Time Seen by a Treating Clinician (TSBTC) as a key milestone in the ED patient journey.

While awaiting SDM review, many interventions may have been performed by other ED staff (particularly nursing staff), including blood tests, electrocardiograms (ECGs), and other templated investigations based on the patient's presentation. The delivery of nursing care and supportive treatments such as tissue viability assessment and appropriate referral are examples of the post-triage phase of care.

The EMEWS describes a formal process of patient reassessment and allows for an auditable mechanism of re-triaging by nursing staff that is currently being implemented in EDs nationwide.

The core responsibilities during the initial medical and nursing assessments are to:

- Identify life- or limb-threatening conditions.
- Initiate therapy to preserve life or limb, prevent a condition worsening and provide symptom relief.
- Create a differential diagnosis and, from this, a likely working diagnosis.
- Instigate the investigations needed to facilitate decision-making.
- Determine where the patient is best cared for, i.e. home, community or hospital.

Patient handover during their Emergency Department journey

EM clinicians work on a shift basis (with on-call cover overnight from a Consultant), and some patients may be still undergoing assessment (e.g. waiting for a computed tomography (CT) scan) at the end of a doctor's shift. These patients must be handed over to a clinician colleague. Patient handover is recognised as a high-risk patient safety event. Miscommunication between clinicians and failure to inform nursing staff of patient handover and related issues may result in clinical error or delays for patients. The *Communication (Clinical Handover) in Acute and Children's Hospital Services National Clinical Guideline No. 11* (DoH, 2015) deals with the transfer of professional responsibility and accountability for patients at the point of handover. Formal board rounds have been demonstrated to reduce this risk, are of educational value in EM training and are recommended by EMP. End-of-shift rounds also provide an opportunity for clinical staff to report any operational problems during the shift.

Recommendations for patient handover within the Emergency Medicine Clinical Team

Training in safe handover practice is provided.

Standard protocols are implemented for ED patient handover:

- Patients should be handed over to a staff member of equivalent or more senior grade.
- All patient handovers should be documented.

At a minimum, formal board rounds or patient rounds involving medical, RANP and CNM staff and incorporating handover of care should be undertaken at the end of night and day shifts.

There should be clear procedures in place for patient handover at the interface of staggered ED shifts.

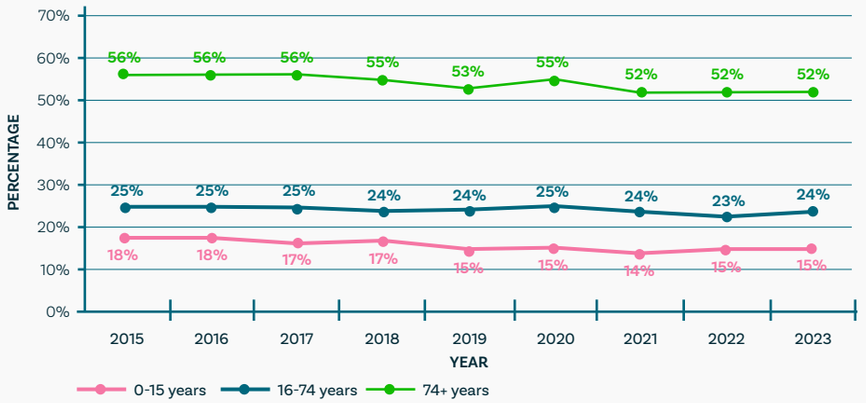
Decision to refer or discharge

Typically, 70–80% of adult patients are discharged from the ED and 20–30% referred for inpatient admission from adult and mixed EDs following assessment, provision of resuscitation if required and emergency treatment. The admission rate for children ranges from 10% to 16% (see *Figure 9*). EMP recommends that specific standards be agreed with each specialty to include the timeliness and comprehensiveness of review of patients referred to them.

The disposition options include:

- Discharge of the patient from the ED;
- Inpatient admission;
- Transfer for care at another hospital or healthcare site;
- Outpatient pathway of care with on-call specialty, regional specialty or primary care;
- Deferred care (i.e. a patient is advised to attend ED or IU at a designated future time);
- Planned trauma care for patients deemed in need of operative intervention (HSE, 2022a).

Figure 9 **Proportion of patients who were admitted, by age group and year (N=11,678,794).**
(Source: PET Data, BIU)



Referral of a patient for admission to an on-call specialty team usually begins with a telephone call or bleep requesting the representative of the on-call specialty to which the patient is being referred to contact the referrer. Increasingly, these referrals are at the level of SDM-to-SDM, and EMP recommends that this be the aim (i.e. while a Senior House Officer (SHO) may be involved in the referral for training purposes, a more senior clinician must also be involved). A discussion then follows of the patient's presentation, clinical findings, results of investigations performed and reason for referral. It is recommended that such communication follow the ISBAR3 communication tool (Identify, Situation, Background, Assessment, Recommendation, Read-back, Risk) as a structured framework which outlines the information to be transferred.

The tool may be available in written format but would preferably be available electronically. Health Information Systems facilitate electronic referrals (and uploading of clinical photographs, where relevant), thereby reducing time spent trying to contact other specialties by telephone or bleep. The SHO may complete the comprehensive admission note, following acceptance of the patient by their Registrar. Following referral, a stable patient should ideally go to a ward bed where they can be assessed by the admitting team. Demand/capacity mismatch between the numbers of patients requiring emergency admission and number of available beds frequently results in the patient waiting on an ED trolley. In these circumstances, it is recommended that the on-call team accepting the referral complete their assessment within two hours of the referral. Staff making and receiving the referral must be aware of the short period of shared clinical governance between EM and the specialty to which the patient has been referred prior to their being assessed by the inpatient specialty.

Emergency care of children

Operationally, the HSE regards children and young people as paediatric presentations up to the eve of their 16th birthday. All children presenting for urgent or emergent care require access to an area that is audiovisually separated from adult patients, contains suitable equipment and is staffed with adequate numbers of appropriately trained medical, nursing and HSCP staff. After registration, each child should be triaged within 15 minutes using the ICTS, including documentation of a pain score. They should then be assessed by a trained clinician who can develop a care plan which includes consideration of a given child's particular needs and those of their family. Common conditions are managed in accordance with standardised clinical practice guidelines. A national guideline is in development for the safe procedural sedation of children within networked units.

Inpatient admission may be required. Where an inpatient bed is needed, the patient should be moved to one located on a dedicated paediatric ward in a timely manner. *The General Paediatric Surgery. A Model of Care for Ireland* (HSE, 2024) aims to ensure that all children who require acute or elective General Paediatric Surgery are managed in an appropriate environment by staff with the requisite skills.

Notification of an ED attendance should be forwarded to the child's primary care team or Public Health Nurse where appropriate. Information leaflets covering common paediatric presentations and diagnoses should be available for parents when their child is discharged. EMP recommends the use of QR codes or smartphone apps to facilitate easy transfer of advice to parents wherever children receive unscheduled care.

For some children with complex medical needs, an ED presentation may be avoided by using an advance care plan or pathway. Such directives are usually planned by the patient's primary paediatrician or specialist service in conjunction with the emergency services.

It is the responsibility of every healthcare professional working with children to be vigilant for child welfare issues. The Children First Act 2015 conferred a statutory obligation on healthcare professionals treating children to act and report, in addition to their moral and ethical obligations.

There is an increasing prevalence of mental health issues among young people. Difficulties in accessing mental health services for children and adolescents in the community are also a significant contributory factor to increased ED attendances by children with mental health needs. The ED environment is not designed for the specific needs of this patient cohort, who may demonstrate intensification of their challenging behaviour while in the ED. Furthermore, they experience delays in access to services and sometimes protracted hospital lengths of stay.

Emergency care of the older adult

When compared to their younger counterparts, older ED patients tend to require more resources per visit, have a greater level of urgency, stay longer in the ED, have a higher frequency of missed diagnoses, are more likely to make a return visit and have a greater likelihood of negative outcomes (O'Kelly *et al.*, 2009; Sharma and Inder, 2009; Murphy *et al.*, 2000).

The development of FFD, including the introduction of Frailty Intervention Therapy Team (FITT), has addressed some of the barriers to delivering gerontologically adapted assessment of older people using a more comprehensive approach.

There is an ongoing need to develop dedicated Geriatric emergency care teams who have the competencies and experience to deliver emergency care to an undifferentiated population of older people.

Specific consideration needs to be given to the following issues:

- Polypharmacy and recognition of adverse drug reactions;
- End-of-life care;
- Delirium care;
- Older adult major trauma and fractured hip;
- Elder abuse.

Emergency care of the person requiring palliative or end-of-life care

Despite best efforts, there are times when patient death in the ED is expected. The focus of staff then switches to ensuring that patients receive compassionate and timely end-of-life care focused on comfort and dignity. Futile interventions that prevent a peaceful death should be avoided. Proactive recognition of ED patients with palliative care needs will allow appropriate patient-centred planning, e.g. the PAL.M.ED intervention in St Vincent's University Hospital.

A large national survey of EM Doctors of all grades in Irish EDs (Saaed *et al.*, 2023) highlighted a lack of knowledge, particularly among more junior staff, about end-of-life care provision. Formalised training and education were identified as important and feedback was provided to training curriculum designers. A national multidisciplinary survey of ED staff and End of Life Coordinators (Tiernan *et al.*, 2019) highlighted the barriers and enablers to provision of compassionate end-of-life care.

Recommendations included:

- Staff education and training;
- Improved access to palliative care services;
- Bereavement support for families and staff;
- Appropriate infrastructure to allow for private and dignified care.

The Hospice Friendly Hospital programme provides educational supports, infrastructure guidance and promotes the use of ceremonial resources (see Irish Hospice Foundation Supports and Services web page). Many hospitals have End-of-Life Coordinators who can assist ED staff in developing policies, guidelines and resources.

Care of the deceased is an important aspect of care in the ED. Guidelines on end-of-life care are available through the IAEM Clinical Guidelines (IAEM, 2020) and the *End of Life Care Toolkit* (RCEM, 2020). Doctors and nurses must be aware of their duties and responsibilities in caring for the deceased person, including requirements to notify the coroner. Information is available in the *HSE National Clinical Guidelines for Post Mortem Examination Services 2023*.

Emergency care of homeless people

Homeless people are more likely to die younger and be sicker than those who are not homeless. They have mortality rates 3.5–4.0 times that of the housed population and higher morbidity. Despite this, homeless people have less access to healthcare, with 45% not having a medical card. Due to the combination of poor health and lack of access to appropriate primary healthcare, they use secondary care services to a greater extent than the housed population. Rates of admission to acute hospitals vary from 2.7 to 7.0 times that of the general population, while ED usage rates have been shown to be 2.6–5.0 times that of the general population.

The responsibility of EM staff is to identify that the person is homeless and, following completion of treatment, to liaise with the Medical Social Worker, who will then communicate with multidisciplinary inclusion health teams in the community.

People who frequently attend Emergency Departments

Patients who frequently attend EDs or high-intensity users (HIUs) have complex and interacting physical, psychological and/or social problems. This complex biopsychosocial morbidity leads to high service use of other health and social care services and is associated with an increased mortality rate. This small group of patients make up a significant percentage of all attendances to EDs and contribute to existing ED capacity and patient flow issues.

The disparate care needs of this group require an individualised or case-specific intervention. Evidence-based interventions include care planning, case management, MDT conferences and integration of care into community services (RCEM, 2017). Identification of patients and intervention is best achieved through an EM-led interdisciplinary HIU group which includes CLP, MSW and pre-hospital care.

Emergency care of international protection applicants/ migrants and their children

This group are a growing and vulnerable population in Ireland. They may include people with language barriers, those living as homeless and those with pre-existing medical conditions who have lost access to their medical records or continuity of care in their country of origin. Children in this group may be without a designated primary care provider and therefore also lack access to routine childhood immunisations. Such families may utilise the ED for primary care problems as well as for more serious medical issues. They may experience heightened healthcare concerns for their children. Access to interpreters, MSWs and inclusion health medicine teams, where they exist, help to deliver support and appropriate clinical care for this group.

Emergency care of people with alcohol or other substance dependency

Patients who present to EDs with substance or alcohol dependency have complex biopsychosocial healthcare needs. The Dual Diagnosis model of care (HSE 2023c) reports that 30-50% of people with severe mental illness have co-existing substance misuse problems. The substance use disorder perpetuates the morbidity, leading to high service use, including re-presentations. Identification and intervention for the substance use disorder improves morbidity and decreases future emergency service use (NHS, 2019).

EMP recommends that all ED clinical staff be trained in the recognition and treatment of substance abuse and to provide brief advice and initial intervention. Guidelines regarding the prevention and/or treatment of alcohol/drug withdrawal and its complications are needed. Clinical Nurse Specialists (CNSs) in substance misuse have a role and responsibility in the education of ED staff, development of hospital guidelines and management of complex cases. EMP recommends that each ED has the expertise of these professionals.

Substance misuse liaison CNSs are key members of an acute hospital substance liaison service, in line with the acute hospital alcohol care team model (Moriarty, 2020), which has been shown to significantly reduce avoidable bed days and readmissions. Alcohol care teams are integrated into community addiction services, and interventions are delivered in a stepped-care model with access to assertive engagement for the most frequent users of the emergency services (Hughes *et al.*, 2013).

Emergency care of people with neurodiversity

The challenging nature of the ED environment with its bright lighting, high noise levels, prolonged waiting times and crowded waiting rooms (even separate paediatric ones) causes particular issues for children with sensory challenges and neurodiversity (Nicholas *et al*., 2016). Consideration of sensory spaces is needed for children with neurodiversity as well as anxiety-reducing resources e.g. noise cancelling headphones, weighted blankets. For children, this is addressed within the RCPCH *Facing the Future: Standards for Children in Emergency Settings*, specifically standards 50 and 52 (RCPCH, 2018).

Patients with neurodiversity require particular consideration in the ED because they may be unfamiliar with the acute healthcare environment and may have associated physical or sensory difficulties. This group of patients may have communication and/or comprehension difficulties and may not be able to self-report illness. Occasionally, their behaviour may be challenging to manage in an ED setting, and they may be at risk of harm to themselves and others. There may be an increased demand for emergency services from this group because of complex healthcare needs and polypharmacy. The HSE report on Intellectual Disability Nursing (HSE, 2018, p10) recommends that "Liaison posts within acute hospital services provide significant support to individuals presenting in emergency departments and should be developed further to provide individuals with ongoing support throughout their acute hospital journey".

To support people with ID to express their needs when in a healthcare setting, the HSE has created a communication tool that helps ED staff to provide better, safer care by providing reasonable adjustments before undertaking any assessment, examination or treatment of people with ID. The tool, available in printed or app form, is called the '*HSE Health Passport*'.

Emergency care of people with physical disability

The infrastructure of each facility in the network of emergency care must meet the needs of patients with a physical disability in order to ensure that they are cared for in a safe environment. ED infrastructure needs to accommodate their family members or carers. Physiotherapy, OT or MSW assessment are more likely to be required by people with disability to facilitate their safe discharge.

Emergency care of the person with cancer on active treatment

Cancer patients on active treatment present several unique challenges to EDs due to the complexity of their disease and treatments, including risk of infection due to immunosuppression. Effective and timely treatment of oncological emergencies and management of acute symptoms and treatment side effects are critical for this patient cohort.

Emergency care of people with language or communication challenges

Excellent communication is essential to the successful interaction with all patients and their families attending the ED. Clear information is required on access routes to the hospital, and clear road and hospital signage indicating the type of emergency network unit (e.g. 24/7/365 ED or 12/7 IU) is essential.

Communication barriers that can impede successful interaction include:

- Literacy and language deficits;
- Dysphasia and dysarthria;
- Environmental issues such as poor signage and noise;
- Inability to access or use services or equipment;
- Physical disability restricting communication, e.g. difficulties with writing;
- Visual or hearing impairment;
- Inability to concentrate and focus on communication.

SLTs can provide assistance in reducing communication barriers. Where a patient does not have adequate fluency in the English language, family, friends and multi-lingual staff may be used for more basic interpreting, such as whether the patient requires analgesia, but this may be inappropriate in many circumstances. Instead of relying on ad hoc practices to aid clinical examinations or to obtain consent, the HSE recommends the use of professional interpreting services.

Emergency care of people who identify as lesbian, gay, bisexual, transgender, queer, intersex or asexual

There is a need to ensure that the lesbian, gay, bisexual, transgender, queer, intersex or asexual (LGBTQIA+) community feel safe within the ED to express themselves openly, freely and without judgement. Those from the LGBTQIA+ community are more likely to experience psychological distress and are at greater risk of mental health problems (Burgess *et al.*, 2008). There is an increased susceptibility to alcohol or drug misuse and self-harm (Cochran *et al.*, 2003). EDs must ensure that the experience of transgender patients in the system is as positive as possible. Simple mechanisms, such as ensuring that these patients are registered correctly on the IT system under the name they are currently using and the gender they identify as, will make the hospital experience less traumatising. LGBTQIA+ inclusivity within the ED presents an opportunity for improvement. The establishment of local working groups to identify ways to improve the experience of these patients within the ED is recommended.

HSE staff can demonstrate that they are aware of the issues that the LGBTQIA+ community can face when accessing healthcare and that they feel comfortable talking about issues relating to sexuality or gender identity by wearing a rainbow badge, which shows that they are there to listen without judgement and signpost to further support, if needed, as part of the Rainbow Badge initiative.

Emergency care of pregnant and postpartum women

For sites that do not have an obstetric unit, EM staff should liaise with the linked obstetric unit(s) to agree guidelines and protocols in the management of women with pregnancy-related emergencies.

The use of the Irish Maternity Early Warning System (IMEWS) is a nationally recommended practice for all pregnant women. Key lessons and recommendations from the MBRRACE (Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries) reports that are relevant to emergency care should be disseminated and integrated into staff training. Ectopic pregnancy should be considered in all women of reproductive age, with the use of FAST (Focused Assessment with Sonography in Trauma) scanning as a potentially valuable diagnostic tool.

Postnatal women face unique risks such as haemorrhage, sepsis, and thrombosis, which may go unrecognised, and they also encounter particular challenges including breastfeeding and post-caesarean section pain that can increase their vulnerability while awaiting triage. Finally, consideration should be given to establishing direct referral pathways for obstetric patients requiring specialised services such as radiological, surgical, or other medical care to reduce time spent in the ED and improve outcomes.

Emergency care of patients who allege rape or sexual assault

Women, men or children may present to an ED alleging rape or sexual assault. ED staff must consider the physical, psychological and legal issues involved and they need to be aware of the role of the ED as outlined in *National Guidelines on Referral and Forensic Clinical Examination Following Rape and Sexual Assault* (HSE, 2023d).

- ED staff should aim to provide the highest quality service to these patients in a sensitive, appropriate and non-judgemental way.
- The ED focus is always on the safety and physical and psychological needs of patients and their right to privacy and confidentiality.
- The patient's informed decisions must be respected at every stage of their journey.
- All staff should promote and encourage the patient's sense of personal control.
- Detailed medical records should be completed, as they will be required as evidence in a subsequent criminal investigation.
- Children First reporting requirements should be followed for patients aged under 18 years.

A patient's consent should be sought for An Garda Síochána (AGS) to be contacted if they are not already involved. Once consent has been granted, AGS should be contacted as early as possible. It is important that forensic evidence is preserved (according to the national guidelines) and that forensic and legal procedures are followed.

ED staff should liaise with their nearest appropriate Sexual Assault Treatment Unit (SATU) and, with the consent of the patient, organise transfer of the patient for SATU care as soon as clinically appropriate. Ideally, forensic examination should be undertaken in a SATU setting. Patients who do not wish to report the incident to AGS should still be encouraged to consent to referral to a SATU for a health check. Patients who refuse AGS, SATU or Rape Crisis Centre care should be provided with a health check and psychological support through the ED, the hospital and their GP. This may involve the appropriate on-call team, infectious disease service, the patient's GP (with the patient's consent) and MSWs. Priorities include reducing the risk of pregnancy, reducing the risk of transmission of blood-borne viruses (by Hepatitis B immunisation and HIV post-exposure prophylaxis post sexual exposure), reducing the risk of other sexually transmitted diseases, and ensuring psychological support. Detailed clinical records should be kept in case the patient subsequently decides to report the incident to AGS.

Emergency care of patients who report experiencing domestic, sexual or gender-based violence

A screening support decision tool for identifying patients experiencing domestic, sexual or gender-based violence (DSGBV) was developed as a collaboration between EMP and the EDs of Mercy University Hospital and Connolly Hospital. A National Training Programme is in development which will include appropriate responses for patients who indicate they are experiencing some element of DSGBV, even when that is not the reason for their ED attendance.

Information about DSGBV in all its forms, its prevalence and impacts, as well as national policy and relevant legislation, is available to all staff in an eLearning module on HSE's online learning platform

Clinical Decision Unit

A Clinical Decision Unit (CDU) is an area adjacent to the ED that provides for a period of inpatient observation, assessment or therapy under the care of a Consultant in EM for patients who no longer require active ED care. When the first EMP Model of Care was published (HSE, 2012), eight hospitals in Ireland had a CDU attached to their EDs. Several hospitals lost their CDU during the COVID-19 pandemic, and these have not been repurposed to their original use. A survey of all EDs conducted in August 2023 revealed that only three hospitals had functional CDUs. EMP recommends that EDs seeing more than 40,000 patients per annum should consider having a CDU service.

Pathway-based care is the mainstay of CDU activity, e.g. diagnostic pathways for chest pain, stable upper gastrointestinal bleeding, pulmonary embolism, ureteric colic and acute headache provide an efficient inpatient pathway for selected patients. Observation after head injury or other trauma, therapeutic procedures, management of the patient after an overdose of medication and soft tissue infection remain common reasons for CDU admission. Additionally, assessment and focused intervention such as physiotherapy, OT and MSW can be optimally coordinated to achieve early and safe discharge in suitable patient groups.

CDU medicine has significant untapped potential. Hospitals with CDUs have high levels of flow through their units, accounting for 15–20% of acute inpatient admissions. The creation of additional pathways of care in each unit has the potential to increase this number. With the average length of stay being in the region of 24 hours, this will have a positive impact on EDs and hospital average length of stay and, more importantly, provide an appropriate environment for a patient rather than being detained inappropriately in the ED or admitted to another ward. Similar to all areas of the Acute Floor, CDU beds must be protected for their CDU function.

Observation medicine/Clinical Decision Units for children

Paediatric acute care is particularly suitable to observation medicine, with a higher proportion of children compared to adults presenting with mild-to-moderate illness or injury and without pre-existing comorbidity (Green and Ruben, 2009). The international literature would strongly support the use of a CDU to complement PEM

and traditional inpatient paediatrics, with many authors reporting equally favourable clinical outcomes in comparison to hospital admission but with associated financial savings, reduced ED and hospital length of stay, and improved patient satisfaction (Blair *et al.*, 2008; Mallory *et al.*, 2006; Hassan, 2003; McConnochie *et al.*, 1999).

Discharge from the Emergency Department

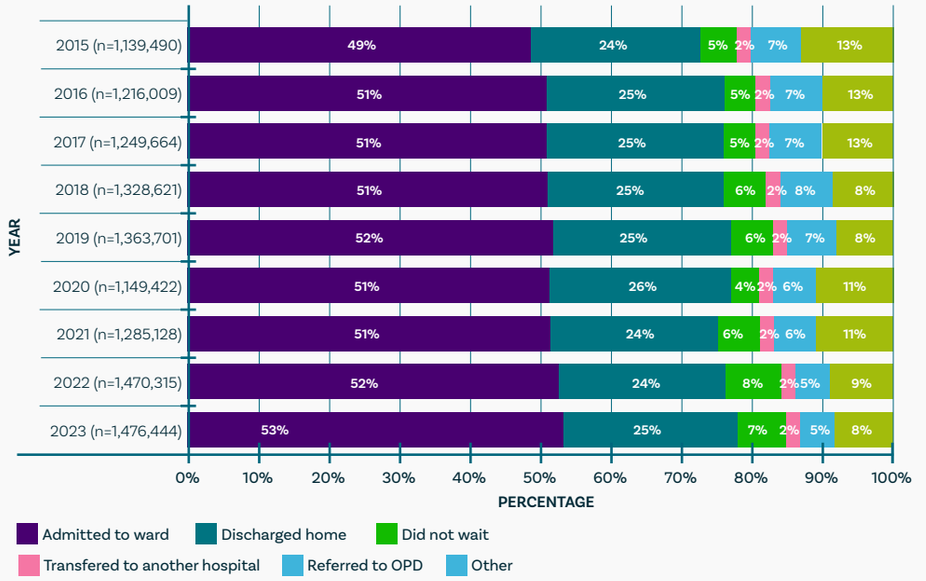
EMP recommends that the time at which all EM care processes for a patient are completed be logged by the discharging clinician. EDs with good access to structured clinical pathways as alternatives to hospital admission may refer significant numbers of patients directly to outpatient care from the ED without the need for prior consultation with inpatient specialty teams, particularly after soft tissue, bone and maxillofacial trauma. These referrals should always be notified to the patient's GP.

Written communication needs to be sent to the GP named by the patient in the case of patients who are discharged. Patients require self-care information and verbal, electronic, or printed instructions, as appropriate, as part of the discharge process.

At any stage in the ED journey, patients may opt to leave the ED before the completion of their treatment. EMP recommends that the Left before Completion of Treatment (LBCT) figure should not exceed 5% of new patient attendances in patients who have not had a clear diagnosis and treatment plan implemented. EDs must have a means of monitoring the number of those who 'Did not wait' (see *Figure 10*) and a coordinated approach to the management of this cohort of patients. To aid this, EMP has issued *Guidance on the Management of Patients in Emergency Departments who Leave Before Completion of Treatment* (LBCT) (2022).

The above recommendation includes children who may attend for assessment but who do not wait to be seen or leave before completion of treatment. Each hospital where children are seen should have an agreed written policy in place for the paediatric cohort who LBCT.

Figure 10 **Discharge destination, by year (N=11,678,794).**[1] *(Source: PET Data, BIU)*



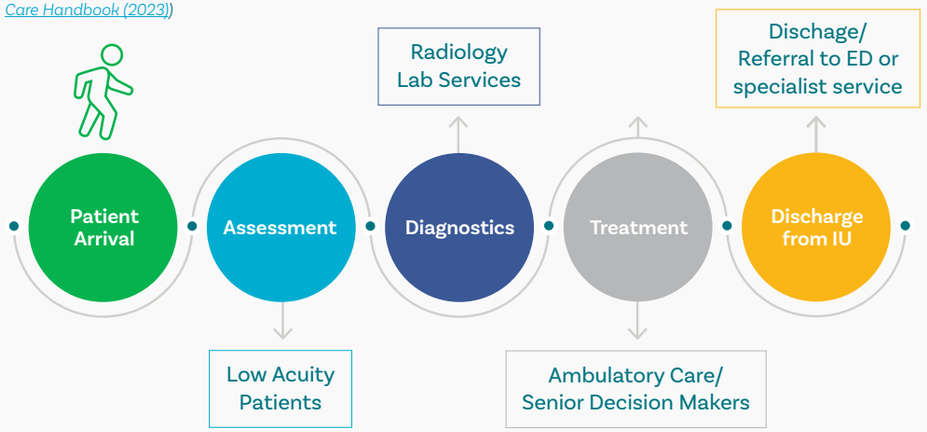
1. The category "Other" includes: Brought in Dead (BID), Death (in the ED), Discharged to Other place, Not Specified, Unknown, Admission Lounge, Referred to PAU, Referred to ASAU, Discharged to CDU, Discharged to Nursing Home, Not Yet Discharged, Admitted in the ED and Discharged Prior to Going to Ward Bed, Referred to Acute Medical Unit, Referred to the ED Clinic.

Patients who are not admitted to a ward (i.e. who are discharged) may be variously discharged with no follow-up, follow-up with their GP or follow-up in outpatient or other healthcare settings.

Injury Unit pathways

Figure 11 below provides a high level overview of the typical patient pathway through an IU.

Figure 11 **Typical patient pathway through an IU.** *(Source: Access to Care: Adult Services Pathways of Care Handbook (2023))*



IUs provide unscheduled emergency care for patients with neither life-threatening nor limb-threatening injuries as conveniently as possible, with a treatment time in some cases of less than 1 hour, while ensuring patient safety and equitable standards of care within a network of emergency care.

They are designed and equipped for the treatment of patients with broken bones, dislocations, sprains, strains, wounds, scalds and minor burns that are unlikely to need overnight admission to hospital. Staff members perform X-rays, reduce joint dislocations, apply plaster casts and treat wounds by suturing or other means of wound closure. They have swift access to diagnostics, including X-ray and laboratory tests, and some have rapid access to physiotherapy services. The team of doctors, RANPs, nurses, Radiographers and Physiotherapists operate under the governance of a Consultant in EM from the hub ED. Patients can go directly to the IU or be referred by a GP. Audiovisual separation of children from adults is recommended.

IUs provide the same level of expertise and service as EDs for the appropriate group of patients, but they are not designed to treat significant head, back or neck injuries, abdominal pain, medical illnesses or mental health problems. While some have a higher age threshold, none treat children aged under 5 years because of the special requirements of young children attending hospital. These children should attend mixed EDs, or Paediatric Urgent Care Centres for those living in Dublin.

Each IU is part of a wider system of care and is linked to a hub ED in an acute hospital. Therefore, if a patient in an IU needs to be admitted to hospital, they will be referred directly to a linked hospital in exactly the same way as if they had attended the hub ED. The established IUs, as part of networks of emergency care, have also been welcomed as part of the inclusive National Trauma System.

Generally, IUs are open 12 hours per day, 7 days per week, with some local variations. Work is under way to standardise the opening hours in all IUs. Opening hours of existing units are available on the HSE web page "Find urgent and emergency care".

Injury Units do not treat:

- any child of any age with a medical illness, for example, fever, seizures, respiratory symptoms
- non-traumatic limp or non-use of a limb
- injuries following a fall from a height or a motor vehicle crash
- serious head injuries
- abdominal (stomach) pain
- gynaecological problems
- injuries due to self-harm
- neck pain or back pain
- injuries that are more than 6 weeks old

The full list of inclusion and exclusion criteria for injuries treated at IUs are listed on the HSE web page "When to visit an injury unit".

The child that presents to an Injury Unit or Paediatric Urgent Care Centre

IUs do not treat children under the age of 5 years because of the special requirements of young children attending hospital. These children will attend EDs or Paediatric Urgent Care Centres for those living in Dublin. Inclusion and exclusion criteria for injuries treated at IUs are listed on the HSE web page "When to visit an injury unit".

Conditions suitable for treatment in the Paediatric Urgent Care Centre (PUCC) are outlined on the CHI at Connolly web page.

Review clinics

It is the norm internationally for patients to attend the ED just once for treatment of their emergency. However, historically 5-10% of patients at many adult and mixed EDs are brought back for a scheduled review. This has not been felt to be necessary in paediatric EDs. Since the early 2020s there has reportedly been a fall in the number of patients being brought back for review because enhanced patient care pathways provide other options. Despite this relatively large cohort of patients and the workload involved in their care, there is surprisingly little published research into review clinics.

The reasons for the existence of review clinics include:

- Definitive diagnosis of certain acute injuries occurs a few days after attendance at the ED, and review clinics optimise the demand for diagnostic imaging.
- The clinics are perceived as a safety net for patients. The perception, or in some cases the reality, is that there is nowhere else for the patient to go because of lack of access to alternative follow-up services. Efforts towards networking of care should reduce the incidence of this.
- Providing a service to patients for whom a need for further review has arisen after ED discharge (e.g. queries raised by a Radiologist's report).
- Senior EM staff having a particular expertise in certain conditions makes it appropriate for them to review these patients.
- Service developments have led to EM intentionally taking on new roles because of the inherent expertise within the specialty, e.g. Silver Trauma clinics that cater for the increasing number of elderly patients who fall and suffer multiple injuries to various body parts.
- GP practice charges for procedures such as removal of sutures or follow-up appointments serve as a financial disincentive to GP follow-up, whereas there is (appropriately) no additional charge for the ED review clinic attendance.

Governance and Operational Issues of Review Clinics

- The Consultant in EM is responsible for the clinical governance of all EM scheduled review activity.
- Review clinic activity is of secondary priority to the immediate management of new ED patient presentations. EMP recommends that the clinical staff running the review clinic are specifically rostered for this function and not be in any other roles within the ED at the same time.
- EMP recommends that review clinics be scheduled for the least busy times in the ED day (usually the early morning) and that activity be recorded, monitored and frequently audited to ensure the quality, safety and cost-effectiveness of the care provided.
- Risk management issues identified during review clinics should be addressed.
- Alternative pathways of care to EM review should be developed where appropriate.
- Should another specialty plan to discontinue a service for follow-up of particular cohorts of patients who initially presented to the ED, it must be clearly understood that responsibility for the follow-up of these patients does not default to the EM service. Any service reconfiguration must involve a comprehensive plan for where this workload will transition to. Discussions must involve hospital management, with appropriate advice sought from EM.
- The number of review appointments that each patient requires should be kept to a minimum, and patients should be discharged to the care of their GP as soon as appropriate.
- Increasing senior staffing levels in EM will allow access to real-time senior opinion for complicated and unusual patient presentations, thus reducing the need for ED clinic review.

Consultant-led review clinics

There will remain a need for some patients to return to be seen by a Consultant in EM. The number and type of these patients will vary in line with the pattern of service provision in the hospital and geographical considerations. Consequently, it may be that the Consultant is the only person providing the clinic, e.g. in an IU, or that the Consultant reviews patients in conjunction with other practitioners, e.g. a Physiotherapist.

It is important that the ED is not used for the outpatient review of patients from another specialty. Rapid-access specialty clinics are needed but should take place outside the ED.

Other review clinics

Registered Advanced Nurse Practitioner

RANPs may elect to review a cohort of patients to determine the most appropriate ongoing pathway of care for these patients, with referral rights to relevant outpatient clinics, both within their base hospital and to clinics within the regional network of emergency care.

Physiotherapy

Clinical Specialist Physiotherapist (CSP)-led ED/IU review clinics will provide specialist expertise in the management of patients with acute musculoskeletal conditions, thus reducing the need for review of these patients by Consultants in EM and reducing the number of onward referrals. This is the current operational model in many centres in the UK and in some Irish EDs. Protocols are being developed to enable CSPs to refer to appropriate outpatient clinics and other therapy services. CSPs working in a review clinic context or as first contact practitioners can contribute to the training of Specialist Registrars in EM, RANPs and other clinicians in the management of patients with musculoskeletal presentations.

Hand Therapy Clinics

Many patients who present to the ED with hand injuries can be effectively managed by a Clinical Specialist OT or a Clinical Specialist Physiotherapist with a recognised specialism in hand therapy. EMP recommends ready access from all emergency care units to such clinics within the network of emergency care. Hand Therapy Clinics are under the governance of Plastic Surgery or Trauma and Orthopaedic Surgery.

Dressing Clinics

Whereas it may be necessary to review a complicated wound in the initial stages of healing to determine the need for further intervention or onward referral, the ED should not be used for ongoing or routine dressing of wounds. Patients with surgical wounds and chronic skin ulcers should be cared for in suitable outpatient settings such as Tissue Viability Clinics. The development of such clinics in the community as part of the Enhanced Community Care initiative is welcome.

Deferred care

Historically, patients who attend the ED are seen in order of clinical priority as determined by their triage category. Because of a mismatch between the number of patients attending and the staff available to see them, particularly overnight, there are often significant waits for patients in lower triage categories to be seen. Generally, those impacted by these delays are patients with peripheral limb injuries. A number of EDs nationally have begun to offer such patients the opportunity to be seen by appointment the following working day at a time when the ED is better staffed to see such patients. In such cases they will typically be seen by the RANP, resulting in shorter waits, quicker access to diagnostic imaging and a better patient experience. In many ways this mirrors the approach of patients to IUs where a patient may sustain an injury in the evening or overnight but not attend the IU until it opens the following morning. Application of this approach in an ED requires the Triage Nurse to confirm that the patient does not have a life- or limb-threatening condition, and that urgent intervention is not required. They will also provide appropriate analgesia and splintage and arrange for the patient to be seen in a scheduled fashion without the need to be treated as a new attendance when they return. EMP endorses this approach as one which optimises the experience of patients with conditions suitable for deferred care. Networking of Emergency Care would allow some of these patients being scheduled for deferred care to receive their care in a networked IU.

Key specialty and service interfaces

The interfaces described below are the collaborations that are frequently necessary to deliver the complete care journey for some ED patients.

General practice

Both EM and general practice provide 24/7/365 unscheduled care, seeing undifferentiated patient presentations and tolerating high levels of diagnostic uncertainty while ensuring that no serious diagnosis is overlooked. Only a small proportion of patients managed by GPs are referred to hospital, and internationally less than one patient per thousand requires immediate referral to an ED. There is limited crossover between the top 10 complaints presenting in general practice and those presenting in EM. An Irish study (Cummins *et al.*, 2022) looked at the level of consensus between providers across healthcare settings about the appropriateness of ED attendances. In relation to the possibility of lower-acuity presentations being treated by a GP within 24–48 hours, a GP deemed this acceptable in 11% of cases, whereas the Consultant in EM deemed it acceptable in 38% of patients. With regard to assigning a level of appropriateness to the ED attendance, the GP found attendances in the lower-acuity patients to be appropriate in 82% of patients, whereas the Consultant in EM found it to be appropriate in 65% of cases. Obtaining consensus on appropriateness of attendance is challenging, and there was a significant cohort of complex heterogeneous presentations where agreement could not be reached by clinicians in the study. Feedback from patients and ED staff suggests that since the late 2010s there has been an increase in the numbers of patients presenting to EDs with issues that could be dealt with in primary care, particularly since the COVID-19 pandemic. Anecdotally, this appears to be driven by several factors, including a national shortage of GPs (which is particularly acute in rural areas), changes in the way people choose to access healthcare and reported preference on the part of some patients for earlier face-to-face rather than initial video or telephone consultation.

Out-of-hours GP cooperatives, Primary Care Teams and other Community Teams allow patients to avail of clinical expertise in primary care across extended hours.

Accurate and timely communication is crucial in enabling safe quality care for patients. EMP recommends that electronic referral be facilitated for GPs, and all patients attending ED have a discharge summary sent to their GP.

The National Ambulance Service (NAS) runs a virtual Navigation Hub for patients who call 999 or 112, which allows for patients to be directed to the service that can best add value to their healthcare journey in a timely manner. Separate to this, an advice line is needed as a channel for primary care providers to seek advice from Consultants in acute specialties on clinical care as outlined in the HSE's *Acute Floor Model for Ireland*, (HSE, 2017).

Other emergency services

Each ED ought to meet at least once a year with other emergency services, where relevant, to agree communication and processes. These services include An Garda Síochána, Tusla, fire and rescue services, Mountain Rescue Ireland, and the Irish Coast Guard.

Pre-hospital care

Pre-hospital care pathways in unscheduled care fall into two broad categories: first, bringing an EM skill set to the scene of the emergency for higher-acuity patients before they reach the hospital; second, providing outreach services for lower-acuity patients. Practitioners in both pathways are always tasked by the NAS to achieve the preferred outcome of providing assessment and treatment in the patient's place of residence, when this is appropriate, in preference to their needing to attend the ED, while maintaining appropriate lines of communication and governance. The Alternative Pre-hospital Pathway (APP) project, Pathfinder and EDITH are examples of such outreach services.

Community Intervention Teams

A Community Intervention Team is a specialist health professional team that provides a rapid and integrated response to a patient with an acute episode of illness who requires enhanced services/acute intervention for a defined short period of time. This may be provided at home, in a residential setting or in the community as appropriate, thereby avoiding acute hospital attendance or admission, or facilitating early discharge from the ED or hospital bed.

Hospital-based specialties

EM has important interfaces with a wide spectrum of specialties. As a general principle, except for more time-critical requirements, access standards for emergency care require that patients who are referred to hospital-based specialties should be assessed within 1 hour of referral, and a clear care plan completed within 2 hours of referral. Staff making and receiving the referral must be aware of the short period of shared clinical governance between EM and the specialty to which the patient has been referred prior to their being assessed by the inpatient specialty. EMP recommends that referrals to specialty teams are at the level of SDM-to-SDM. On-site Registrar presence on a 24/7/365 basis is required for the major specialties.

Some specialties such as Neurosurgery/Interventional Cardiology/Nephrology/Plastic Surgery are only available in larger hospitals with networked units having direct access to opinion for patients presenting to them. In the absence of on-site services, local protocols are needed to identify which alternate specialty will admit patients when the opinion of the regional specialty consulted is that they be admitted to the hospital whose ED they attended rather than be transferred to the regional specialty. Clear lines of communication are needed for EM clinicians who require a subspecialty opinion as to the appropriateness of off-site transfer.

EMP recommends rapid-access outpatient clinics be available for EDs and GPs with direct appointment booking available 24/7/365.

Acute Floor

EM, Critical Care, Acute General Surgery and Acute Medicine (AM) are complementary systems of patient care. Ideally, these services should be co-located on an Acute Floor as outlined in *Developing an Acute Floor Model for Ireland* (HSE, 2017). It is also important to have ready access to Trauma and Orthopaedics, Cardiology and Paediatrics.

The *Developing an Acute Floor Model* document recommends that patients should access the ED and Acute Medical Assessment Unit (AMAU) through a common entrance. All patients should be rapidly streamed to the appropriate service by a suitably experienced clinician at the single point of entry. When there is uncertainty about streaming or level of acuity, a fuller triage should be carried out by a suitable senior clinician according to the Manchester Triage System (MTS), with category 2 generally defaulting to the EM service (unless by prior agreement) and categories 3 and 4 (which are stable patients) and those with predefined clinical needs being suitable for the wider Acute Floor. Each patient should have a single infection prevention and control (IPC) assessment upon arrival, with the application of appropriate precautions as indicated.

The clinical interface between EM and many specialties is often dependent on the availability of timely diagnostic support, especially radiological investigations, including cross-sectional imaging and ultrasound. Point-of-care ultrasonography (POCUS) is increasingly being performed by appropriately credentialled EM doctors.

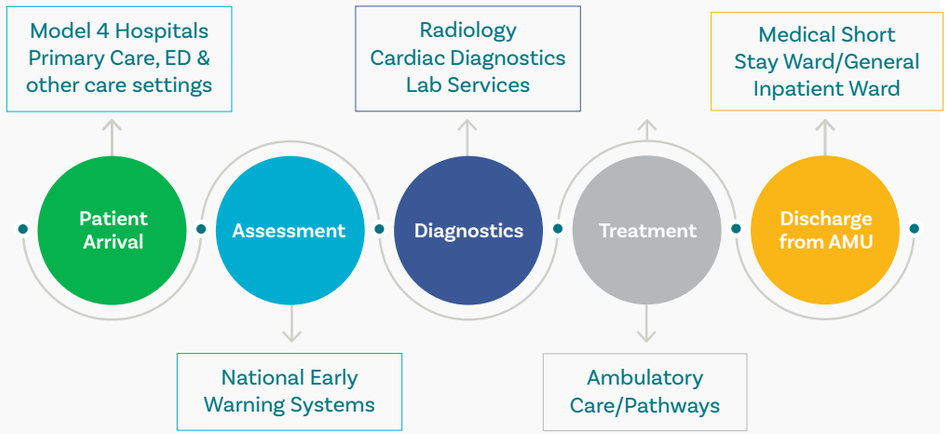
Acute Medicine Patient Pathway

The Acute Medicine Programme was created to ensure that all acute medical patients had a better patient experience, with improved communication, and that they received safe, quality care with timely diagnosis and the correct treatment delivered in an appropriate environment. The *Report of the National Acute Medicine Programme* (RCPI, 2010) describes the function and organisation of Acute Medical Units (AMUs) and is illustrated below in *Figure 12*.

There are six main benchmarks that the dedicated AMUs of the Acute Medicine Programme are aiming to achieve (McGovern, 2013):

1. Assessment and avoidance of admission;
2. Operation of an effective short stay unit;
3. Efficient processing of ordinary patients;
4. Appropriate care and discharge of complex patients;
5. Review of patients by a senior medical physician within 1 hour;
6. Decision regarding admission or discharge (disposition decision) within 6 hours.

Figure 12 **Acute Medicine Patient Pathway.** (*Source: Access to Care: Adult Services Pathways of Care Handbook (2023)*)



Critical care

Given the undifferentiated nature of ED patient presentations, many EM patients require critical care. The streaming of patients to critical care may begin in the pre-hospital arena with the prioritisation of response, instigation of therapy and advance notification to EDs. Although Consultants in EM are trained in advanced resuscitation skills, the timely support of critical care services in the care of emergency patients remains invaluable. Standardisation of critical care equipment is needed across each hospital area (and ideally between hospitals) so that critical care staff can work comfortably in the ED environment without the clinical risks associated with using unfamiliar equipment in a stressful clinical situation. The Emergency Medicine Airway Registry of Ireland has been developed to provide an ongoing audit of standards of emergency airway provision, complication rates and outcomes, irrespective of which specialty performs the procedure.

There must be equity of access to critical care for patients regardless of where a patient presents. Network protocols will govern the transfer or retrieval of such patients to regional units. If patients who need urgent inter-hospital transfer are initially assessed in the ED Resuscitation Rooms pending Intensive Care Unit (ICU) bed availability, they should be moved to an ICU bed as promptly as possible, leaving the resuscitation space available for the next patient who needs it. Effective planning for routine and surge critical care capacity is needed in order to minimise instances of patients being delayed in the Resuscitation Room. EM and critical care capacity planning is particularly important in exceptional surge events such as epidemics and major emergencies.

Simulation training and resuscitation training courses offer exceptional opportunities for inter-specialty training and the development of team-working skills, particularly in patients with critical care needs arising from High-Acuity Low-Occurrence (HALO) emergencies.

Emergency surgery

Developments in emergency care and minimally invasive interventions – as well as changes in the spectrum of medical, surgical and trauma presentations to EDs – have resulted in lower rates of emergency surgical interventions such as laparotomy or thoracotomy. Developments in diagnostic imaging and interventional radiology have also had a major impact on the clinical interface between EM and surgery. The availability and timeliness of a surgical response in agreeing a care plan for patients (that may or may not obviate the need for surgical intervention which would previously have been necessary in the treatment of their particular presentation) remains a critical component of emergency care.

The *Surgery for Ireland Report*, (RCSI, 2023), makes recommendations about the networking of the provision of emergency surgery services to allow less complex urgent surgery be delivered locally during certain hours, with more complex and/or clinically urgent surgery being delivered in Emergency Surgery Centres . This is a further important contribution to the journey towards networking of emergency care.

Many emergency presentations that may or may not require surgical intervention at some stage lend themselves quite easily to clinical practice guideline and pathway development (e.g. ureteric colic, head injury, upper gastrointestinal bleeding). Many such guidelines have been developed by the IAEM Clinical Guidelines Committee. In addition to improving the quality of emergency surgical care, such guidelines will ensure the appropriate use of diagnostic imaging.

Surgical Assessment Units (SAUs) have been developed to provide rapid access for GP and ED-referred patients with surgical problems (National Clinical Programme in Surgery, 2023). Similarly, the national implementation of Virtual Fracture Access Clinics has been a welcome development, facilitating timely access to senior decision-making in Trauma and Orthopaedics and appropriate follow-up for patients with radiologically visible fractures. EMP in collaboration with the National Clinical Programme in Trauma and Orthopaedic Surgery supports the development of Advanced Practice Physiotherapy as a means of following up ED patients who are being discharged but may still have significant peri-articular or intra-articular injuries necessitating early follow-up. This is preferable to being discharged to their GP for follow-up.

Interventional radiology

The role of interventional radiology (IR) in acute resuscitation has become much more clearly defined since the early 2010s. Unfettered access to IR via the network of emergency care is essential. It is important that the surgical specialty – under whose care the patient would be admitted were they not being transferred for IR – is involved in agreeing these transfers. An IR on-call service should be available in all level 4 hospitals and a networked service should be available in each health region, with clear and agreed transfer policies to the regional level 4 hospital.

Diagnostic imaging

Diagnostic imaging is a core component of ED and Acute Floor processes. The Acute Floor in larger hospitals – which will include the ED, Critical Care Unit, SAU and AMAU – should include a diagnostic imaging suite. The close proximity of the Acute Floor in the one area and proximity to the Diagnostic Imaging Department will facilitate patient movement to and from imaging and between Acute Floor services.

Increasingly, new ED builds in larger hospitals incorporate a CT scanning suite within the ED.

It is recommended that all EDs and IUs be part of the National Integrated Medical Imaging System. This ensures connection on a single imaging platform, allowing the sharing of images between specialists and hospitals for faster and improved diagnosis and reduced radiation exposure by reducing the need for repeat cross-sectional imaging.

There are four main imaging modalities that EDs utilise. As follows:

1. Plain radiography;
2. Ultrasound;
3. Computed tomography (CT);
4. Magnetic resonance imaging (MRI).

The ED must have access to plain radiography at all times. The images should be available on a digital Picture Archive and Communication System (PACS). Immediate (within 1 hour), provisional 'hot' reporting is ideal but, as a minimum, the official

report ought to be available for review within 24 hours. EMP recommends that all EDs undertaking fracture reduction have co-located radiology suites and, ideally, mini image intensifier (C-arm) availability. The increasing numbers of qualified nurse prescribers of radiation enhances lean processes in the ED and improves the overall Patient Experience Time (PET).

Ultrasound is an invaluable, widely used diagnostic modality that does not involve radiation exposure. POCUS is widely used in EM to aid the diagnosis of multiple conditions ranging from trauma and abdominal aortic aneurysm as well as assisting with venous access. Every ED requires at least one dedicated ultrasound machine physically located in the ED. Trainees in EM undergo training in ultrasound leading to specified levels of accreditation as part of their curriculum-based training. Systems must be in place to ensure a timely 24/7/365 ultrasound service in the ED.

EMP endorses the recommendation from the Royal College of Emergency Medicine that a CT scanner should be situated within, or immediately adjacent to, the ED and should be available 24 hours a day. Arrangements are needed with colleagues in Radiology to facilitate protocol-based referral and rapid reporting for CT in head injury, stroke, pulmonary embolism, major trauma, and abdominal pain.

Networked access must be available for urgent MRI scanning 24/7/365 for those conditions where immediate surgical intervention may be necessary (e.g. spinal cord compression).

EMP recommends the development of agreed turnaround times for the various diagnostic imaging modalities appropriate to the acuity of presentation, reflecting the different urgencies of need. Examples include:

- Diagnostic imaging to plan emergency life- or limb-saving treatment;
- Imaging needed to make a safe decision regarding admission or discharge of the patient and that requires follow-up in the near future;
- Diagnosis or exclusion of the possibility of a new cancer being the cause of the patient's ED presentation.

Laboratory medicine

EMP recommends a maximum turnaround time of 2 hours for all urgent EM laboratory tests and POCT for the most urgent blood test results. Links are needed between EDs and supporting laboratory services to develop turnaround time monitoring systems and ensure that there is access to quality-assured laboratory services with turnaround times that are appropriate to the clinical context. Standard laboratory order sets have been developed for common presentations in adult patients to facilitate the fast-tracking of test results, minimise unnecessary investigation, and optimise resource utilisation.

Blood transfusion services are of critical importance. EMP recommends that transfusion and blood product usage be included in the clinical audit programme of each ED. Coagulation services are particularly important in the management of patients with haemorrhage who have clotting disorders.

Clinical microbiology plays a crucial role in advising EM on the judicious use of antibiotic therapies and in advising on and supporting IPC in the ED.

Other emergency diagnostics

As well as diagnostic imaging, the ED and the Acute Floor require support from a range of other diagnostic services, particularly cardiac diagnostics.

Infection prevention and control

Patients need the same level of IPC in EDs as they do on inpatient wards. EMP has collaborated with the HSE Antimicrobial Resistance & Infection Control (AMRIC) to co-develop standards, clinical guidelines, care pathways, process indicators and IPC service initiatives in emergency care. These standards ought to be applied with the same rigour as those on inpatient wards. In light of accumulating evidence of patient harm arising from prolonged stays in EDs, use of the limited isolation facilities in EDs should not be a reason to detain patients for periods beyond the decision to admit to an inpatient bed.

All ED clinical staff must undertake the mandatory IPC induction training on HSeLanD before commencing employment (including agency and temporary staff). This covers hand hygiene, aseptic technique and standard and transmission-based precautions. EMP recommends that this be supported by an ongoing programme aligned with the educational programme of the hospital or network.

Psychiatry

All hospitals with EDs require a CLP service to provide prompt and expert mental health assessments when needed. All patients presenting with self-harm or suicidal ideation should be offered a comprehensive mental health biopsychosocial assessment as outlined in detail in the *National Clinical Programme for Self-Harm and Suicide-related Ideation Model of Care* (HSE, 2022b). Best practice is for parallel assessment of mental health needs alongside physical investigation and treatment, with interim management plans agreed until the assessment can be completed. This requires adequate CLP staffing and a culture of responsiveness and proactivity.

While the ED is the appropriate setting for the management of undifferentiated presentations, it should not be the default or only avenue to seek emergency care, where the patient has a clearly differentiated primary mental health problem. EMP supports all opportunities for collaboration and pathway development in areas that can improve patients' care (dual diagnosis, child and adolescent mental health etc.).

A shared governance model is best practice in the ED, as outlined in the models of care for EM and CLP. Psychiatry services provide consultations to patients in the ED, but the patients cannot be considered as admitted under the care of Psychiatry until a decision to admit has been made. Once that decision has been made, patients may be considered under the joint care of EM and Psychiatry while they remain in the ED.

Where a patient requires an admission under another specialty (e.g. for the treatment of a drug overdose or wound management), EMP recommends that the principles of parallel assessment apply and that policies are in place to ensure that patients get referred promptly.

EMP recommends that local and regional bed management policies be developed, with allocated staff, in order to ensure that patients of all ages have prompt access to psychiatric admission when required.

The service provided to people who present to an acute hospital following self-harm in Ireland is guided by the National Guidelines of the *National Clinical Programme for Self-harm and Suicide-related Ideation Model of Care* (HSE, 2022b). The introduction of this National Clinical Programme (NCP) in 2014 included the resourcing of mental health clinical nursing specialist for EDs along with evidence-based guidelines requiring full biopsychosocial assessment for all people who present with self-harm or suicidal ideation; the co-production of an emergency care plan; involvement of carers; and communication with and bridging to next care occurring under the supervision of a named Consultant Psychiatrist.

People who present to the ED for assessment with undifferentiated presentations or with self-injury requiring medical attention should be seen as soon as practicable by the Psychiatry service. Best practice is for parallel assessment where the physical and mental health assessments occur contemporaneously and without need for physical healthcare interventions to be complete before a mental health assessment commences. The *National Clinical Programme for Self-harm and Suicide-related Ideation* promotes this approach in assessing patients who present following self-harm, while the *Side by Side* document (Brown *et al.*, 2020, p3)

promotes this as the gold standard, emphasising the importance of avoiding delays in psychiatric assistance and recommending that:

> *All healthcare professionals must work together to eradicate terms such as 'medically fit' or 'medical clearance'. The terms 'fit for assessment', 'fit for review' or 'fit for discharge' should be used instead to ensure parallel working. The phrase 'medically cleared' is not meaningful and has no role in the assessment or management of patients in this context.*

There are exceptions to this, e.g. it is not possible to complete a valid diagnostic assessment of someone who is acutely intoxicated, and in this situation the CLP clinician might need to provide interim safety advice, perhaps obtain collateral histories and return later to conduct a thorough assessment when the person is fit for more complete assessment. Likewise, where there is a question of a psychological cause of physical symptoms that is still being investigated, it is important not to pre-empt the findings of these investigations.

People with eating disorders, including those who have not yet been diagnosed with an eating disorder, are a high-risk (but lower frequency) group of patients who may present to the ED. Prompt identification and appropriate management are important. The IAEM *Guideline for the Assessment and Management of Patients with Suspected or Confirmed Eating Disorders in the Emergency Department* (IAEM, 2023), which is endorsed by the HSE Clinical Programme for Eating Disorders, outlines the initial assessment and management of people with eating disorders and helps to identify those at high physical risk who may require medical admission and who should have joint or parallel management by CLP from the earliest possible stage.

Recommendations for child protection

Patient- and family-centred care should be a cornerstone of the emergency care of children.

Close liaison with social care and child protection services is important.

There should be an integration of service delivery models across the specialties of PEM, EM, general paediatrics, paediatric trauma surgery, paediatric general surgery and paediatric diagnostic imaging to provide the best quality of care for children in need of Urgent and Emergency Care (UEC). This should be reflected in national care pathways, protocols and agreed standards of care.

EMP Recommendations

EMP recommends that almost all patients (95% of attendances) have their episode of care in the ED completed within 6 hours.

As recommended in the HSE Escalation Policy (HSE, 2023a), a local hospital escalation framework focusing on patient flow in the ED with agreed triggers, actions, escalation and control should be developed and implemented in each hospital.

EMP endorses the recommendation from the Royal College of Emergency Medicine that a CT scanner should be situated within or immediately adjacent to the ED and be available 24 hours a day.

EMP recommends that referrals to specialty teams are at the level of SDM-to-SDM.

EMP recommends that the on-call team accepting the referral complete their assessment within 2 hours of the referral.

EMP recommends a maximum turnaround time of 2 hours for all urgent EM laboratory tests and POCT for the most urgent blood test results. EMP further recommends the development of agreed turnaround times for the various diagnostic imaging modalities appropriate to the acuity of presentation.

All ED patients who require ICU admission should be admitted to an ICU bed within 6 hours of ED arrival.

Formal board rounds have been demonstrated to reduce risk and are of educational value in EM training and are recommended by EMP.

Clear protocols are needed to ensure equitable access to networked or centralised specialty services.

EMP recommends the development of alternative pathways of care to minimise the requirement for EM review clinics.

EMP recommends a modified triage process for presenting patients aged ≥75 years.

EMP recommends monitoring of the Time Seen by a Treating Clinician (TSBTC) as a key milestone in the ED patient journey.

EMP recommends that rapid access referral options for outpatient reviews are developed which will benefit patients and reduce unnecessary ED attendance.

EMP recommends that each ED has ready access to the expertise of Clinical Nurse Specialists in Substance Misuse and MSWs to assist in the management of patients with alcohol and substance dependencies who attend the ED.

EMP recommends the establishment of local working groups to identify ways to improve the experience of LGBTQIA+ patients within the ED.

EMP recommends that EDs seeing more than 40,000 patients per annum should consider providing a CDU service.

The provision of audiovisual separation of children from adults is recommended in EDs and IUs.

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Pillar Three Infrastructure

Pillar Three
Infrastructure

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Emergency Department Infrastructure Summary

This section emphasises the need for EDs to have infrastructure that meets both general and specialised care requirements.

Key design considerations include effective patient streaming, multidisciplinary spaces and specific areas for children and older adults, with the need to ensure privacy, safety and efficiency. It calls for integrated approaches to staffing, training and technology use to ensure that the highest standards of emergency care are maintained.

The Multidisciplinary Emergency Team

Within Pillar 3, consideration is given to the EM team. This includes Consultants, Non-Consultant Hospital Doctors (NCHDs), a range of nursing roles, including Registered Advanced Nurse Practitioner (RANP) and evolving multidisciplinary roles in EM. Staffing challenges remain a concern along with the need for appropriate workforce planning to meet changing demands on emergency care.

Academic Emergency Medicine

The training and development of EM specialists is well developed in Ireland, with an established structure for undergraduate and postgraduate training. There is a need for ongoing research and academic development to keep pace with evolving medical practices and technology.

Health Information Systems

The introduction of an Information System for all areas of the Acute Floor will enhance patient flow and reduce errors through digital communication. It integrates various aspects of emergency care, offering real-time updates and patient tracking and facilitating better resource management.

Emergency Department infrastructure

The broad concepts of good infrastructure design are outlined in this section but are dealt with in detail in the 2024 update of the *Standards for Emergency Department Design and Specification for Ireland* (IAEM, 2024).

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The Multidisciplinary Emergency Team

Emergency care is provided by a broad range of clinicians and other healthcare workers, some of whom provide frontline patient-facing emergency care and others who provide essential support for emergency care services. EMP recognises the valuable contribution of all healthcare staff to ensure that patients receive high-quality emergency care on a 24/7/365 basis.

The Consultant workforce

In June 2024 there were 182 whole-time equivalent (WTE) Consultants in EM employed in the public healthcare system in Ireland, 21 of whom work as Consultants in Paediatric Emergency Medicine (PEM) (see *Table 4*). This Consultant cohort is distributed across 28 EDs and associated units.

Table 4 **Regional distribution of Consultants in EM workforce (WTE) by hospital acuity level in publicly funded EDs, June 2024** *(Source: Health Service Executive, Doctors Integrated Management E-system)*

Health Region	Model 4	Model 3	Model 2	Specialist Paediatric	Other	Total	Consultants/ 100k**
Dublin & Northwest	18.55	17.76	0.46			36.8	36.8
Dublin & Midlands	16.49	15.53				32.0	32.0
Dublin & Southeast	14.92	11.92	0.54		0.47	27.9	27.9
South & Southwast	14.67	7.29	0.46		0.50	22.9	22.9
Midwest	11.64		0.36			12.0	12.0
West-Northwest	5.14	21.70	0.36			27.2	27.2
CHI				21.35		21.3	21.3
National Ambulance Service					2.03	2.0	2.0
Total	**81.4**	**81.4**	**2.2**	**21.3**	**3.0**	**182.1**	**182.1**

In 2017, the National Doctors Training and Planning (NDTP, 2017) Unit in the HSE published a *Review of the Emergency Medicine Medical Workforce in Ireland*. This report looked at the workforce at the time, the undersupply of doctors in EM, service configuration and key drivers of change for the future of the EM workforce. It also looked at the training needs of specialists trained through the EM specialist training programme. The document will be updated in late 2024 by the NDTP Unit while the IAEM is developing a staffing document which will include an outline of the role of the Consultant in EM.

EMP is working closely with the National Office of Trauma Services in supporting the successful implementation of Trauma Networks. This implementation will lead to hospitals with EDs being described as either Local Emergency Hospitals, Trauma Units, Trauma Unit with Specialist Services, or Major Trauma Centres, with implications for Consultant staffing. It is also collaborating with other National Clinical Programmes to coalesce recommendations around the feasibility of continuing to attempt to offer the full range of unscheduled/emergency services as required on a 24/7/365 basis in as many hospitals as currently offer this service.

The following classification of EDs, based on annual attendances, is used in the United Kingdom:

Small ED (may be urban)	<60,000 attendances per annum
Remote and rural ED	Typically <60,000 attendances per annum
Medium-sized ED	60,000–100,000 attendances
Large ED	>100,000 attendances
Very large ED	>150,000 attendances
Major Trauma Centre	Usually either a large or very large ED

Based on 2023 data, there are seven EDs in Ireland that fall into the United Kingdom (UK) classification of being medium-sized EDs. Two of these hospitals are designated as Major Trauma Centres (MTCs). The incorporation of attendance numbers at IUs linked to hub EDs in Limerick and Cork would move these units above the UK threshold for large EDs. When the National Children's Hospital opens, its ED will be an MTC for children and will very likely fulfil the criteria for a large ED.

The Royal College of Emergency Medicine (RCEM) recommends there should be 1 WTE Consultant for every 3,600–4,000 patient attendances (RCEM, 2019). The following ranges of Consultant numbers are recommended by the RCEM for the staffing of UK EDs, depending on the size of the ED and whether or not it functions as an MTC. Reaching these numbers allows the designation of specific areas in the ED and particular duties to each of multiple Consultants on duty at one time, including resuscitation, CDU and ambulatory care, children, older persons, pre-hospital EM and retrieval, workplace-based assessment of trainees, extension of the hours of rostered (rather than on-call) Consultant presence and other facets of Consultant practice. This model is different to the command-and-control model that was necessary when each ED only had one or two Consultants on staff.

Table 5 **Royal College of Emergency Medicine recommendations for Consultant numbers**

ED size	Recommended Consultant WTEs
Medium	18–25
Large	25–36
Very large	34–48 (not relevant in the Irish context)

Based on the above information about attendances, designation and staffing recommendations, it is possible to calculate the likely workforce requirements. Factors such as the typical flow of patients across the day and layout of the department also play a role in calculating the optimum ratio of clinician hours to patient attendance (Appendix 13 of "*It's about time": Efficient Emergency Department Care in Ireland;* EMP 2021b). EMP recommends that each ED has a Consultant in EM on clinical duty for the maximum period allowable under the current Consultant contract.

The networking of emergency care reflects the organisation of Trauma Networks, access to critical care, emergency surgery, interventional radiology and early reperfusion therapies. EMP recommends that such networks be considered in the future appointment of Consultants in EM, albeit that Consultants are but one component of the necessary ED MDT. EMP also recommends that Consultant posts based in Local Emergency Hospitals include the option of sessional commitments to the local Trauma Unit or MTC.

EMP recommends that all future Consultant Posts in EM are allocated to an ED hub, with sessional commitments to supporting units, and that consideration be given to subspecialisation within EM, particularly in the areas of Paediatric EM, Geriatric EM and Pre-Hospital EM. EMP recommends that each ED which sees children has at least one Consultant in PEM to lead on optimising the quality of emergency care delivered to children, standard setting, ensuring appropriate care environments, and adherence to the Children First Act 2015.

Lifestyle factors, such as a demand for job sharing and part-time Consultant working, will influence the overall numbers of Consultants employed. The ageing of EM workforces in other countries has prompted debate on the deployment of older Consultants (those aged over 55 years). The RCEM (2019) has recommended discontinuation of late shifts, night shifts and on-calls from age 55 years. Where the workforce allows it, EMP recommends consideration of a similar approach in Ireland, while recognising that current Consultant numbers would make this difficult to achieve.

In November 2023, the Minister for Health launched the *Model 3 Hospitals Report* (NDTP, 2023). It showed that the highest rate of vacant Consultant posts and Consultant posts filled on a temporary basis in Model 3 hospitals was in the specialty of EM. *Table 6* has been updated with 2024 data.

The report makes recommendations about the imminent and current challenges in assuring Consultant staffing in Model 3 hospitals. These recommendations include joint appointments between Model 3 and Model 4 hospitals, to include a substantial minority, or majority, commitment to the Model 3 Hospital. EMP unreservedly supports this recommendation in light of the increasing networking of emergency care which generally recommends that ambulance-borne patients with certain time-critical conditions, bypass Model 3 hospitals to attend the appropriate regional or national specialised centre, depending on their apparent diagnosis.

Table 6 **Model 3 CAAC Approved Consultant Posts by Medical Discipline, Sub-Status and Tenure at 31st December 2024.** *(Source: Doctors Integrated Management E-system)*

Medical Discipline	Filled	Vacant	Total	% posts Vacant
Anaesthesiology	135	6	141	4%
Emergency Medicine	**76**	**7**	**83**	**8%**
Medicine	306	29	335	9%
Obstetrics & Gynaecology	71	5	76	7%
Paediatrics	61	3	64	5%
Pathology	53	7	60	12%
Radiology	101	8	109	7%
Surgery	132	4	136	3%
Total	**935**	**69**	**1004**	**7%**

Medical Discipline	Permanent	Temp/Agency/ Locum	Total	% filled temporarily
Anaesthesiology	123	12	135	9%
Emergency Medicine	**63**	**13**	**76**	**17%**
Medicine	238	68	306	122%
Obstetrics & Gynaecology	58	13	71	18%
Paediatrics	55	6	61	10%
Pathology	43	10	53	19%
Radiology	84	17	101	17%
Surgery	120	12	132	9%
Total	**784**	**151**	**935**	**16%**

Figure 13 **International peer comparison of the EM workforce per 100k population *=2024 data.**
(Source: Medical Workforce Planning, NDTP)

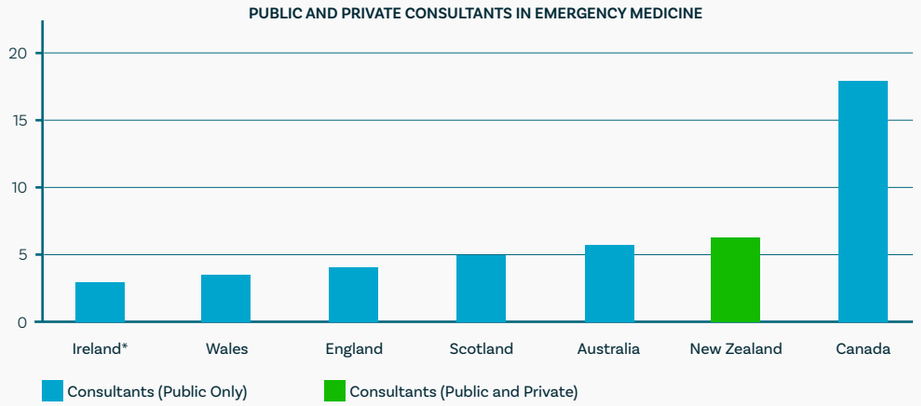

Figure 13 compares the number of Consultants in EM in the healthcare systems of comparable jurisdictions.

The Non-Consultant Hospital Doctor workforce

EMP recommends that middle-grade (i.e. Registrars, Specialist Registrars, etc.) and Senior House Officer (SHO) staffing in any ED should be at a level to provide 24/7/365 rosters that incorporate training and annual leave requirements. Eight middle-grade doctors are the minimum required to comply with the European Working Time Directive, which provides for one middle-grade doctor on shift throughout the 24 hours. More than eight will be required to deal with the patient workload in larger EDs. Indeed, many of the larger EDs now have a minimum of two middle-grade doctors on duty at all times. The number of SHOs required in any ED will depend on training needs, staffing at Consultant and middle-grade level and the number of other Senior Clinical Decision-Makers, e.g. RANPs and appropriately licensed Health and Social Care Professionals (HSCPs). Experience shows that a minimum of 10 SHOs is required to provide a 24/7/365 roster.

In December 2023 there were:

- 68 WTE Specialist Registrars in EM (Advanced Specialist Trainees), including those currently in research positions;
- 229 WTE Registrars in EM;
- 329 WTE SHOs.

Interns and GPs undertaking sessional work in EDs are also part of the NCHD workforce.

Several hospitals outside Dublin provide a rostered paediatric NCHD service in the ED under the governance of the inpatient paediatric service for a subset of children presenting with conditions deemed by the triage nurse to be 'medical' in nature.

Emergency nursing

Nursing in the ED is led by a Clinical Nurse Manager (CNM) 3, overseen by an Assistant Director of Nursing (ADON) and supported by a number of CNM 2s and CNM 1s. Staff Nurses and other nursing roles, including Clinical Skills Facilitators, GP/Community Liaison, Clinical Nurse Specialists (CNSs) and RANPs make up the majority of the ED nursing workforce.

Implementation of the *Framework for Safe Nurse Staffing and Skill Mix in Adult Emergency Care Settings in Ireland* (2022) as well as increased ED activity have meant that in nurse staffing has increased. In January 2024, 2,726 nurses (WTE 2,584.14) were employed in EDs and IUs, 58.65% of whom (WTE) were in the Staff Nurse grade. There were 153 approved WTE RANP across EDs and IUs, with 21 vacant WTEs. There were also 63.5 WTE approved candidate posts (Appendix 3). The clinical skillset of the nursing staff continues to expand to meet the changing complexity of the patients presenting for care. The academic opportunities available to the nursing staff also continue to expand. There were 304 (290.75 WTE) Health Care Assistants (HCAs) employed. The ratio of Registered Nurses to HCAs which was recommended in the *Framework for Safe Nurse Staffing and Skill Mix in Adult Emergency Care Settings in Ireland* (DoH, 2022) was 85:15. The majority of the HCAs are trained to QQI Level 5.

There are no CNS roles specific to emergency nursing, but CNS roles in respiratory medicine, cardiology, care of the older adult, paediatrics, wound care, diabetes, stroke, self-harm and CLP are well established and function as a support to the ED MDT.

Other nursing roles in the ED include CNMs (grades 1, 2 and 3), Clinical Skills Facilitators (CSFs), Patient Liaison, GP/Community Liaison Nurses and Research Nurses.

Nursing workforce planning

The *Framework for Safe Nurse Staffing and Skill Mix in Adult Emergency Care Settings in Ireland* (DoH, 2022) is the second in a suite of evidence-based reports for safe nurse staffing and skill mix developed for the Irish healthcare system. It outlines recommendations to ensure the safe staffing of EDs and IUs. Central among these recommendations was the introduction of a systematic approach to the determination of staffing levels, recommending a team comprising 85% Registered Nurses and 15% HCAs on all shifts and that the CNM 3 role is 100% supervisory. The CNM 2 role has become more challenging as it aims to ensure that quality care is delivered to increased patient volumes with higher complexity in a crowded environment while ensuring staff well-being. EMP recommends that a national framework for the safe staffing and skill mix in EDs and IUs seeing children be developed.

EMP has produced *Role Profiles for Nursing Staff Working in Emergency Care Settings in Ireland* (EMP, 2018) with the aim of assisting with the standardisation and development of the emergency nursing workforce.

In the National Nursing Workforce Survey undertaken by EMP in 2021, various challenges were identified, primarily the level of unfilled posts, missed breaks, late shift finishes and reported "care left undone events". This aligns with the findings of Drennan *et al.* (2024) that lower levels of nurse staffing are associated with adverse events that can result in delays to the provision of care and serious outcomes for patients. Through the implementation of The Framework for Safe Nurse Staffing and Skill Mix in Adult Emergency Care Settings in Ireland (2022), it is anticipated that these issues will be addressed and assist with retention and recruitment to the specialist area of emergency nursing. The survey also confirmed that there was a shortage of Registered Children's Nurses, particularly in mixed EDs.

Registered Advanced Nurse Practitioners

A RANP service benefits activity levels and reduces waiting times (DoH, 2017). In 2019, the Department of Health published *A Policy on the Development of Graduate to Advanced Nursing and Midwifery Practice* with the aim of increasing the number of RANPs in the workforce. The *Framework for Safe Nurse Staffing and Skill Mix in Adult Emergency Care Settings in Ireland* (2022) set a target that 2.3% of the ED nursing workforce should be RANPs and aimed to deliver reduced PET in emergency care settings. There are now 153 WTE approved RANP posts in Ireland's EDs and IUs, as well as 63.5 WTE CANP posts.

The scope of practice of RANPs has evolved since the 2012 EMP report (HSE, 2012). The treatment of those with musculoskeletal injuries, chest pain and the provision of Rapid Assessment and Treatment (RAT) are well established. The RANP scope of practice has expanded into new areas such as adult and paediatric medical conditions, trauma-specific and frail elderly roles. Strategic plans for future services need to consider the growth required in this sector while being mindful of succession planning.

The development of new RANP posts must continue to follow the *National Guideline for the Development of Advanced Nursing or Midwifery Practitioner Services* (Office of the Nursing and Midwifery Services Director, 2020). This was developed to ensure that robust structures are in place for both the CANP, the supervisor and the practice placement area. The National Council for the Professional Development of Nursing and Midwifery (2004) developed a framework which outlined key steps such as a needs analysis followed by the development of the job description and the practice area before a CANP is appointed. In 2019, EMP published *A Guide to Enhance Advanced Nurse Practitioner Services across Emergency Care Networks in Ireland* (EMP, 2019a) to reflect the evolving role of RANPs in the emergency care setting.

Clinical Skills Facilitator

The Clinical Skills Facilitator (CSF) is integral to developing a knowledgeable, caring, effective and efficient nursing and multidisciplinary workforce in EDs and IUs. The CSF delivers a comprehensive programme of education encompassing practical skills and theoretical evidence-based nursing practice. They coordinate induction, orientation, education and practical training sessions and provides essential support for all new staff joining the ED or IU. EMP recommends that each ED has a dedicated CSF. Larger departments and those with a higher turnover of staff will need more than one. EMP further recommends that CSFs provide training to associated IUs, with the required WTE being proportionate to the additional workload. The CSF enables ED and IU nurses to examine their practice and identify how it can be improved through participating in individual staff development and continuing education programmes, providing clinical expertise, promoting effective communication, and developing managerial and leadership skills.

The domains of competence for the CSF role are included in the EMP *Role Profiles for Nursing Staff Working in Emergency Care Settings in Ireland* (EMP, 2018). EMP recommends that EDs which see both adults and children have dedicated CSFs for the particular care needs of patients in each age group.

Community/GP Liaison Nurses

The Community/GP Liaison Nurse acts as a vital communication link between the ED and other healthcare professionals and agencies. They liaise with child safeguarding professionals, GPs, Public Health Nurses, Tusla, nursing homes and other community care services to provide seamless transitions for patients between acute and community services.

The role encompasses a wide range of management, clinical and educational responsibilities aimed at facilitating the delivery, follow-up and evaluation of ED care to patients and their families. In 2024, 16 EDs had a total of 17.8 WTE approved GP/Community Liaison posts. 13 EDs had their posts filled (14.2 WTE/head count 17). EMP recommends that each ED has a Community/GP Liaison Nurse.

Injury Unit staffing

In the past 12 years, IUs have become embedded as a safe and popular care option for the appropriate patient cohort. The patient caseload in an IU is ideal for the service to be delivered by RANPs. IU nurse staffing was included in the *Framework for Safe Nurse Staffing and Skill Mix in Adult Emergency Care Settings in Ireland* (DoH, 2022). EMP has produced a *Guidance document on staffing for Injury Units (IUs)*, last updated in 2019 (EMP, 2019b).

Health Care Assistants

HCAs are an integral part of the ED Team. The *Framework for Safe Nurse Staffing and Skill Mix in Adult Emergency Care Settings in Ireland* (DoH, 2022) recommends that 15% of the emergency nursing workforce should be HCAs. Education for HCAs is at QQI Level 5 via the Activities of Living Patient Care and ED Care skills modules. As recommended by the *Review of Role and Function of Health Care Assistants* (HSE, 2018), EDs now have a standardised job specification. The report recommends the development of the HCA role in different service areas, including specialised training for particular HCA roles. There is potential for an 'enhanced HCA' role in the ED to be developed.

Health and Social Care Professionals and Clinical Pharmacists

As of September 2024, there were a total of 26 different disciplines of HSCPs providing therapeutic, rehabilitative, re-enablement, health and social care and diagnostic services throughout the health service. Despite representing 25% of the clinical workforce, they are significantly underrepresented in EDs. HSCPs and Clinical Pharmacists can improve ED and hospital efficiencies by facilitating early discharge, reducing unscheduled returns by ED patients, improving Patient Experience Time (PET) and reducing inpatient lengths of stay. They also release medical and nursing time for other activities. HSCPs refer patients to their counterparts in the community, furthering Sláintecare's ethos of providing as much care as possible close to the patient's home. Their value, particularly within Frailty Teams, is increasingly recognised and proven by the OPTIMEND study (Trépel *et al.*, 2024; Cassarino, *et al.*, 2019). Certain HSCPs also work autonomously, e.g. the Clinical Specialist Physiotherapist (CSP). The CSP's autonomous practice in the management of spinal and peripheral musculoskeletal conditions is established, and EMP supports the recognition of advanced physiotherapy practice, including permission to request diagnostic imaging.

EMP recommends that workforce planning is undertaken for all HSCPs and Clinical Pharmacists in EDs and IUs to move towards a 7/7/365 model with extended hours of service. This will require standardised staffing levels and referral pathways.

HSCPs (and other healthcare professionals) in EDs include:

- Medical Social Workers (MSWs);
- Physiotherapists;
- Clinical Pharmacists;
- Radiographers.

Other HSCPs that may contribute to ED patient care include OTs, SLTs, Dietitians, Cardiac Technicians, Play Therapists, Medical Physics staff and Materials Management staff.

Medical Social Workers

The Medical Social Worker (MSW) service is well established in urban EDs. In 2022, MSWs were employed in 14 EDs to facilitate early discharge, reduce reattendance rates, enhance the patient's quality of life and release medical and nursing time for other activities.

The role includes the protection of people from harm or abuse and supporting people to live independently.

Key areas of practice include:

- Child protection and welfare;
- Safeguarding of vulnerable adults;
- Homelessness;
- Domestic, sexual or gender-based violence (DSGBV);
- High-intensity users/complex transfers of care;
- Staff training and education;
- Staff debriefing after distressing or unique situations.

In 2022, EMP published its *Recommendation and justification for dedicated Medical Social Worker services for Emergency Departments and Injury Units*.

Physiotherapists

Physiotherapists working in EDs focus on two key areas:

- Medical assessment/care coordination;
- Soft tissue injury treatment.

Physiotherapists use their skills to screen, assess and refer patients in order to minimise avoidable hospital admissions. This includes acting as a secondary contact practitioner following referral of a patient by medical staff to assess mobility status, falls risk and suitability for discharge. Most of these services fall within the umbrella of Frailty Teams/Frailty at the Front Door (FFD) services. Medical care coordination involves assessment and treatment of patients with vestibular, cardiorespiratory, neurological and musculoskeletal conditions.

Physiotherapists act as CSPs in soft tissue injury care as either first contact practitioners or secondary contact practitioners to assess, diagnose and provide specialist clinical treatments. They provide Physiotherapist-led clinics and support to Consultant-led review clinics. They can be based in the ED musculoskeletal stream or in IUs. While assessment and diagnosis are common to all physiotherapy roles, the Clinical Specialist provides an expanded skill set and acts as a Senior Clinical Decision-Maker in EDs. A postgraduate educational programme commenced in 2024 to allow Physiotherapists to be designated as X-ray prescribers.

In 2023, nine EDs had dedicated physiotherapist staffing with 15.13 WTE (not including physiotherapists in Frailty Teams).

Clinical Pharmacists

The Clinical Pharmacist is an emerging role in the ED MDT in Ireland. The ED Clinical Pharmacist role is well established in North America, Australia and the UK. Published literature (UK Clinical Pharmacy Association and the Royal College of Emergency Medicine, 2023; Brown *et al.*, 2008; Vasileff *et al.*, 2008) has shown that Clinical Pharmacists working in the ED reduce medication errors and create time savings for physicians. An Irish study (Gaskin and Conyard, 2017; Joint HSE/IMPACT Steering Group, 2017) has demonstrated that the ED Clinical Pharmacist is a cost-effective addition to the ED team, particularly through the avoidance of drug-related harm. See the EMP's 2022 publication *Recommendation and justification for Clinical Pharmacy services in Emergency Departments*.

Key roles of Clinical Pharmacists in the ED include:

- Medicine reconciliation;
- Patient counselling;
- Medication management training and prescribing education;
- Community Pharmacy and GP liaison for ED prescription queries.

Occupational Therapists

Occupational Therapists (OTs) help people to do the everyday things that they want and need to do when illness, injury, disability or challenging life events affect their ability to do so.

The OT's role focuses on:

- Enabling occupation, i.e. helping people to do the everyday activities of life (self-care, leisure/play, work/education, social participation, sleep/rest);
- Helping people live a satisfying and meaningful life;
- Maximising a person's function, independence and participation;
- Taking a person-centred approach that focuses on people's abilities and goals;
- Advocating for people's human rights and access to services.

Key roles of the OT in the ED include:

- Frailty service for those aged over 65 years;
- Screening for expedited discharge for those aged over 65 years;
- Hand therapy;
- Cognition service.

In 2022, Occupational Therapy was available in 18 EDs.

Speech and Language Therapists

Speech and Language Therapists (SLTs) enable people with communication disorders and/or feeding, eating, drinking and swallowing (FEDS) disorders to achieve their maximum potential. They work with people of all ages to assess, diagnose and treat individuals with communication and/or FEDS disorders. Communication disorders include difficulties with speech, understanding and/or using language, fluency, voice and the social uses of language. Difficulties with communication and/or FEDS may be present from birth or develop during a person's lifetime (e.g. after traumatic brain injury, stroke).

SLTs' key roles in the ED include:

- Acute management of communication difficulties;
- Acute management of swallowing difficulties;
- Management of acute and progressive neurological conditions, dementia and Chronic Obstructive Pulmonary Disease.

In a 2022 survey carried out by EMP, dedicated SLT services were available in seven EDs.

Dietitians

Dietitians are healthcare professionals who use their knowledge of nutrition, physiology and science to promote health and individually assess and treat disease-specific nutritional issues. They provide interventions to maintain health, reduce risk of poor health or restore health. They work to empower individuals, families and groups to provide or select food which is nutritionally optimal, safe, tasty and sustainable, and improve the nutritional environment for all through governments, industry, academia and research (description adapted from European Federation of Associations of Dietitians).

Dietitians' key roles in the ED include:

- Early identification and nutritional assessment of those at risk of malnutrition;
- Early recognition and management of eating disorders;
- Gastrostomy tube (transcutaneous feeding tube) assessment/troubleshooting and enteral feeding management;
- Early identification and nutritional assessment of those requiring modified diets.

In a 2022 survey carried out by EMP, five EDs had a dedicated dietetic service.

Other roles in the ED

- Business Managers;
- Receptionists;
- Patient advocacy roles;
- Ward Clerks;
- Secretaries;
- Data Managers;
- Materials Management staff;
- Catering staff;
- Household staff;
- Porters;
- Security staff;
- ICT Support staff.

Pre-Hospital Care/Ambulance staff

Pre-hospital staff interface with ED staff and make a significant contribution to emergency care. They include:

- Paramedics;
- Advanced Paramedics;
- Specialist paramedics in community care and critical care;
- Emergency Medical Technicians.

EMP Recommendations

There is a need for ongoing comprehensive workforce planning for EM that reflects the changing nature of this demand-led service. This includes all members of the MDT and supporting services in light of the growing population, including the increasing number of frail elderly patients with multiple comorbidities. Appropriate staffing of the ED is one of the most important factors in providing a prompt, timely and clinically effective service to patients.

EMP recommends that all future Consultant posts in EM are allocated to a hub ED with sessional commitments to supporting units, with consideration given to subspecialisation within EM, particularly in the areas of Paediatric EM, Geriatric EM and Pre-hospital EM critical care.

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Academic Emergency Medicine

Undergraduate Medical Training in Emergency Medicine

There is an increasingly recognised need for EM specialists globally. To meet this need, physicians must be trained to deliver time-sensitive interventions and life-saving emergency care.

Comprehensive, structured undergraduate education and training programmes in EM in our medical schools are vital to the ongoing development of the specialty. At the completion of undergraduate training, all doctors should possess a basic knowledge of emergency care and the skills to initiate management of the most common acute problems.

The clinical content of much of the workload of EM is encountered as a part of many other clinical specialties, but the volume of patients, their undifferentiated presentations, the time-critical nature of care and decision density are all unique to EM.

EM provides students with an important perspective on the links between pre-hospital, community and primary care teams and the hospital. Simulation training offers medical students particularly valuable instruction in critical team working in a protected learning environment. A very popular and effective mode of supporting students in developing resuscitation and human factor competencies at an early stage in their development has been the virtual competition SimWars.

The International Federation for Emergency Medicine (IFEM) (2009) has produced an outline undergraduate curriculum for EM which captures the essential elements of EM and should form the basis for future undergraduate curriculum development in EM in Ireland.

Postgraduate Medical Training in Emergency Medicine

The Royal College of Surgeons in Ireland (RCSI) is the training body currently recognised by the Medical Council as being responsible for EM training in Ireland. The Irish Committee for Emergency Medicine Training (ICEMT) is a subcommittee of RCSI's Irish Surgical Postgraduate Training Committee (ISPTC), and its principal role is the organisation, oversight and delivery of EM training in Ireland. Information regarding training in EM and Paediatric EM is available on the RCSI website. ICEMT has close links with the Royal College of Emergency Medicine (RCEM) in the UK and uses the RCEM curriculum and examinations. EM trainees in Ireland must pass the Membership and Fellowship examinations of the College (MRCEM and FRCEM) to successfully complete their training.

Postgraduate training is divided into Core Specialist Training in Emergency Medicine (CSTEM) and Advanced Specialist Training in Emergency Medicine (ASTEM). EM is recognised for intern training and, while there are currently a limited number of intern posts in EM, the specialty is actively working to increase this number, particularly in the context of increased medical school output. Feedback from interns who have rotated through EM is very positive, largely because of the exposure to a broad range of conditions under the direct supervision of Senior Clinical Decision-Makers.

Core Specialist Training in Emergency Medicine

Core Specialist Training in Emergency Medicine (CSTEM) is the initial step for doctors intending to become specialists in EM. It is a 3-year training programme during which doctors rotate through 6-month posts at SHO level in EM and other specialties relevant to the practice of EM. As of September 2024, there are 30 trainees in each year of the programme; in other words, at full capacity the annual output of CSTEM is 30 doctors. The programme is outlined in *Table 7*.

Table 7 Core Specialist Training in Emergency Medicine

Year 01	Emergency Medicine
	Trauma and Orthopaedic Surgery or Plastic Surgery or Acute Medicine
Year 02	Emergency Medicine
	Paediatric EM or Acute Paediatrics
Year 03	Anaesthesia or Intensive Care Medicine
	Emergency Medicine

Doctors are eligible to enter CSTEM once they have successfully completed an intern year. During CSTEM, training is delivered through shop-floor teaching (direct clinical exposure) supplemented by workplace-based assessment as well as formal teaching sessions and workshops, both in the workplace and in RCSI. Trainees are appraised annually and progression through the programme is contingent on satisfactory appraisals. As they progress through CSTEM, trainees prepare for and sit the MRCEM, which comprises three parts:

- MRCEM Primary (multiple choice question paper covering the basic sciences as applied to EM);
- MRCEM Intermediate (Single Best Answer paper);
- MRCEM Observed Structured Clinical Examination.

Satisfactory completion of the 3-year CSTEM programme leads to the award of a Certificate of Completion of Core Specialist Training (CCCST). Doctors intending to progress to ASTEM must possess a CCCST and pass the MRCEM.

Advanced Specialist Training in Emergency Medicine

Advanced Specialist Training in Emergency Medicine (ASTEM) is a 4-year programme during which trainees rotate through a minimum of three EDs that are recognised for ASTEM training. ASTEM includes a further 6 months' training in Paediatric EM, as outlined in the *ICEMT Training Guide*. As of September 2024, there are 60 training places on ASTEM. Annual intake is between 14 and 16 trainees.

As trainees progress through ASTEM, they gain additional clinical expertise with an increasing emphasis on leadership as well as the administrative and managerial competencies required for specialist EM practice in Ireland. Training is delivered through shop-floor teaching, formal teaching sessions (on site and in RCSI) and monthly training days. Trainees are granted a non-clinical half-day each week to facilitate training in research, audit, etc. Progression is contingent on a successful annual appraisal. During ASTEM, trainees prepare for the FRCEM, which is the exit examination for ASTEM. FRCEM comprises two parts:

- FRCEM Single Best Answer paper;
- FRCEM Observed Structured Clinical Examination.

Trainees must also submit a successful Quality Improvement Project and pass an ICEMT management assessment during ASTEM. A completed IAEM clinical guideline and ultrasound sign-off are also required.

Doctors who have successfully completed the 4-year ASTEM programme and have passed the FRCEM examination are awarded a CSCST by the ISPTC. Doctors in possession of a CSCST in Emergency Medicine are eligible for inclusion in the Specialist Division of the Medical Council register in Emergency Medicine.

Non-training grade doctors in Emergency Medicine

Expansion and consolidation of the Consultant in EM training programmes is the cornerstone of the future development of the EM medical workforce. However, the contribution of non-training grade doctors in EM is important to consider. Factors favouring the development of a non-training grade, the Staff Grade (SG), include current challenges in NCHD recruitment, the lack of service continuity caused by NCHD rotations and the necessity to develop appropriate career structures for those doctors who have been working for many years at Registrar level, often in the same department, but who have elected not to complete higher specialist training. EMP recommends a balance between service and training such that the medical staff configuration in EDs is a mixture of doctors in training and those with a defined level of training and experience. EMP recommends further consideration of the SG role within a structured training and education framework under the governance of ICEMT.

Emergency nursing training

In view of the broad spectrum of emergency nursing, EMP recommends that a minimum period of 4 weeks' supernumerary clinical placement and a rostered ED placement in fourth year be an integral part of all undergraduate nurse training in Ireland. Aligned with clinical exposure are skill sets such as venepuncture, intravenous cannulation, ECG acquisition and medication management, which will equip the graduate nurse with the requisite skills for practice. EMP welcomes the inclusion of IUs in the clinical placement schedule, reflecting the broader environment in which unscheduled care is delivered.

Following the completion of a local orientation programme, registered nurses who join an ED can begin the academic component of their emergency nursing career with the Level 8 Foundation Programme in Emergency Nursing offered through five technological universities. The blended course delivery (online and in-class) allows greater flexibility to learners as they manage full-time employment and part-time study. It is a clinically based programme to enhance the novice nurse's knowledge, skills and competencies in the delivery of evidence-based care for patients who have suffered injury or sudden illness.

There is a comprehensive range of postgraduate education programmes available for nurses wishing to pursue a career in emergency nursing. Many of these courses are based on service need and have developed in partnership between third-level institutions and service providers. It is recommended that as many staff as possible enhance their knowledge and skills by undertaking the Level 9 Higher Diploma in Emergency Nursing. There is also a growing number of Emergency Nurses progressing to doctoral-level studies.

In addition to postgraduate education programmes, a range of short courses (e.g. Advanced Cardiac Life Support and the various trauma nursing courses) support Emergency Nurses' continuing professional and competency development. These courses provide for the development of competencies and skills to support practice specific to EDs and IUs. The number of mandatory and optional education programmes available to Emergency Nurses as of September 2024 is approximately 80.

Emergency nursing clinical pathway

Emergency nursing academic options

Research in Emergency Medicine

EDs offer a unique frontline research environment with high patient volumes across all ages and acute presentations and a workforce that sees the value for patients and staff of supporting the creation of new knowledge through research. Since the early 2010s important international multi-centre randomised controlled mega trials (CRASH 3, HALT-IT) have been conducted in EDs in Ireland; high-quality research on frailty and integrated pathways for older adults in an Irish context has been published, and observational studies using Ireland's trauma and cardiac arrest registries have informed service developments. Industry has recognised the value of high-volume 24/7/365 services as an ideal setting for testing certain devices. A wealth of master's and standalone research projects have been undertaken in our EDs that continue to grow an evidence-based model of care.

The Buttimer Report (Department of Health and Children, 2006b) and Fottrell Report (Department of Health and Children, 2006a) recommended that education, training and research in EM be coherently developed from undergraduate level to specialist training in Ireland. This required the appointment of joint education and healthcare academic clinicians at Senior Lecturer, Associate Professor and Professor levels in EM. These clinicians require appropriate support from training bodies and institutions that work collaboratively with academic colleagues in related disciplines (e.g. nursing, HSCP groups, National Ambulance Service College) to further develop research, education and training in EM in Ireland. EMP recommends that further Chairs in EM be developed in each medical school along with the parallel development of Senior Lecturer roles.

The multidisciplinary environment within universities, with their many schools and departments, provides opportunities for synergy and collaboration. The academic EM clinician acts as a resource to address the problems faced in meeting the ever-increasing demand for emergency medical services.

There is considerable academic and research activity within Irish EM. IAEM and ICEMT actively promote research through bursaries, prizes and the support of academic track training. Development of a dedicated academic focus in EM facilitates the implementation of national health strategies through the development and evaluation of best practice initiatives, protocols and policies, care pathways and guidelines.

In 2013, to foster multi-centre clinical research through the creation of an Irish EM research network, the Academic Committee of IAEM produced an overarching *Academic & Research Strategy* (IAEM, 2013). This strategy highlights the potential in EM to develop original research in the following areas:

- Clinical research, including randomised controlled trials;
- Health services research;
- Translational research.

There are now several EM-dedicated research units in EDs in Ireland. Furthermore, a number of higher trainees in EM have successfully completed or are currently undertaking full-time clinical research. The implementation of the Acute Floor Information System (AFIS) and the International Classification of Diseases 10th Revision (ICD-10) diagnostic coding of all ED attendances, rather than for the admitted patient only, will create further excellent opportunities to carry out research in EDs in Ireland more cost-effectively.

Academic emergency nursing

A significant number of Emergency Nurses hold qualifications at higher diploma, master's and PhD level. Links with third-level institutions are essential for the further development of academic emergency nursing. Such development will increase the body of knowledge and research evidence to support the specialty. A higher diploma is the minimum standard of education required for appointment as a CNS, while master's-level education is the minimum required for registration as an RANP.

A number of third-level institutions offer a Master of Science (MSc) in Advanced Practice, which is a generic programme generally undertaken by a broad range of nurses wishing to specialise in areas of care such as cardiology, respiratory, renal, primary care, diabetes, stroke and epilepsy. All MSc programmes have incorporated nurse prescribing of medicinal products and ionising radiation into their curricula, providing a more comprehensive educational experience for the individual nurse and avoiding duplication across multiple programmes. Clinical doctoral programmes and PhD by research are offered in most third-level institutions.

Research in emergency nursing

Research and audit are core activities for CNSs and RANPs. Previous reports noted that ANPs (and some CNSs) were engaging in research, and clinical audit was well established for both; however, ongoing support to build these skills is required (National Council for the Professional Development of Nursing and Midwifery, 2010). Protected time outside of the clinical caseload is required to pursue research and publication activities. EMP recommends that both CNSs and RANPs be provided with educational opportunities and resources to develop their skills in audit and measurement of clinical outcomes in order to increase research and audit in practice and ultimately improve the quality of care. These recommendations align with those in *A Research Strategy for Nursing and Midwifery in Ireland* (Department of Health and Children, 2003), *Nursing and Midwifery Research Priorities for Ireland* (National Council for the Professional Development of Nursing and Midwifery, 2005a) and *The Development of Joint Appointments: a Framework for Irish Nursing and Midwifery* (National Council for the Professional Development of Nursing and Midwifery, 2005b).

Collaborative research networks for RANPs and academics in relevant disciplines were being established prior to the COVID-19 pandemic. However, the cessation of face-to-face meetings and attendances at courses during this time led to these relationships being disrupted. Several RANPs have, nonetheless, completed studies to PhD level in the interim, and some have taken up new posts at universities in Galway, Cork and Dublin. This will assist in developing research partnerships.

Multidisciplinary research in the Emergency Department

Multidisciplinary research in the ED is an increasingly fruitful area, reflecting and benefitting the rising numbers of patients with complex needs presenting to the ED, e.g. OPTIMEND. Such research should be encouraged and funded.

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Health Information Systems

Introduction

EM is a data-dense specialty and EDs are complex systems (Handler *et al.*, 2004), so Health Information Systems (HISs) relevant to the ED environment are essential. Increased healthcare use, growing healthcare expenditure and the need to react to public health emergencies such as the COVID-19 pandemic require strong health data infrastructure. EMP strongly endorses the successful implementation of an appropriate and robust dedicated information system for Emergency Medicine and the other services on the Acute Floor. Currently, the majority of EDs in Ireland have a basic HIS. All sites have access to Emergency Care Activity and Profile (ECAP), a software programme that provides data analysis on the current dataset and close-to-real-time information about the activity in the ED, comparing it to the national average.

Information systems designed for use in the ED and Acute Floor manage data and simplify processes in support of patient care. The NCPs for Emergency Medicine, Surgery and Acute Medicine, in liaison with NCPs for Trauma and Orthopaedics and Critical Care, agreed the components and system requirements of an Acute Floor Information System (AFIS). AFIS as a project has now been replaced by the national Electronic Health Record (HER) programme, which will provide an information system solution to emergency care across hospitals and community and integrate with medical devices and early warning systems.

Telemedicine videoconferencing technology offers greater connectivity with remote sites and is particularly used in Australia and the USA in the provision of emergency care. It facilitates the involvement of Senior Decision-Makers in treatment and transfer decisions early in the patient journey.

Benefits of an Information System for unscheduled care

EDs and Acute Floors (AFs) are among the most complex areas to manage in a hospital. A Health Information System provides a means of eliminating non-value-added steps and expediting patient flow with increased quality and efficiency. Systems able to automate workflow processes have the following benefits:

- **Reduction in errors:** Medical errors are often caused by illegible writing and phone calls made between nurses and doctors to communicate instructions and patient status. Automating this process and having information communicated digitally removes errors that arise from illegible handwriting, unrecorded phone calls etc.
- **Continuity of care:** Information systems allow ED/AF staff immediate access to patient data. Medical records can be transmitted between various healthcare providers, ensuring timely availability of information. The National Shared Care Record will assist healthcare staff in supporting a patient's care transitions through the Irish healthcare system in a secure and robust manner.
- **Streamlining workflow:** Automated information allows ED/AF managers gain a perspective on how their department is functioning in unit-specific, hospital specific and network-wide contexts. Automated systems make it easy for managers to track and identify areas where bottlenecks hinder patient care. Furthermore, by having patient data accessible from an electronic database, also known as an electronic patient record, ED/AF staff can easily view patient data without having to go to a filing cabinet and manually extract critical information.
- **Utilisation of patient care pathways:** Patient care pathways with decision support can be implemented from the pre-hospital setting through to ED or hospital discharge. Such pathways can lead to reduced length of stay and provision of better-quality care.
- **Registry support:** A key functionality and patient safety benefit at local, network and national level is the ability to create and maintain robust patient registries for a variety of conditions and processes, e.g. trauma, cardiac arrest or child protection.
- **Registration:** Registration applications can significantly reduce time spent on registration, e.g. pre-registration before patient arrival at hospital and self registration at registration booths in the ED reception. The HSE Health App will assist with patient identification.
- **Electronic Whiteboard:** The Electronic Whiteboard and operational dashboards supply real-time information concerning the condition of patients, the number of patients and patients' lengths of stay.
- **Departmental layout map:** This map visualises the current occupancy but also helps to locate and move patients between areas and to designate zonal staffing. Updates on the patient location can be provided by staff via their mobile phone.
- **Transfer of patients:** Patient transfer to and from different care units and comprehensive discharge instructions can be communicated to different staff members both within and outside the ED/AF.
- **Activity-based funding:** With good information, funding can be linked with activity, as discussed later in this report, in Pillar 4, Measures and Value-based Emergency Care.

The ED user interface and usability

As the ED is a high-volume, high-acuity, pressurised and complex area where staff turnover can be high, the usability of all ED systems is particularly important. System usability is also relevant to staff from other departments and locum staff who work in the ED. Poor usability results in a large proportion of healthcare workers' time being wasted on clerical work (Walker *et al.*, 2021), reducing productivity and wasting resources that could otherwise be directed to patient care.

It is important that any software-user interface does not require users to receive extensive training to be able to access its basic functions. Good systems are intuitive, with user guidance and training built in as part of their everyday use. Such systems minimise the risk and consequences of errors and are straightforward to use for routine tasks. This particularly applies to order entry systems (requesting laboratory, radiological and other tests to assist in diagnosis), documentation systems and clinical results reporting systems, all of which are key to the patient care process. Similarly, the importance of system reliability, speed and uptime increases with the ever-growing reliance on technology. The more that technology helps to improve the quality and efficiency of care, the more difficult it becomes to work without it (Bloom *et al.*, 2021).

eHealth strategy for Ireland

An electronic health record is a cornerstone of the eHealth strategy for Ireland. The first iteration of this strategy was published in 2013 (updated in 2020) and is one element of Sláintecare's 10-year vision to reform health and social services in Ireland along with the roll-out of individual health identifiers and a shared health record (DoH, 2021). The interface between unscheduled care systems and the wider eHealth solution is a priority in the design of any eHealth software. ED software applications need to be able to access data from other systems, e.g. the scheduling of outpatient appointments may reside in software that is owned by another service, yet access to that data may be required for patients attending an ED. Sharing data within a department, between departments and between institutions is essential to optimise the delivery of quality care to patients, e.g. shared patient record access between community services and acute services.

Telemedicine and future technologies

Telemedicine facilitates healthcare decision-making at a distance, primarily benefitting those who live rurally beyond easy reach of hospital care (Wootton, 2001). Assessments can be made and treatments prescribed by remote specialist Senior Decision-Makers and delivered at the bedside by local staff. This can be provided through purpose-built conferencing software (via television with video cameras), mobile device applications and telephones. Uptake has dramatically increased worldwide since the COVID-19 pandemic response (Eze *et al.*, 2020). In emergency care, a senior clinician may provide input around advanced patient care and transport decisions with an aim to get the right patient to the right place first time.

Information systems need to integrate with other emerging healthcare technologies such as artificial intelligence (AI), which may be applied to data interpretation (especially diagnostic imaging), attendance patterns, diagnosis and treatment recommendations, patient engagement and adherence and administrative activities (Davenport and Kalakota, 2019).

The utility of new technologies will need to be balanced against patients' natural wishes for direct human interaction via in-person consultation rather than video or other remote care. The potential use of AI in healthcare needs to be carefully weighed against ethical concerns regarding data usage and system algorithms. Patient consent, data anonymisation and protection are all important considerations (Murdoch, 2021).

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EMP Recommendations

EMP recommends that the implementation of an information system for EDs and services on the Acute Floor be prioritised as a project of national importance..

Secure electronic transfer and sharing of patient care data is needed between all relevant healthcare providers.

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Emergency Department Infrastructure

Patient care in the ED is highly time dependent. The length of time spent by patients waiting for or receiving care, the number of patients attending and the scope of services offered will influence the design requirements for each department. The Irish Association for Emergency Medicine (IAEM) *Standards for Emergency Department Design and Specification for Ireland 2007* adapted international best practice for use in an Irish healthcare context. This document has been significantly updated in 2024 *(IAEM, 2024)* to reflect the most recent developments in ED design for both mixed and Paediatric EDs. The high-level infrastructure requirements for IUs are outlined in Appendix 3. More detailed infrastructure specifications are in development by the IU Implementation Group.

In response to the COVID-19 pandemic, the physical layout of most EDs was extensively reconfigured to allow for safe patient streaming. In many cases, this involved changed or increased footprints. One of the major deficits identified was the lack of isolation facilities and negative pressure rooms in EDs, where aerosol-generating procedures (e.g. the administration of nebulised medications and other critical care procedures related to sustaining the patient's airway and breathing) could be carried out more safely without exposing healthcare staff to the risk of acquiring aerosol-generated infection. Several EDs had these retrofitted as part of renovations commissioned in response to the COVID-19 pandemic. While the provision of such isolation and single rooms in EDs is important in the containment of communicable diseases, they are not intended to address deficits elsewhere in the hospital that have the potential to result in prolonged patient stays in the ED.

PILLAR 3 EMERGENCY DEPARTMENT INFRASTRUCTURE

The recent publication of infrastructure requirements for EDs (IAEM 2024), reflects the following concepts:

- Patient care should be the key focus of ED design.
- The involvement of the multidisciplinary ED team in the design process is essential.
- The provision of an adequate Resuscitation Room is of central importance to the ability of EDs to provide the immediate life-saving and disability-limiting care that is their primary purpose.
- Design should engender a sense of caring, efficiency and safety with protection of a patient's right to confidentiality and privacy.
- Efficient workflows should be promoted to ensure an optimal environment for patients and staff.
- Adequate space for direct patient care, clinical support functions and non-clinical ED activity should be provided.
- Rooms for mental health assessments should be provided. The National Clinical Programme for Self-Harm and Suicide-related Ideation (NCPSHI) has advised that dedicated mental health assessment room should be provided in accordance with the MOC standards and Psychiatric Liaison Accreditation Network (PLAN) standards.
  - ~ The needs of specific patient groups should be addressed:
    - Where adults and children are seen in the same ED, specific design requirements must be adhered to. There should be clear audiovisual separation of facilities between both groups.
    - An area attuned to older adults should be provided in the ED to optimise assessment and care.
  - ~ Office and teaching space must be provided within each ED so that SDMs remain immediately available when required for direct patient care while undertaking essential work when not scheduled to provide direct patient-facing care.

EMP advocates a systematic approach to building or renovating ED facilities to ensure that any new ED build reflects the concept of the Acute Floor. The constant evolution of EM means that many EDs will need to be updated or replaced between now and 2030 to ensure the provision of the highest standards of contemporary emergency care. Failure to resolve current issues of inpatient boarders occupying ED clinical spaces will negate the intended effects of optimal design on patient care.

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Pillar Four
Infrastructure

Pillar Four
Infrastructure

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Values, Measures and Quality Improvement Summary

Pillar 4 describes the importance of measurement to ensure successful and timely delivery of emergency care. A multifaceted approach is needed to improve emergency care, intertwining effective measurement strategies, system improvement methods, rigorous clinical guidelines and sustainable practice. This calls for a shift towards value-based care and systemic thinking to enhance efficiency and patient satisfaction and to improve environmental sustainability.

Key performance indicators

Strategic use of KPIs serves to enhance performance and accountability in EDs. Specific KPIs include Ambulance Handover Times, with a target of 95% under 20 minutes; Patient Experience Time, aimed at 95% of patients being discharged or admitted within 6 hours of arrival at the ED, with no patient waiting more than 9 hours; and the CDU Length of Stay targeted at 95% discharge rate within 24 hours. EMP recommends that any instance where a patient remains on a trolley in the ED for more than 24 hours is treated as a serious reportable event and investigated as such. These KPIs are designed to standardise data collection, facilitate benchmarking and inform continuous improvement across EDs.

Value-based emergency care

The transition to value-based healthcare focuses on using available resources efficiently to improve patient outcomes. This approach involves measuring resource use at the patient level, defining patient-centred outcomes and linking resources to outcomes to reduce unnecessary variations in both. The goal is to replace ED block funding with an activity-based funding model, using data to drive improvements and equity in patient care.

A systems improvement approach to emergency care

The integration of systems thinking and process improvement methodologies to enhance quality and safety is key to optimising the delivery of emergency care. Using structured, evidence-based frameworks helps to reduce inefficiencies without compromising the quality of care delivered. The emphasis is on understanding emergency care as a complex adaptive system, meaning changes need carefully considered implementation to avoid unintended consequences.

Clinical guidelines

Clinical guidelines relevant to the undifferentiated presentations of patients with emergency conditions are essential in the journey to standardising emergency care, ensuring safety and efficacy throughout the healthcare system in Ireland. Following a robust process of approval by IAEM, these clinical guidelines guide clinicians in consistently providing evidence-based care across diverse settings. They cover a wide range of conditions and procedures, enhancing the overall quality of emergency care provision.

Green Emergency Medicine

The concept of Green Emergency Medicine aligns with broader environmental sustainability goals. It references the *GreenED* initiative promoted by the Royal College of Emergency Medicine, which provides a framework for reducing the environmental impact of EDs in providing essential care to their patients. This is part of a global movement towards sustainable healthcare practices that contribute to net-zero targets aimed at reducing operational costs without compromising patient care.

Measures and Value-based Emergency Care

EMP recommends the recording and monitoring of the following data to inform KPIs and lead to a culture of continuous improvement and research in each ED. These data will also help to explain variance between units and inform service planning.

- **ED activity:** The standard definitions of ED activity will help to ensure that data collection is standardised and comparable between units (see Appendix 5 – Emergency Care Activity Measures). The data will help characterise patient demand on each ED, support appropriate benchmarking of similar units and will allow units to monitor changes in their workload over time.
- **ED process dataset:** Time points in the patient's ED journey are defined as part of the process measures described in Appendix 4 – Emergency Care Process Measures.

Agreed KPIs include:

- Ambulance Handover Time: 95% <20 minutes;
- Patient Experience Time: 95% <6 hours (and no patient waits >9 hours);
- Left before Completion of Treatment: <5% of new patient attendances;
- CDU Length of Stay: 95% <24 hours.

Given the challenges faced by the HSE in meeting these KPIs and looking ahead to the full implementation of the Urgent and Emergency Care (UEC) plan, the HSE has introduced four additional interim targets:

- Total ED time <24 hrs;
- Total ED time for patients >75yrs at the 6 hour time point;
- Total ED time for patients >75yrs at the 9 hour time point;
- Total ED time for patients >75yrs at the 24-hour time points.

As recommended in the *Development of a Framework of Key Metrics with clear triggers and actions to ensure the triage of patients presenting to Emergency Department is in line with best practice* (HSE, 2023a), a local hospital escalation framework focusing on patient flow in the ED, with agreed triggers, actions, escalation and control, should be developed and implemented in each hospital.

RCEM has proposed five KPIs as well as a set of system metrics to provide information about where delays occur in the patient journey through the ED and to assist improvement efforts (RCEM, 2019). A suite of potential KPIs covering structural, process and outcome domains for use in Ireland was developed using a Delphi process. Some of these overlap with current national clinical KPIs (Wakai *et al.*, 2013) and provide a valuable resource for auditing aspects of quality and performance at departmental level. A high-quality patient information system is required for the collection of necessary data to underpin future adoption of these clinical KPIs nationally.

Other national clinical key performance indicators

There are currently a small number of national clinical KPIs that relate to emergency care and are co-implemented by EMP with other National Clinical Programmes, supported by the National Office of Clinical Audit (NOCA) (see *Table 8*). It is likely that KPIs for major trauma will measure the percentage of major trauma patients received by a trauma team, pre-alerts from pre-hospital services and CT head scans completed within 1 hour. In addition, EMP recommends a maximum turnaround time of 2 hours for all urgent EM laboratory tests and point-of-care testing (POCT) for the most urgent blood test results. EMP further recommends the development of agreed turnaround times for the various diagnostic imaging modalities appropriate to the acuity of presentation.

Table 8 **Clinical KPIs**

Acute Coronary Syndrome Programme (HSE *2023; NOCA 2022)*	Percentage of patients with ST segment elevation myocardial infarction/new left bundle branch block (LBBB) who receive timely reperfusion therapy (either primary percutaneous coronary intervention (PCI) <120 minutes or thrombolysis <30 minutes)	Target: 80%
	Percentage of patients with STEMI/new LBBB who receive primary PCI	Target: 95%
Irish National Audit of Stroke *(NOCA 2023)*	Median time between hospital arrival and brain imaging time (minutes)	Target: < 60 minutes
	Percentage of patients with ischaemic stroke who receive thrombolysis	Target: 12%
	Median time between hospital arrival and time of thrombolysis (minutes)	Target: < 60 minutes
Irish Hip Fracture Database *(NOCA 2021)*	Time from arrival in the ED to transfer to either operating theatre or orthopaedic ward	Target: <4 hours

Reporting

KPIs are heavily dependent on accurate data recording and reporting. At ED and hospital level, detailed validated reports are needed for data-driven ED operational management meetings to fuel continuous quality improvement and review unexpected variation from national norms.

A high-quality information system will enable real-time collection of activity and process measures. It is likely that there will be data gaps until the AFIS or similar system is implemented nationwide.

Value-based emergency care

Value-based healthcare has been defined as the equitable, sustainable and transparent use of available resources to achieve better outcomes and experiences for every person, recognising constrained resource availability and increasing demand (Hurst *et al.*, 2019). It is one of the fundamental pillars of the *Sláintecare Implementation Strategy and Action Plan* (DoH, 2021).

Value-based healthcare requires the ability to:

- Measure resources used at the patient level.
- Define patient-centred outcomes.
- Link resource usage with the activity performed to achieve those outcomes and minimise unwarranted variation.

Patient Related Outcome Measures

Patient-reported outcome measures (PROMs) are tools for assessing a patient's health status and the outcomes of healthcare interventions. These standardised, validated surveys capture patient-reported data on areas such as general health, quality of life, symptoms, functional ability, and physical, mental, and social well-being.

In emergency departments (EDs), PROMs offer a patient-centred approach to evaluating outcomes, particularly for patients who are discharged home (Vaillancourt, 2019). While emergency care is typically evaluated using metrics like department length of stay and mortality, PROMs and patient-reported experience measures (PREMs) offer a more person-centred perspective. These tools enable healthcare providers to incorporate patient preferences and evaluate care effectiveness on both individual and strategic levels (Van Oppen, 2020). By integrating PROMs into emergency care, providers can align their services more closely with patient-centred goals and outcomes.

Current status

Information on ED patient-level expenditure, staff resources or share of recent hospital spending allocation enhancements is not available on a national basis (Lawless, 2019). Specific patient-centred outcomes, largely based on time-to-treatment metrics are continually being defined. These include time-to-reperfusion therapies, time-to-CT scan and time-to-antibiotics.

The incomplete knowledge of patient-level costing hampers the ability to link activity and funding. Currently, Irish EDs are funded under a block grant system, where a budget is set annually from a hospital's overall funding allocation to operate each ED, regardless of actual activity.

Future goal

It is national strategy that ED block funding will be replaced by an activity-based funding (ABF) model (HSE, 2021). EMP has worked with the Healthcare Pricing Office to evaluate international evidence on ABF models for emergency care funding and has determined that the Australian model best fits the Irish context. The Australian model, implemented in 2012, classifies ED activity based on five variables into urgency-related groups (URGs), which are analogous to the diagnosis-related group used for inpatient activity (HSE, 2021). These five variables are:

- Type of visit (six categories, including emergency or return visit);
- Sex (two categories);
- Triage category (six categories ranked 1–5 in descending order of clinical urgency, with 6 representing a non-triaged attendance);
- Episode end status (nine categories, including "admitted", "did not wait" and "died in the ED");
- Discharge diagnosis code (obtained from the ICD-10-AM Principal Diagnosis Short List).

Patient-level costs are then combined with these activity data to generate a cost and ultimately a price for each URG.

Once embedded and mature, the data provided by an ABF framework will allow analysis of the causes of variance between EDs and potential incentivisation to achieve best-practice performance indicators (using the hip fracture care best practice tariff as a potential exemplar).

Pathway towards value-based emergency care

Currently, discharge diagnosis coding is the only element required for the generation of URGs that is not captured by Irish EDs; the other four variables are obtained from PET data from the HSE Business Information Unit (BIU).

A sixth variable (age) is currently being implemented in Australia and it is likely that Ireland will follow suit.

In Ireland, EMP has determined that the national ED discharge diagnosis code dataset will be based on the Australian ICD-10-AM Principal Diagnosis Short List. This dataset was selected as it has been previously validated for ED discharge diagnosis coding in a large, mature health system. Its applicability to the Irish emergency care environment has been evaluated (MacMahon and Gallagher, 2022). EMP intends that discharge diagnosis coding using this dataset will be implemented for all ED attendances. The data provided will also assist in research, service evaluation and improvement, performance benchmarking, and equitable and efficient resource allocation.

EMP proposes that the discharge diagnosis code dataset will transition to an element selected from a comprehensive SNOMED CT-based Acute Floor diagnosis reference set consistent with national policy as outlined by HIQA (2014). The Irish SNOMED CT National Release Centre published such a reference set containing a list of 1,277 diagnoses in April 2024.

The HPO is developing a methodology for patient-level costing in conjunction with the implementation of discharge diagnosis coding to include the suitability of Australian cost weights for use in Irish emergency care. A comparison of costings between sites will be followed by a period of shadow funding before ABF is fully implemented for EDs.

Ongoing consultation within the EM community and with stakeholders in other clinical programmes, the HSE and patient representative organisations will assist in the further development of meaningful patient-centred outcomes.

Summary

- EMP recommends the recording and monitoring of access and process data (see Appendices 3 and 4) to inform KPIs and lead to a culture of continuous improvement and research in each ED.
- It is national strategy that ED block funding will be replaced by an activity-based funding model.
- EMP has determined that the national ED discharge diagnosis code dataset used in Ireland will be based on the Australian ICD-10-AM Principal Diagnosis Short List.
- EMP proposes that the discharge diagnosis code dataset will transition to an element selected from a comprehensive SNOMED CT-based Acute Floor diagnosis reference set.

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A Systems Improvement Approach to Emergency Care

Introduction

Achieving and sustaining the EMP's overarching aim to improve the safety and quality of patient care and to reduce waiting times for patients in EDs necessitates learning how to most effectively operate and improve the systems through which emergency care is provided.

Patient care should be safe, effective, patient-centred, efficient, timely and equitable (Institute of Medicine, 2001). Quality Improvement refers to the combined and unceasing efforts of everyone – healthcare professionals, patients and their families, researchers, commissioners, providers and educators – to make the changes that will lead to better patient outcomes, better experience of care and the continued development and supporting of staff in delivering quality care (Batalden and Davidoff, 2007).

Patient safety is defined by the World Health Organization (WHO) as "the absence of preventable harm to a patient and reduction of risk of unnecessary harm associated with healthcare to an acceptable minimum" (WHO, 2023). Safety in emergency care applies equally to patients, staff and others visiting emergency care environments.

International frameworks for safe, high-quality, emergency care

The WHO recognises emergency care as an essential part of the health system (WHO, n.d.) and in May 2019 called on all countries to assess and develop their emergency care systems to ensure timely care for those acutely ill and injured (Seventy-Second World Health Assembly, 2019).

The International Federation for Emergency Medicine (IFEM) promotes and supports high-quality EM across the globe. Its "Updated framework on quality and safety in emergency medicine" (Hansen *et al.*, 2020) states that patients attending EDs should expect to receive treatment and care from the right personnel; with the right decision-making, the right processes and the right approach that is patient-centred; with care provided in the right location; with an appropriate duration of stay in the ED; and with access to supporting clinical expertise and services. The framework identifies the enablers of quality in emergency care as including staff, appropriate infrastructure, universal access, use of standardised triage systems, clinical guidelines and protocols and access to coordinated emergency care across the entire patient pathway, with integration between ambulance services, hospitals and primary care. It recommends that emergency care teams engage in clinical audit and outcomes assurance, safety incident reporting and monitoring, and that they have accessible clinical guidelines and promote a culture that avoids blame and optimises learning. Data collection and feedback are indispensable to improving quality and safety. Development of quality indicators and international research on quality and safety in emergency care is recommended.

Systems thinking for emergency care

A system can be defined as "a dynamic and complex whole, interacting as a structured functional unit to achieve goals" (Dekker and Leveson, 2015). A system may comprise multiple nested systems, such as an ED within a hospital, a regional care network and the national health system. EDs are complex adaptive systems (CASs), i.e. dynamic networks of interdependent agents constantly reacting to other agents, influencing the behaviour of the system as a whole (The Health Foundation, 2010). Unpredictability and uncertainty are to be expected in a CAS, and change implemented at one point may have unanticipated consequences at other interdependent parts of the system (Holland, 1992). Healthcare has been described as the most complex system in the world (Braithwaite *et al.*, 2017), and emergency care is one of the most dynamic and adaptive elements of healthcare systems. Systems thinking is recommended to accelerate improvements and reduce risks to patient safety across health systems. Sustainable healthcare improvement requires systems-level change (Wears and Sutcliffe, 2020; Free from Harm, 1999–2015), with sensitivity to context and avoidance of short-term project approaches (Dixon-Woods and Martin, 2016). Complex systems thinking promotes understanding of why 'one size fits all' or 'command-and-control' change management is unlikely to be successful in the long term.

The improvement method

The improvement method advocated by the Institute for Healthcare Improvement applies cycles of reflection and action with measurement of effect – Plan-Do-Study-Act (PDSA) cycles – to test small changes towards achieving specific systems improvement goals (Langley *et al.*, 2009; Berwick, 1996). It emphasises the need for measurement and testing, as not all change made in a system turns out to be improvement. While the PDSA approach is the building block of systems improvement and is particularly effective in microsystem-level change, research on broader health systems improvement cautions against over-reliance on PDSA cycles and short-term projects when broader systematic changes and evaluations are needed (Dixon-Woods and Martin, 2016; Dixon-Woods *et al.*, 2012).

Clinical Microsystem Improvement

The EMP's Clinical Microsystem Improvement (Nelson *et al.*, 2011) programme was well received by ED staff, and demonstrable improvements were achieved through multidisciplinary team coaching in frontline services. The approach involves analysing the patients, providers, processes and patterns in the systems of care and deploying the improvement method, including PDSA cycles, along with Lean (Berwick, 1996) and other Quality Improvement tools.

Lean and Six Sigma methods

The Lean improvement approach that was first developed as the Toyota Production System in Japan (Womack *et al.*, 1991) has been used successfully to drive improvements in EM internationally (Graban, 2009), with benefits including reductions in ED length of stay and waiting times, reductions in the rates of patients leaving before completion of treatment and senior doctors having more time to spend on direct patient care and clinical supervision, along with improvements in the utilisation of staff. (Crane and Noon, 2011; Holden, 2011; Ng *et al.*, 2010; Shriver and Eitel, 2010; Dickson *et al.*, 2009; Jacobssen *et al.*, 2009; King *et al.*, 2006). Lean methods focus on reducing systems waste and wasted human potential (e.g. time and morale) (Graban, 2009; Womack *et al.*, 1991). Lean tools may be used effectively within other improvement approaches such as Clinical Microsystem Improvement and Human Factors and Ergonomics (HFE) (Udod *et al.*, 2020; Moraros *et al.*, 2016; Vermeulen *et al.*, 2014).

The Six Sigma improvement method is often used in conjunction with Lean approaches. It is a data-driven quality method developed by the Motorola Corporation in Japan to reduce the number of errors in a process and to improve cost-effectiveness using a "design, measure, analyse, improve, implement and control" approach that has been applied in the ED setting, particularly to tackle waiting times (Shriver and Eitel, 2010). Statistical process control can be a useful tool to understand, manage, predict and display variation in service demand and capacity in emergency services (Pimentel and Barrueto Jr, 2015).

Human Factors and Ergonomics

HFE examines the interactions of humans and other elements of systems and applies theoretical principles, data and methods to design and optimise human wellbeing and system performance (Carayon, Xie, & Kianfar, 2014). It offers significant potential contributions to systems resilience engineering (Nancy Leveson, 2020) and safety research (Xie, Carayon, 2015). It is a promising approach to improving safety, quality and patient and staff experiences in emergency care (Wears, Perry, 2002, Carayon *et al.*, 2020, Bleetman *et al.*, 2012) and has been applied to improving ED telemetry systems, (Carayon, Xie, Kianfar, 2014) reviewing ICT implementations, (Fairbanks, 2008) (analysing patient transfer for CT imaging (Wears, Perry, 2002) and workflow analysis of clinical decision support (Salwei *et al.*, 2021).

Other improvement tools relevant to emergency care settings

Process mapping (Trebble *et al.*, 2010) and value stream mapping (Koelling *et al.*, 2005) are useful management tools applicable to understanding and improving emergency care processes. Queuing theory (the mathematical study of queues) may be applied in the ED setting to analyse waiting times and resource utilisation (Johnston *et al.*, 2022; Joseph, 2020; Mayhew and Smith, 2008).

The Theory of Constraints (Goldratt and Cox, 2004) also applies to ED processes. It holds that time lost at bottlenecks in a process is lost to the entire system, but time saved by improving efficiency at a stage in a process that is not a bottleneck will not improve the overall system performance. Bottlenecks may jump to different stages in highly variable processes, necessitating monitoring of performance across interdependent stages to ensure that the entire process is improved.

Resilience concepts for emergency care

Resilient health systems are those that consistently deliver high quality care, withstand disruptive events and continually adapt, learn and improve (Wiig *et al.*, 2020). Key capabilities for resilience include the ability to respond, adapt, learn and predict systems change (Hollnagel, 2016). Resilience concepts applied to ED escalation in response to overcrowding (Back *et al.*, 2017) demonstrate how policies may assume the presence of resources that are unavailable, necessitating real-time adaptations by the ED team to protect patient safety.

Person-centred emergency care

Person-centred care (PCC) means that a person is treated with dignity, compassion and respect, with care that is personalised, coordinated and enabling (The Health Foundation, 2014). The *National Standards for Safer Better Healthcare* (HIQA, 2012) describe further key elements of PCC for the Irish healthcare setting. Patient satisfaction surveys, both internationally and in Ireland, have pointed to ED waits as a cause of patient dissatisfaction. (Rasouli *et al.,* 2019; Wang *et al.,* 2017; Pines *et al.,* 2008). Actively seeking, analysing and responding to service-user feedback (e.g. complaints, compliments, comments and surveys) is a core element of PCC. Patient experiences in EDs are included in the *National Inpatient Experience Survey* (HSE, 2022).

PCC must include staff as there is an association between poor staff well-being and poor patient safety (Hall *et al.*, 2016). Staff well-being (West and Coia, 2019; Hall *et al.,* 2016) and engagement (HSE, 2016) are recognised as being essential to healthcare safety, quality and improvement.

Person-centredness for safety, quality and improvement

Compassionate care and leadership are now recognised as key enablers of healthcare quality, with strong evidence existing of their direct positive effects on patient outcomes, systems improvement and value (West, 2021; Trzekiak and Mazzarelli, 2019). PCC values are reflected in a restorative just culture (Kaur *et al.,* 2019) approach to patient safety events, wherein responses include reviewing the events that happened and identifying the people impacted by the event (including healthcare staff), establishing what their needs are and determining whose obligation it is to meet those needs.

Patients, their families or carers and the public are important, but often underutilised, resources in system safety improvement (WHO, 2022) and in research (HSE, 2021). The involvement of patients and staff in improvement initiatives is strongly recommended (HSE, 2017). The concept of co-production of healthcare places person-centredness at the heart of service design, delivery and improvement (Batalden *et al.,* 2016).

Effective care assurance in emergency care

Measuring and assuring the quality of care against evidence-based standards promotes patient, public, staff, organisational and regulatory confidence in services and identifies areas for systems and process improvement.

The emergency care community draws on international and national standards and guidelines to measure and assure the quality of emergency care provided in Ireland; examples include standards and evidence-based guidelines developed and disseminated by IAEM, RCEM and IFEM. EMP led the development of the National Clinical Guideline No 18 for the National Emergency Medicine Early Warning System (EMEWS) (National Clinical Effectiveness Committee, DoH, 2021) and has contributed to the development of several other National Clinical Guidelines (National Clinical Effectiveness Committee, DoH, 2019).

Clinical audit is a core component of effective care assurance and healthcare improvement (HSE, 2023; HIQA, 2012). Key factors influencing the effectiveness of clinical audit in improving systems performance include governance, processes, appropriate levels of funding and staff having adequate time to undertake the audit (Healthcare Quality Improvement Partnership, 2014). Several national clinical audits involve emergency care, including the Major Trauma Audit, the Irish Hip Fracture Database, the National Audit of Stroke, the Irish Heart Attack Audit and the recently introduced Emergency Medicine Airway Registry for Ireland , all conducted by the National Office of Clinical Audit.

Conclusion

Recognising the complexity of healthcare systems does not make it easier to implement sustainable improvement (Braithwaite *et al.*, 2018); nor does understanding quality, safety, resilience, systems concepts and improvement theories, but these approaches may help us to implement well-designed, evidence-based, realistic and cost-saving change projects that are likely to succeed. Appreciating complex systems in healthcare enables us to "grapple with the world we actually inhabit, not the one we wish we did" (Braithwaite *et al.*, 2018).

EMP Recommendations

EMP recommends that systems approaches that have been proven to be effective in improving the safety, quality, timeliness and experiences of care in EDs be used to enable improvement in Irish emergency care.

Staff need tools, training and time to assure and improve the care they provide.

Effective governance is needed to enable safe, effective PCC.

EMP recommends that health and social care systems resilience be optimised in EDs, health regions and at national level to ensure services are reliably safe, effective, responsive and sustainable.

EMP recommends that collaborative research and innovation be supported for ongoing emergency systems improvement.

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Clinical Guidelines

A large number of guidelines, relevant to the practice of EM, are available from the Irish Association for Emergency Medicine. The robust development process ensures that clinically important conditions have evidence-based, up-to-date, practical guidance to assist clinical staff in providing safe and efficient care to patients.

The IAEM Clinical Guidelines Committee (CDC) comprises a group of senior EM professionals representing the whole spectrum of emergency care in Ireland: urban and rural departments, paediatric, adult and mixed departments, care of older people and pre-hospital care. The committee works with relevant disciplines to develop comprehensive guidance for the MDT to provide optimum care in a timely fashion.

Development of a clinical guideline is a mandatory component of Advanced Specialty Training in Emergency Medicine (ASTEM), and the committee supports trainees in this process.

Definitions of a guideline, policy, protocol and an Integrated Care Pathway

A guideline is defined as a principle or criterion that guides or directs action. Guideline development emphasises using clear evidence from the existing literature rather than expert opinion alone (HSE, 2023a).

A policy indicates the position and values of the organisation on a given subject, e.g. a policy on infection control will set out how it intends to comply with national standards and best practice. It is a written operational statement of intent and explains the organisation's stand on a subject and why there is a rule about it (HIQA, 2008). A policy is a means of guiding an organisation to a desired outcome.

A protocol is a written plan that specifies procedures to be followed in defined situations: A protocol represents a standard of care that describes an intervention or set of interventions. Protocols are more explicit and specific than guidelines in their detail in that they specify 'who' does 'what', 'when' and 'how' (HSE, 2012).

An Integrated Care Pathway is a multidisciplinary outline of the expected course of events during the care of a patient, within a set time frame, to help with a specific condition or set of symptoms.

Clinical Guidelines from the Clinical Guideline Committee of the Irish Association for Emergency Medicine

A large compendium of guidelines is available on the Clinical Guidelines page of the IAEM website. They are also available via QR code posters which have been disseminated to all EDs across Ireland.

Clinical Guidelines from other National Clinical Programmes

EMP and the CGC work closely with other National Clinical Programmes where there is overlap in the management of a condition to ensure that care is standardised across specialties, e.g. Early Identification and Management of Delirium in the Emergency Department/Acute Medical Assessment Unit.

Green Emergency Medicine

Although in Ireland there is no specific strategy to support green initiatives for EDs in Ireland, the HSE has launched its *Climate Action Strategy 2023-2050* (HSE, 2023b), which provides a general strategy for Irish healthcare. The aim of the national strategy is to achieve net-zero emissions by 2050 and provide healthcare that is environmentally and socially sustainable. EMP supports specific consideration of the role that EM and EDs can play in achieving this target.

The HSE document provides support, guidance, tools and measures to track improvement. These are divided into things that can be done:

- When at work;
- When on the move;
- When ordering materials or services;
- In management of water and waste.

It also provides guidance on:

- Healthcare models;
- Adaptation and resilience.

The strategy contains a programme of work to develop a delivery framework for greener healthcare models and to support implementation of the plan to reduce the environmental impact of the models of care deployed, the pharmaceutical products used and the services delivered, while continuing to prioritise patient safety, disease prevention and population health.

Royal College of Emergency Medicine GreenED initiative

The RCEM has launched the first sustainability framework designed specifically for a secondary-care setting: GreenED. The GreenED initiative seeks to measure and reduce the environmental impact of EDs in the UK in order to drive environmentally sustainable practices within EM.

At the heart of GreenED is a framework outlining evidence-based actions at bronze, silver and gold levels, with the necessary guidelines and resources required to help achieve them. Addressing these actions not only improves the environmental sustainability of an ED but contributes to national net-zero targets, creating financial savings for EDs while maintaining or improving patient care. Successful completion of all the actions at a given level leads to formal accreditation by RCEM, thus recognising the ED's commitment to environmentally sustainable EM practices.

The GreenED Toolkit consists of a Digital Handbook and accompanying resources and tools such as case studies, sample projects, posters, presentations and data collection templates developed by RCEM's Environmental Specialist Interest Group, pilot site leads and other EM practitioners. It provides guidance on how to implement the actions in the framework. The Handbook is presented in a user-friendly way to save time and effort, maximise efficiency of action implementation and serve as a trove of easily accessible references. All of these resources can be accessed via the RCEM GreenED Resource Hub.

Wilkins (2023) took on a sustainability lead role in her ED and wrote about her experience and the suggestions for where to start in turning an ED Green. The following are her key findings:

- Engagement is key.
- Start with the easy wins.
- Identify your carbon hotspots.
- Find out what the rest of the Trust is doing.
- Reduction is best.
- Saving money and good publicity are great motivators.
- Working out how to persuade an already exhausted workforce to make changes is a challenge.
- Be prepared to uncover some horrors.
- Keep the momentum going.
- Finally – enjoy!

Conclusion

While the journey is just beginning, there is an environmental imperative to move our EM practice to a model that minimises its negative impact on climate change without compromising on the quality of care delivered.

EMP supports adoption of the GreenED toolkit in Irish EDs.

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Future Direction

EM's core business is the delivery of appropriately prioritised high-quality emergency care to the patients who present to EDs. These patients present with emergencies of all types, encompassing a wide range of severity from the small number with immediately life-threatening conditions to those whose condition is found to be less serious after appropriate assessment. Not infrequently, assessment and resuscitation must occur simultaneously before the patient's past and recent medical history is available to inform decision-making.

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There are many initiatives to ensure safe delivery of care as close to the patient's home as is consistent with best practice. These include services providing care exclusively in the community and some outreach services tasked by the NAS. However, as outlined in the Introduction, the number of patients attending EDs in Ireland continues to increase. It is essential that crowding is eliminated. Networks of emergency care continue to mature and will become more established as evidence increasingly confirms the benefits to patients. Ultimately, Trauma Units, Emergency Surgery Units and associated emergency care networks are likely to be aligned.

Streaming of patients from triage along various care pathways is in keeping with the Sláintecare principle of providing the right care in the right place at the right time. These pathways could include the development of Urgent Care Centres in proximity to EDs to cater for the recent steady increase in patients presenting to EDs with minor illness. GPs working in EDs benefit patients whose presentations would be better served by a GP than an EM clinician (ICGP, 2022). In addition, EMP recommends the streaming of appropriate patients directly from triage and from the community to AMAUs, ASAUs, PAUs and Mental Health Assessment Units. In short, the ED must be reserved for same-day emergency presentations.

There is a trend internationally towards the development of ambulatory care services for patients seeking emergency care in hospitals, with a growing body of evidence that these services are safe and lead to greater patient satisfaction. The widespread provision of rapid-access outpatient services for time-sensitive conditions such as venous thromboembolism, low-risk chest pain, transient ischaemic attack and first seizure reduces hospital admissions by facilitating safe ED discharge and timely follow-up for patients who present with these conditions.

RANPs have shown their value in the provision of high-quality care within the ED. The various RANP roles in Irish EDs include specialisms in musculoskeletal injuries and other aspects of trauma care, minor illness and chest pain. RANPs and HSCPs have a significant level of specialist and institutional knowledge to support the training of NCHDs during their rotation through emergency departments. There is no doubt that increasing diversification of areas of practice, coupled with increasing numbers of RANPs and other HSCPs as part of a multidisciplinary blended team, is a key part of the future of patient care in EM.

EM continues to develop a skill set in point-of-care diagnosis, e.g. ultrasound and improving the patient experience by using cutting-edge treatment modalities such as nerve blocks in patients with hip fractures or chest trauma.

Emergency Nurses are an integral part of the emergency team, providing an enormous amount of patient assessment and care that often goes unnoticed by others. Many older doctors remember their Staff Nurse colleague being the only immediate source of wise counsel when EDs were staffed by very junior medical

staff. It is important to ensure that Staff Nurses spend most of their time delivering emergency care to patients rather than being assigned to only deliver care to patients who have finished their ED phase of care but are waiting in the ED for an inpatient bed.

Emergency nursing has continued to evolve since its recognition as a specialist area in the 1970s. Emergency Nurses continue to be facilitated to work at the top of their licence through a large selection of educational opportunities, ranging from eLearning modules to doctorate-level studies. The spectrum of roles within emergency nursing will continue to expand, the most recent being in social inclusion and trauma care. The aspirational plan drawn up in 2012 for RANP-led services in IUs is now a reality.

The increasing use of simulation in EDs has allowed the whole resuscitation team, including input from other hospital teams as appropriate, to practise their assessment and treatment of common emergency presentations and, importantly, less frequent emergencies. This is of great benefit in highlighting the importance of team dynamics, cognitive offload and other aspects of training in human factors.

EMP, in collaboration with HSE National Clinical Advisor and Group Leads (NCAGLs) for Acute Operations and Older Persons and with the support of the National Clinical Programme for Older Persons, is currently planning the implementation of a modified triage pathway for older adults presenting to the ED. Clear recognition of the importance of the post-triage phase of care is important, involving the frontloading of assessments and interventions by appropriate members of the ED multidisciplinary blended team and parallel assessment by other specialties where it is clear that these will benefit the patient without them having to wait for a precise diagnosis. Clear identification of the post-triage phase of care allows early appropriate assessment and screening while also allowing triage to return to its original function of being a validated system of assigning a category that indicates the individual patient's urgency of clinical need.

Rapid Assessment and Treatment (RAT) and Senior Intervention Following Triage (SIFT) will become increasingly common practice in the coming years, with greater numbers of experienced practitioners; RAT RANPs have been introduced in several EDs since the late 2010s.

The intention of Navigation Hubs is to get the right patient to the right place first time with the minimum number of intervening steps. The optimum design is currently being explored, but at a minimum Navigation Hubs will require ready access to an up-to-date and comprehensive local service directory and direct lines of communication between relevant services.

Other imminent initiatives such as Acute Virtual Wards, Urgent Virtual Care and Surgical Hubs should contribute positively to admission avoidance.

The imminent implementation of diagnostic coding for all ED patients, rather than the current practice of only assigning a diagnostic code to the minority of patients referred for inpatient admission, will provide many more data for research and audit. It is also a vital component of the roll-out of activity-based funding in the delivery of Urgent and Emergency Care (UEC) in the hospital environment.

With reference to other systems of UEC provision, representatives from the NAS, relevant NCAGL offices, EMP and Acute Operations visited Copenhagen Emergency Medical Service (CPH EMS) in 2022 to learn about its innovative system for managing the emergency and urgent care needs of patients implemented as a transformational change in 2014. It encourages patients seeking urgent or emergency care without feeling they need an emergency ambulance to dial a particular number (1813), where their call will be dealt with by trained operators with immediate recourse to experienced clinicians for triage calls. Patients receive pre-hospital and/or hospital-based emergency care, urgent care within their community or a next-day appointment where clinically appropriate. This reduces the need for conveyance to hospital, ED attendance and the demand on GP out-of-hours services.

Implementation of the CPH EMS system saw ED visits decrease by 10% in the first few years, with 90% patient satisfaction reported. EMP recommends exploration of the feasibility of applying this model within the Irish healthcare system.

In conclusion, we would once again like to thank the many contributors to this review who gave generously of their enthusiasm, time and expertise. Many of the reviewers included younger specialists in EM, which bodes well for the future of the delivery of emergency care to the people of Ireland.

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Appendices

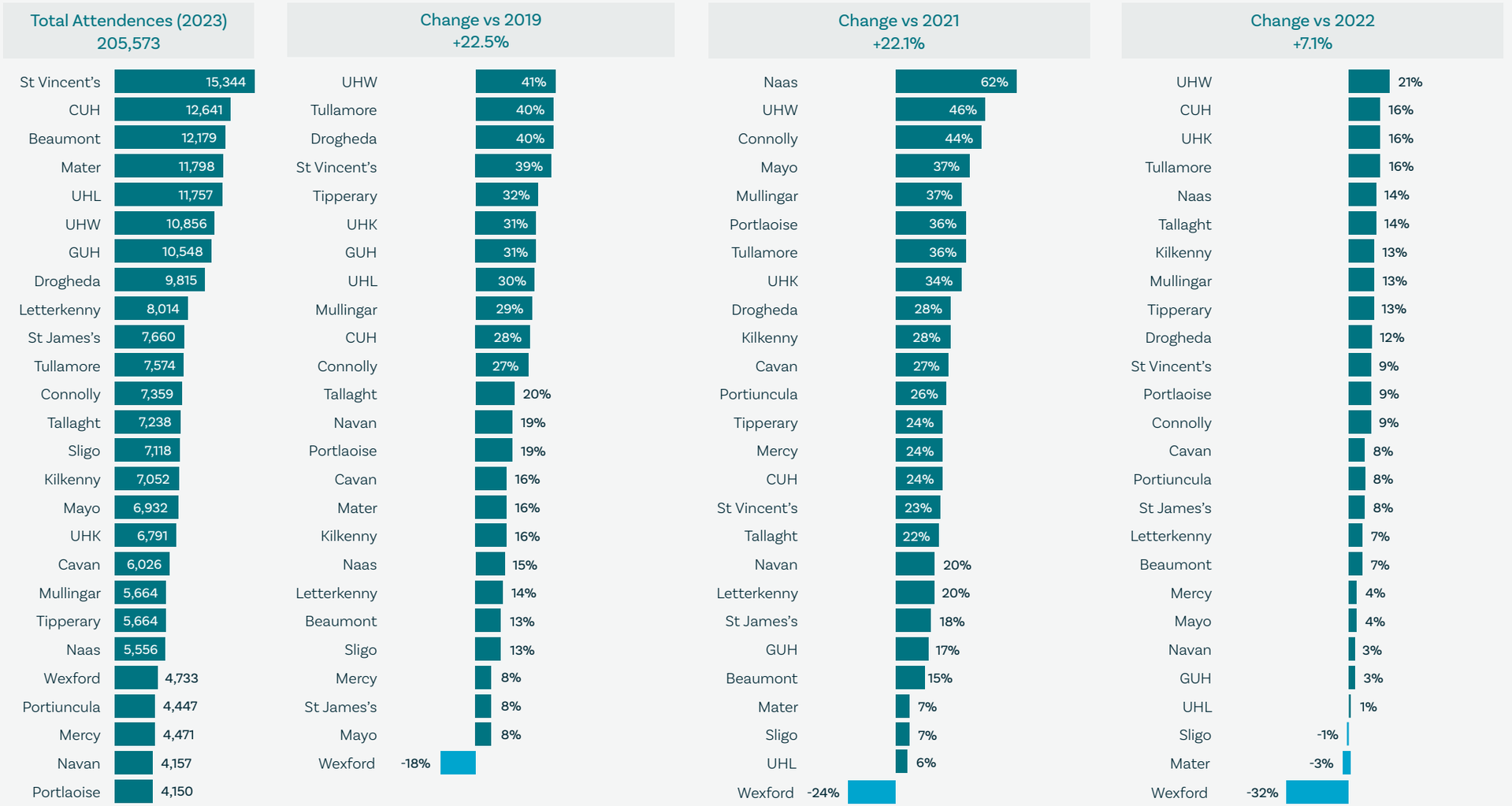
Appendix 1: Adult attendance data and figures

Table A1.1 **EDs listed by percentage of all adult attendances (≥16 years) who are aged ≥75 years for 2024** *(Source: BIU on EDAP platform)*

Hospital	Average attendances/day ≥16 years	Average attendances/day ≥75 years	≥75 years as % of total adult attendances
Beaumont Hospital	146	36	25%
Cavan General Hospital	67	19	28%
Connolly Hospital	127	23	18%
Cork University Hospital	142	39	27%
University Hospital Galway	145	33	23%
Letterkenny University Hospital	94	24	26%
Mater Misericordiae University Hospital *(including Smithfield Injury Unit)*	245	37	15%
Mayo University Hospital	71	22	31%
Regional Hospital Mullingar	74	17	23%
Midland Regional Hospital Portlaoise	76	13	17%
Midland Regional Hospital Tullamore	86	24	28%
Naas General Hospital	75	19	26%
Our Lady of Lourdes Hospital Drogheda	118	28	24%
Our Lady's Hospital, Navan	62	13	21%
Portiuncula University Hospital	53	14	26%
Sligo University Hospital	82	22	27%
St James's Hospital	140	25	18%
St Luke's General Hospital, Carlow/Kilkenny	84	22	26%
St Michael's Hospital, Dun Laoghaire *(operates 12/7)*	42	12	29%
St Vincent's University Hospital	137	46	33%
Tallaght University Hospital	141	24	17%
Tipperary University Hospital	64	17	27%
University Hospital Kerry	79	21	27%
University Hospital Limerick	152	38	25%
University Hospital Waterford	132	31	24%
Wexford General Hospital	98	23	24%

Table A1.1 **ED attendances by hospital for patients ≥75 years.**

(Source: Urgent and Emergency Care Performance Update Report (week ending 31st December 2023). Performance Management and Improvement Unit, Operational Performance and Integration, HSE)



Appendix 2: Emergency Nurse staffing in January 2024

Table A2.1 ED staffing on week commencing 29 January 2024 *(Source: EMP survey)*

Emergency Departments		Approved	In post week beginning 29/01/2024	
Grade		WTE	Actual WTE	Head Count (HC)
Staff Nurses	Staff Nurse	1603.43	1469.81	1540
Clinical Nurse Managers	Manager 1	182.31	146.49	158
	Manager 2	232.66	203.38	219
	Manager 3	36	35	35
Assistant Director of Nursing	ED only	8	8	8
	ED plus other areas	27.8	27.8	28
Registered Advance Nurse Practitioners	Musculo-skeletal	75.46	67.49	71
	Rapid Assessment & Treatment	23	20.7	21
	Other *(please specify)*	14	13.8	14
Candidate Advanced Nurse Practitioners	Musculoskeletal	12.5	12.5	13
	Rapid Assessment & Treatment	10	8	8
	Other *(please specify)*	26	26	25
Other Nursing Grades	Clinical Nurse Specialist *(please specify)*	15	11.4	12
	Clinical Skills Facilitator	51.35	46.4	47
	HDip Education Co-ordinator	2	2	2
	Patient Liaison Nurse	5	4.9	6
	GP/Community Liaison Nurse	17.8	14.2	17
	Research / Audit Nurse	4.5	4.4	6
	Other *(please specify)*	25	23.8	24
	Health Care Assistant	306.38	285.75	298
	Multi-task Attendant	34.9	29	30
	Total	2713.09	2460.92	2582

Table A2.2 IU staffing on week commencing 29 January 2024 *(Source: EMP survey)*

Injury unit		Approved	In post week beginning 29/01/2024	
Grade		WTE	Actual WTE	Head Count (HC)
Staff Nurses	Staff Nurse	54.62	50.6	59
Clinical Nurse Managers	Manager 1	8.04	7.84	10
	Manager 2	7,32	7.17	11
	Manager 3	0	0	0
Registered Advance Nurse Practitioners	Musculo-skeletal	40.65	29.8	32
Candidate Advanced Nurse Practitioners	Musculoskeletal	15	15	17
Other Nursing Grades	Other *(please specify)*	3	2.306	3
	Health Care Assistant	6	5	6
	Multi-task Attendant	5.5	5.5	6
	Total	140.13	123.216	144

Appendix 3: Injury Unit Service Description and Specification

Overview of Injury Units

Injury Units (IU) provide unscheduled emergency care for patients with neither life-threatening nor limb-threatening injuries as conveniently as possible, while ensuring patient safety and equitable standards of care within a network of emergency care.

IUs are designed and equipped for the treatment of patients with broken bones, dislocations, sprains, strains, wounds, scalds and minor burns that are unlikely to need overnight admission to hospital. Staff members perform X-rays, reduce joint dislocations, apply plaster casts or splints and treat wounds by suturing or other means. They have swift access to diagnostics, including X-ray and laboratory tests, and some have rapid access to physiotherapy services. The team of doctors, RANPs, nurses, Radiographers and Physiotherapists operate under the governance of a Consultant from the hub ED. IUs provide the same level of expertise and service as EDs for the appropriate group of patients but are not designed to treat serious head, back or neck injuries; abdominal pain; medical illnesses or mental health problems. They do not treat children aged <5 years because of the special requirements of young children attending hospital. A list of what IUs can and cannot treat is available on the HSE web page 'When to visit an injury unit'.

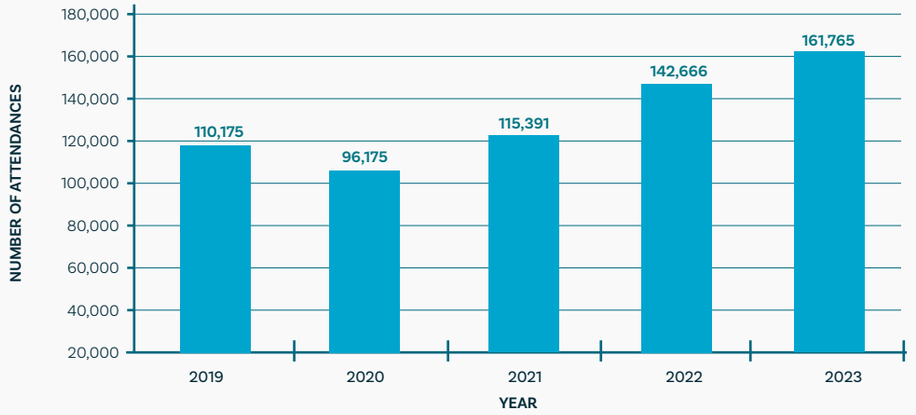
IUs provide an opportunity for patients to be seen and treated in an appropriate clinical setting, with a potential turnaround time in some cases of less than 1 hour. Each IU is part of a wider system of care and is linked to a hub ED in an acute hospital. If a patient in an IU requires admission to hospital, they will be referred directly to a service in a linked hospital, in the same way as if they had attended the hub ED. This approach aligns well with IUs being an integral part of the national networked trauma system.

When used appropriately, IUs provide an option for patients with a less serious injury other than attending the ED. Patients may attend the IU directly or at the recommendation of healthcare practitioners, e.g. GPs, Community Physiotherapists or staff in Navigation Hubs. The use of IUs will not reduce ED crowding and trolley waits: those patients who need admission to hospital will still attend an ED, and it is patients awaiting admission who are the main contributor to ED crowding. However, IUs can contribute to a reduction in congestion in ED waiting rooms because IU patients attending an ED are likely to be 'triaged to wait' while those with more urgent requirements are assessed and treated.

IUs also offer the opportunity for some patients whose injuries require operative intervention to avail of the planned trauma care component of the trauma system. These patients are assessed and treated in the IU, but where they require operative intervention as the next step in their care, they can receive the appointment for their surgical treatment as a day case rather than the current practice of being referred to the hub ED for assessment. IUs will therefore integrate with the wider trauma system to ensure that trauma patients can have their needs met in the most efficient and patient-centred manner.

There are currently 12 IUs in operation nationally. Nine IUs are located within Model 2 hospitals. Three IUs (Smithfield Rapid Injury, Mercy IU, Mullingar IU) are standalone units. In 2023, 161,000 patients attended IUs in Ireland. The locations, opening hours and contact details of each of the units are listed on the HSE web page 'Find urgent and emergency care'.

Figure A2.1 Injury Unit attendances 2019–2023 (N=626,172)



2020 April – St John's Hospital commenced weekend service
2022 November – Monaghan Hospital increased service to 12 hours Monday–Friday
2022 November – St Francis Private Hospital, Mullingar service opened
2023 September – Monaghan Hospital commenced weekend service

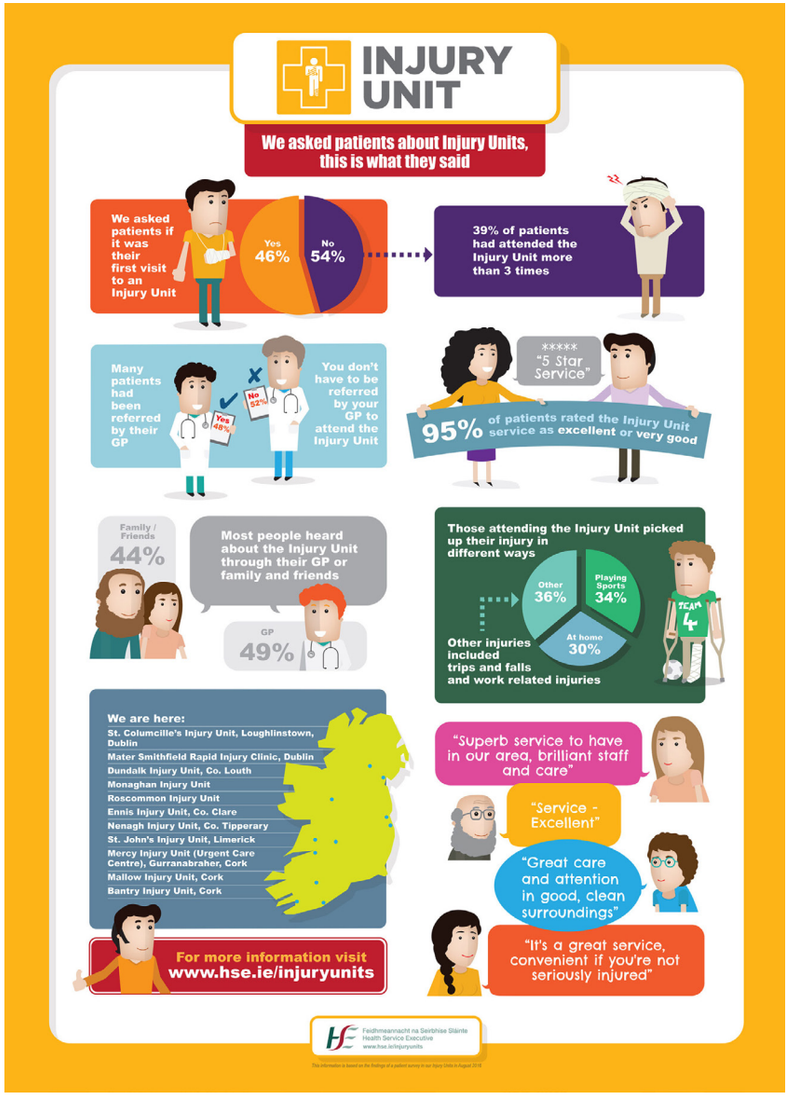
Governance

Each unit has a named Consultant in EM responsible for the standard of care and other governance matters. In the event of this named Consultant not being available at any given moment to advise on urgent clinical issues, the Consultant in EM on call for that day in the hub ED will be the point of contact. The units are currently mostly staffed by a blend of doctors and RANPs treating patients. A long-term aspiration is to have fully RANP-led IU services.

Patient experience and satisfaction

In 2017, the HSE Communications Division sought feedback from patients who had attended IUs. When asked to rate the IU Service, 70% of respondents selected Excellent, 25% Very Good and 5% Good. This reflects the fact that the care provided in IUs to patients with suitable injuries resulted in high satisfaction. See *Figure A2.2* for outcomes of the survey.

Figure A2.2 IU Patient Satisfaction Survey Outcomes



Staffing

The staffing model described here assumes IUs being open to the public for new patient registrations for 10 hours per day, 7 days a week. To allow for 'completion of care', these units must be staffed for a 12-hour period. As part of the development of a trauma system, consideration for 12/7 opening to the public may take place, but this would require staffing for a 14-hour day to allow for completion of care and would require a significant uplift in staffing.

The required hours per year to provide 12-hour cover per day (12-hour shift x 365 days/year) is 4,380 hours/year. Most nursing staff will work a standard 12-hour shift to provide for the 'completion of care' period in IUs that are open to the public 10 hours per day.

Staffing based on 08:00–18:00 operational service followed by 2 hours to complete care

Clinical governance is with a named Consultant in EM from the hub ED. The Consultant commitment is 8 hours/week (0.24 WTE) week (416 hours/year) (in-person or remote). If the named Consultant in EM is unavailable, the staff liaise with the duty Consultant in EM in the hub ED.

A radiography service is needed for all hours of opening to ensure that the demand for X-ray can be met in a timely fashion and staffed to reflect known patterns of patient presentations. IUs co-located with Medical Assessment Units (MAUs) generally share clerical and radiography staff. EMP recommends that a therapeutic physiotherapy service be available to ensure that the demand for follow-up physiotherapy can be promptly met.

Table A2.1 Minimum WTE staffing requirement for IUs

Annual Attendances	Average Daily Attendances	SDM*	SDM*	SDM*	SDM*	SDM*	Clerical ^
<7,000	20	4	1	0.5	3	1	2.9
7,000–11,000	30	4.5	1	0.5	3	2.5	2.9
11,000–15,000	40	5	1	1	3	2.5	3
15,000–18,000	50	6	1	1	6	4	4
18,000–21,000	60	8	1	2	6	5	4
21,000–25,000	70	10	2	2	6	5	5

**A Senior Decision-Maker (SDM) in an IU is defined as a RANP or a middle-grade doctor (Registrar, Specialist Registrar or Staff Grade/Associate Specialist). Advanced Practice Physiotherapists may also act as SDMs in the near future. It is anticipated that IU patient care will be a predominantly RANP-provided service (EMP, 2019). Factors that will influence future senior clinician staffing in IUs will include unit case mix, demand patterns and availability of middle-grade doctors, RANPs and Advanced Practice Physiotherapists.*

^Where there is one member of staff on duty, break cover must be provided to ensure efficient flow through the IU.

EMP recommends that staff be rostered according to pattern of presentation, e.g. anticipating higher numbers of presentations on Mondays. Experience shows that Senior Decision-makers treat a maximum of 25 patients per day, depending on acuity and pattern of presentation. Assistant Director of Nursing/CNM3 oversight may be provided by the hub ED or the hospital.

Injury Unit staff roles

RANP: In 2024 there were 29.8 WTE RANPs and 17 WTECANPs in post in IUs. The RANP role has additional responsibilities such as education, research, audit and continuing professional development (CPD) that are not accounted for in the staff availability calculations. Activities such as clinical supervision, case review and audit should be arranged on a regular basis with the responsible Consultant in EM, while other activities such as research and CPD will be undertaken at the hub ED or at national level. RANP efficiency can be significantly enhanced by having the assistance of Staff Nurses skilled in treatments for patients presenting with injuries.

Middle-grade doctors: A historical requirement that a middle-grade doctor should be present at all times to enable the broadest possible case mix to be managed in IUs is no longer applicable as increased RANP numbers and expansion of their scope of practice has reduced this requirement. Notwithstanding the changed landscape, many IUs still have middle-grade doctors on staff, and depending on unit demand, a single middle-grade doctor may cover the 12-hour shift each day, or the shift may be split between two doctors.

Consultants in EM: These senior doctors provide leadership, governance and remote support for IU care to the MDT. A minimum Consultant in EM commitment equivalent to two half-day sessions or 8 hours in total for each IU is considered appropriate. When the IU is well established and protocols are embedded, it may be possible to reduce this to 4 hours per week.

General Practitioners: There is potential for GPs who wish to do so and who have appropriate training and experience in the care of injuries to participate in medical staff rosters for IUs. These roles would be implemented under the governance of EM, within the governance framework for a network of emergency care.

Staff Nurse role: The Staff Nurse will utilise their skills and competencies to support the SDM and improve efficiency. EMP recommends that Staff Nurses undertake additional education for the prescribing of medicinal products (analgesia) and ionising radiation. The *Guidance document on staffing for Injury Units (IUs)* (EMP, 2019) recommends that Staff Nurses be skilled in assisting with procedural analgesia and anxiolytics. Staff Nurses will also be required to support the efficient running of on-site review clinics. There is an opportunity for Staff Nurses to gain specific competence and experience in this area of practice under the supervision of the SDM.

Nursing management support: EMP recommends that there be a CNM2 available on site to provide nursing leadership. This role is particularly important where IUs are geographically distant from the hub ED. In addition, support is needed from a CNM3 or an ADON to each IU within a network or at hospital level. The CNM2/CNM3/ADON supports the IU nursing staff team, oversees IU rostering and ensures staff meet mandatory training and CPD requirements.

Other therapy professions and Medical Social Work: A needs assessment will indicate whether service demand for Physiotherapy, Occupational Therapy and other services justifies on-site provision or if the service should be provided at the hub ED to ensure that all patients have equitable access. Future expansion in the Physiotherapy and OT scope of practice may enable a greater contribution of these professions to IU staffing. EMP recommends that network outpatient therapy clinics be available to IU patients as required. Medical Social Work services must be accessible throughout the hours of IU clinical activity. Physiotherapy-led trauma clinics in IUs would lead to efficiencies for patients. Arrangements for hub support and the frequency of these clinics should be determined by demand.

Reception/Administration staff: Reception staff are required for the full duration of IU operating hours to support patient registration and other clerical duties. There may be shared administrative support with the on-site MAU.

Security: An immediate security response is required for all hours the IU is open.

Other supports: Porter services and appropriate household/cleaning resources are required in an IU.

There may be scope for the further development of the Health Care Assistant (HCA) role. Expansion of the HCA scope of practice may enable this role to contribute to care in the IU setting. Appropriate training for the role will be required to ensure that their scope of practice matches service requirements. Patient throughput, acuity and patterns of attendance will ultimately influence the skill-mix requirement.

Facilities and equipment

All IUs need access to dedicated staff and digital plain imaging facilities for all hours of opening. These facilities need either to be provided as an integral part of the IU or in the Diagnostic Imaging Department, where this is immediately adjacent. One general radiology room is sufficient for 20,000 to 25,000 patient attendances per annum. The images need to be immediately available to Consultants in the hub ED.

Infrastructural requirements can be considered in terms of clinical areas (including direct clinical care and clinical support areas) and non-clinical areas.

Facilities

Table A2.2 Injury Unit infrastructural requirements

IU Area	Functions	Details
Patient access	Walking entrance	Accessible to the public 12 hours a day, 7 days a week
	Reception	Including chart storage and chart scanning areas
	Security post	
Patient care areas	Adult waiting area	Easily viewed from reception desk
	Paediatric waiting area	Easily viewed from reception desk
	Subwait	Patients waiting for treatments/results following examination
	Clinical rooms	Most rooms should be 12 m^2 to facilitate the taking and documenting of a history, performance of examination and access to a computer for requesting and viewinys. One or more larger rooms (16 m^2) are required to allow for the manipulation of fractures and dislocated joints, exploration/suturing of wounds and Physiotherapist-led services. At least one clinical room should be for children. Single consulting rooms with interconnecting doors should be provided to allow for assessment, diagnosis and treatment.
	Diagnostic imaging	IUs need access to dedicated radiography staff and digital plain imaging facilities for the full hours of operation. Access to National Integrated Medical Imaging System for communication with the hub ED is also essential.
Clinical support areas	Clean utility	Controlled drugs press Drug storage Suture packs Dressing packs Procedure packs Wound-cleaning solutions Bandages Dressings Wound-closure materials
	Dirty utility	
	Equipment storage	Crutches/walking frames, etc.
	Supplies storage area	
	Staff duty base	With telemedicine to hub ED
	Education/meeting room	
	Offices	MDT – Nursing/Medical/HSCP/Clerical
Non-clinical areas	Staff room	
	Staff changing room	
	Staff toilets (and showers)	

APPENDICES

An integrated ICT infrastructure is needed to support IUs. An Electronic Health Record (EHR) will allow seamless integration with the wider network of emergency care or trauma system, and use of secure medical messaging allows staff in IUs to access the advice of SDMs in the hub ED.

A patient information system for IUs will allow the following data to be extracted to monitor patient outcomes:

- Age;
- Gender;
- Professional staff consulted;
- Investigations;
- Treatments;
- Times of arrival/treatment/departure;
- Consultations;
- Details of onward referrals.

REFERENCES

EMP (2019). Guidance document on staffing for Injury Units (IUs). Dublin: National Emergency Medicine Programme. Available from: https://healthservice.hse.ie/filelibrary/onmsd/guidance-on-local-injury-unit-staffing.pdf [Accessed 5 August 2024].

Appendix 4: Emergency Care Process Measures

Emergency care process time-point definitions

Table A4.1 **National ED process dataset**

No.	Time point	Definition
01	Ambulance Arrival Time	The time the ambulance crew record they arrived at the hospital.
02	ED Arrival Time	The first documentation of a patient's presence in the department is taken as the arrival time.
03	Triage Time	The time that triage is started.
04	Time Seen by Treating Clinician	The time a patient is first examined by a doctor, RANP or other authorised healthcare professional.
05	Time of Disposition Decision	The time the treating clinician decides on a patient's further management. It should be the same time as Decision to Admit for patients who are subsequently admitted.
06	Time Seen by Admitting/ Consulting team	The time a patient is seen by a doctor on behalf of the admitting Consultant or by a doctor providing a non-EM specialist opinion.
07	Time of Completion of Admitting/Consulting Team Assessment	The time that admitting/consulting teams have completed their assessment of a referred patient.
08	Time bed requested on Patient Administration System (PAS)	The time that an inpatient bed is requested on the hospital's computerised PAS.
09	ED Departure Time	The time that a patient physically leaves the ED.

Additional EMP measures

EMP recommends two additional ED process time points to support local analysis of ED process efficiency and EMP quality measures. These are

a. Time of First Clinical Intervention (e.g. ECG performed); and
b. Time of Emergency Medicine Discharge.

These data points are not necessary for national monitoring of ED process efficiency and are therefore not included in the national ED process dataset.

Table A4.2 **Additional ED process time points recommended by EMP**

No.	Time point	Definition
a	Time of First Clinical Intervention	The time diagnostic or therapeutic processes are commenced for a patient.
b	Time of Emergency Medicine Discharge	The time a patient is ready for departure; this indicates the end of the EM care process.

Clinical Decision Unit measures

EMP requires that the time of patient arrival in CDU to time of CDU discharge is recorded to support monitoring of the CDU Length of Stay Key Performance Indicator, i.e. that patients will be admitted to CDUs for less than 24 hours, after which time they will be discharged, if appropriate, or admitted for ongoing inpatient care to other hospital specialties.

Table A4.3 **CDU time points**

No.	Time point	Definition
a	Time of CDU Admission	The time a patient is recorded as being admitted to the CDU.
b	Time of CDU Departure	The time a patient leaves the CDU for discharge home, in-hospital admission under the care of a non-EM specialist or for transfer to another healthcare setting.

Table A4.4 **Emergency care process measures to be reviewed in EDs**

No.	Name of measure	Calculation	Reporting criteria	Rationale
3.1	Ambulance Handover Time	All patients arriving by ambulance to ED (see notes on definition)	Measure: % of total <20 minutes, median, mean, 75th and 95th centile if target unmet **Target: 95% <20 mins**	Access to ED for ambulance patients
3.2	Total ED Time – Arrival to ED Departure Time	a. All new ED patients b. All new ED patients who are subsequently admitted c. All new ED patients who are discharged by an EM clinician d. All new ED patients who are discharged by a non-EM clinician e. All scheduled returns f. All CDU admissions g. All new patients aged <16 years h. All new patients aged <1 year i. All new patients aged ≥65 years j. All new patients aged ≥80 k. All new patients identified as presenting primarily due to mental health problems	***Primary measure:*** % of total >6 hours ***Secondary measure:*** Median, mean, 75th and 95th centile Data per day of week for a quarter (run charts) and measure of variance.	• Measures the timeliness of care for all patients • Target: 95% <6 hours • Indicates access to inpatient beds for admitted patients • Secondary measures demonstrate progress towards target and indicate duration of delay for most delayed 10% of patients
3.3	Arrival to Triage Start Time	All new patients	% <15 mins target time	Indicates access to triage
3.4	Arrival Time to First Clinical Intervention	All new ED patients	Median, mean, 75th and 95th centile	Access to first diagnostic or treatment milestone on patient journey
3.5	Arrival to Time Seen by Treating Clinician	All new ED patients	Median, mean, 75th and 95th centile	Access to EM clinicians
3.6	Arrival Time to Time of Disposition Decision	All new ED patients	Median, mean, 75th and 95th centile	Duration of EM assessment phase
3.7	Disposition time to start seen by consulting/admitting team	All new ED patients referred for admission or consultation	Median, mean, 75th and 95th centile Target: 1 hour for Acute Medicine	Access to admitting teams
3.8	Time of Disposition Decision to ED Departure Time for admitted patients	All new ED patients who are subsequently admitted	Median, mean, 75th and 95th centile	Access to inpatient beds
3.9	EM Discharge Time to ED Departure Time for discharged patients	All new ED patients who are subsequently admitted	Median, mean, 75th and 95th centile	Access to transport
3.10	EM Discharge Time to ED Departure time for patients transferred to other hospital	All new ED patients who are subsequently transferred	Median, mean, 75th and 95th centile	Access to inter-hospital transport or retrieval
3.11	CDU Length of Stay	Time of CDU admission to CDU departure time	Median time, mean % of total >24 hours Target: 95% <24 hours	Duration of CDU care. Access to other specialty care for patients requiring longer admission

Appendix 5: Emergency Care Activity Measures

EMP recommends that clear differentiation is made between patients who receive substantial assessment and treatment from ED Clinical Staff, those who are registered in the ED and transferred elsewhere and those who are registered, triaged and then transferred elsewhere.

Table A5.1 **Patient cohort definitions**

No.	Time point	Definition
01	New ED Patient Attendance	A patient who attends ED requesting emergency care for the first time and any patient transferred to or admitted through an ED who requires EM clinical care or resources; includes unscheduled return patients
02	Paediatric Patient	Any patient aged <16 years
03	Older ED Patient	Any patient aged ≥75 years
04	Scheduled Return	A patient for whom a subsequent ED visit is arranged, including attendance at an EM review clinic
05	Unscheduled 7-day ED Return Patient	A patient who returns with the same condition within 7 days of the initial ED visit
06	Unscheduled 28-day ED Return Patient	A patient who returns with the same condition within 28 days of the initial ED visit
07	LBCT: Left before Completion of Treatment	A patient who registers but leaves the ED before discharge by a clinician. We recommend that IT systems facilitate the recording of three distinct adult patient cohorts as the implication differ for each of the three groups: 1. Adult patients who register but leave the ED before triage; 2. Adult patients who are triaged but leave before assessment by a treating clinician; 3. Adult patients who are assessed by a treating clinician but subsequently leave the ED. This is an accepted measure of EM performance. A rate of 5% (varying from 3% to 6%) is reported for the UK. An arbitrary target of <5% is proposed for Ireland. Where a child leaves the ED/IU before completion of treatment, a review of the circumstances should be undertaken because of possible child protection risks. If the decision to bring the child from the ED/IU is considered to put the child at risk, then urgent consultation is needed with the senior doctor on duty.
08	Assessment Unit GP referral	Patients who have been referred by their GPs to an Assessment Unit cannot be considered ED attendances unless they require EM care or resources other than triage. It may be appropriate for this patient group to use the patient registration facilities at the ED, but these patients are not ED patients unless they require resuscitation or clinical resources other than a brief triage.
09	Assessment Unit referrals from ED	Patients who self-present to an ED may be subsequently referred to an Assessment Unit. This patient group should be identified separately in hospital admission data.

Table A5.1 **Patient cohort definitions**

No.	Time point	Definition
10	Number of admissions through ED	The total of new and return patients admitted to the same hospital. The following should be monitored: • Total number of admissions; • The proportion of new patient admissions to new patient attendances; • The admission rate for unscheduled return patients; • The proportion of scheduled return patients admitted.
11	CDU admission	A patient referred for admission to a CDU under the care of a Consultant in EM or PEM. CDUs are inpatient areas separate to but co-located with EDs. CDU admission rates should be monitored as well as the total ED time for CDU admissions and CDU length of stay.
12	Patients Referred but not Admitted	A proportion of patients referred for admission may not be admitted.
13	Patient Transferred to Other Hospital	An EM patient who is transferred to another hospital because their care needs cannot be met in the same hospital or can be better met in another healthcare facility. This includes patients transferred for ongoing acute care (including inpatient psychiatric care) or for escalating levels of care. It excludes patients transferred to non-acute hospital healthcare facilities (e.g. nursing homes).
14	Patient Follow-up Care	The follow-up care arrangements for each patient should be recorded at the time of EM discharge (e.g. discharge to GP, nursing home, self-care).

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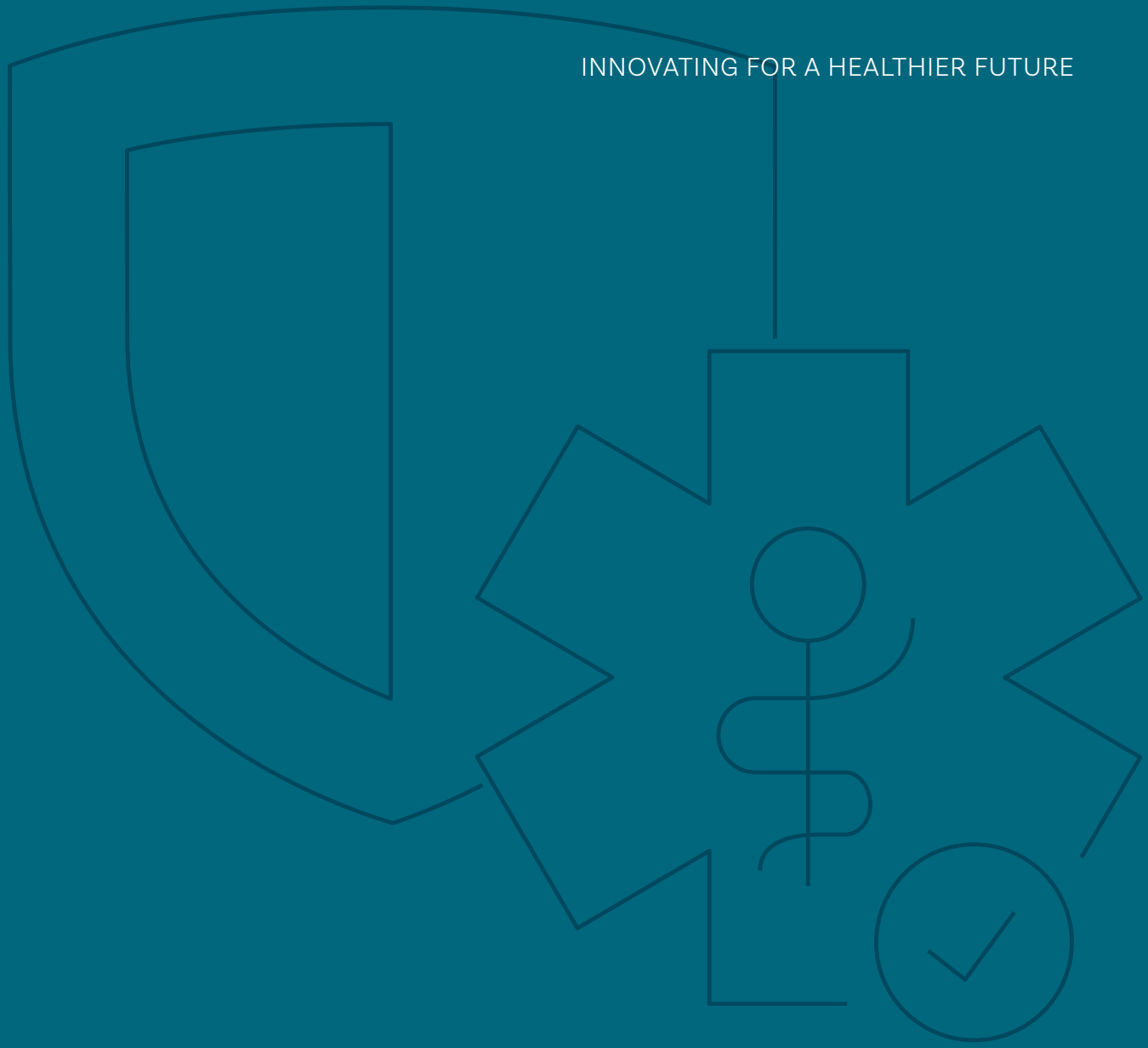

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