



# Patient Flow Academy

Webinar 1, 18<sup>th</sup> April 2024

## **Welcome and Opening Remarks from the Chair**

- Damien McCallion, HSE Chief Operations Officer

## **An Introduction to the Patient Flow Academy**

- Dr. Mike O' Connor, HSE National Clinical Advisor and Group Lead, Acute Hospitals

## **Panel Question and Answer**

- Mari O' Donovan, HSE General Manager ECC Programme, CHO 4
- Denise Roxburgh, Unscheduled Care Lead for the IEHG (HSE Dublin & Southeast)
- Dr. Rosa McNamara, Consultant in Emergency Medicine, St. Vincent's University Hospital
- Dr. Mike O' Connor, NCAGL, Acute Hospitals
- Damien McCallion, HSE COO

## **Close and Post Webinar Feedback**



# An Introduction to the Patient Flow Academy

Dr. Mike O' Connor, National Clinical Advisor and Group Lead, Acute Hospitals



# Overview



Healthcare demand and delivery in Ireland



An overview of patient flow



Why does patient flow matter?



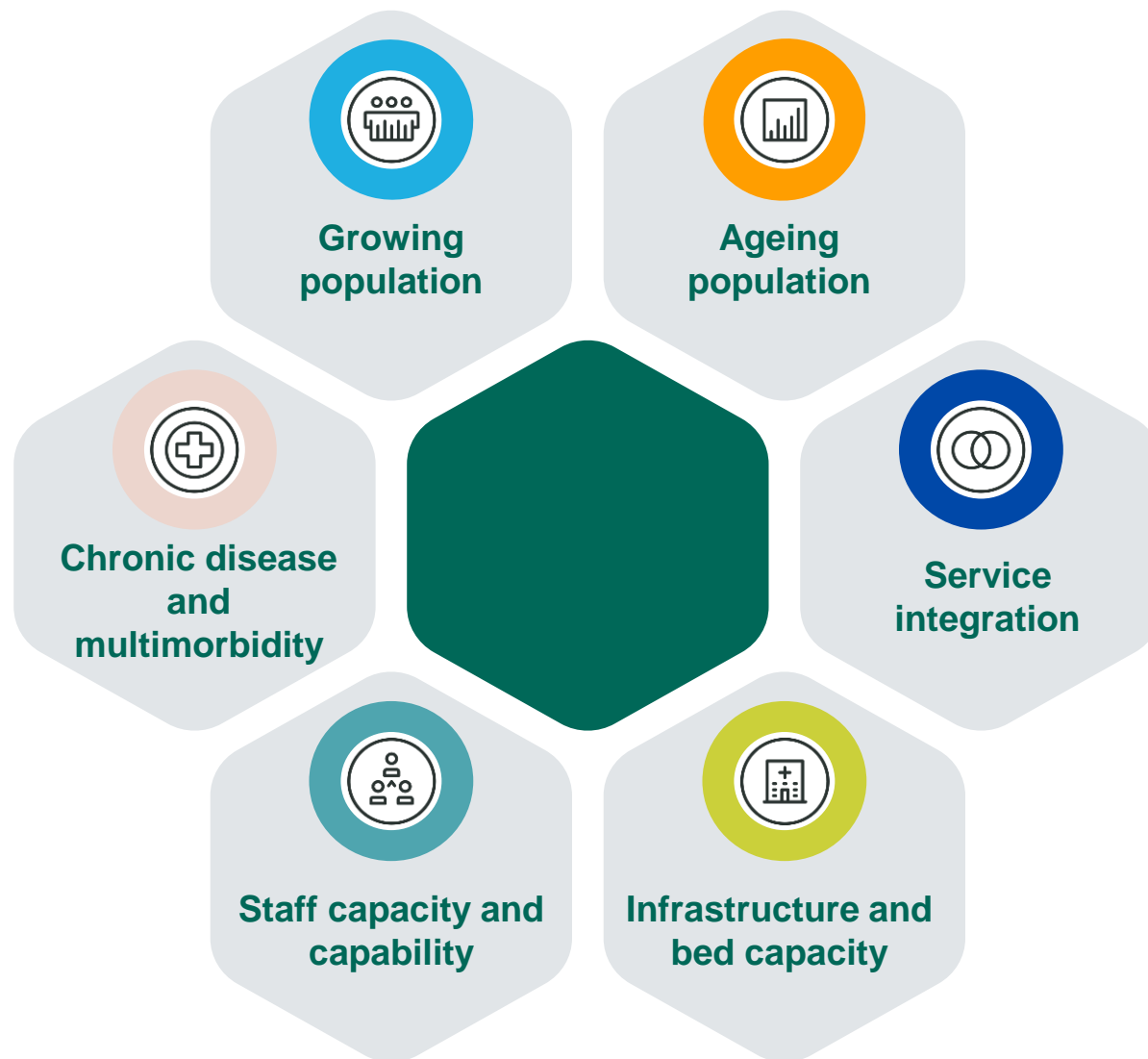
The HSE Patient Flow Academy



# Healthcare demand and delivery in Ireland



# Healthcare demand and delivery in Ireland





# Bed capacity in Ireland



2.9

Hospital beds per  
1,000 population in  
Ireland



4.3

OECD hospital bed  
average per 1,000  
population

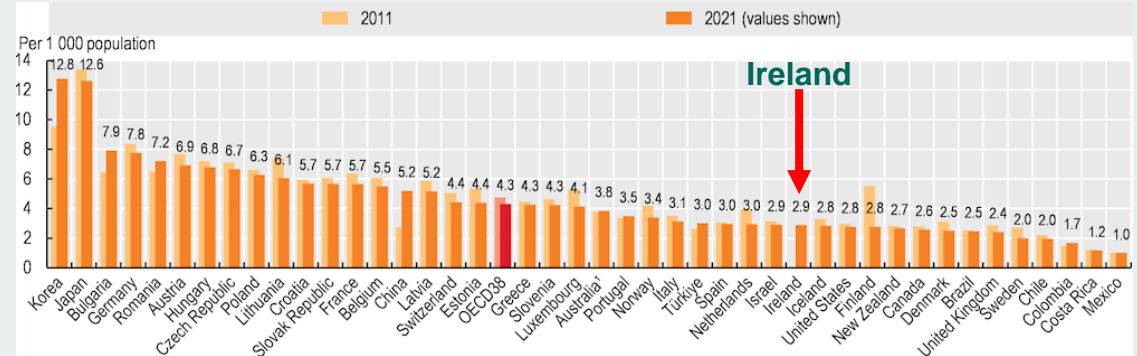


90%

Occupancy rate of curative acute  
care beds in Ireland  
(OECD average is 70%)

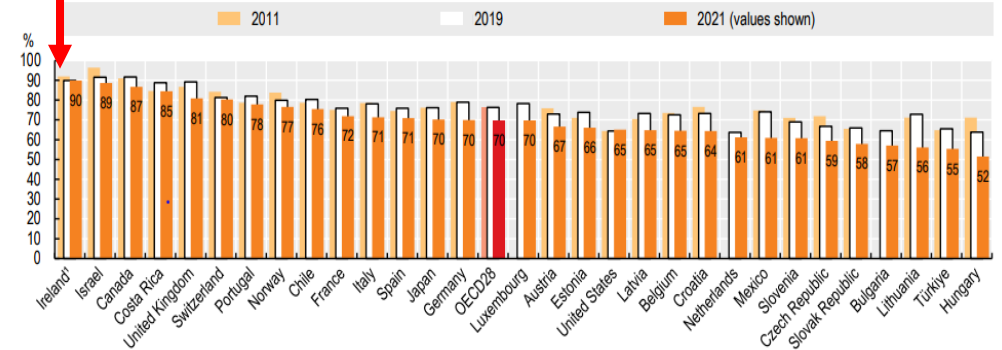
OECD Health Statistics 2023

## Hospital Beds



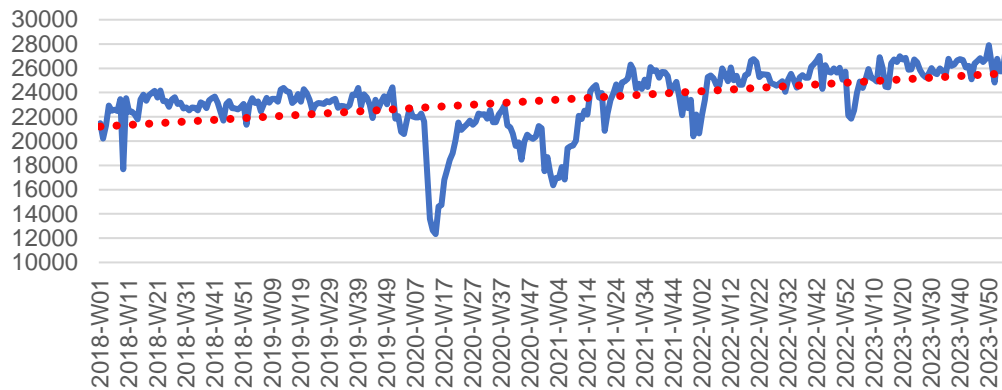
## Bed Occupancy

Ireland

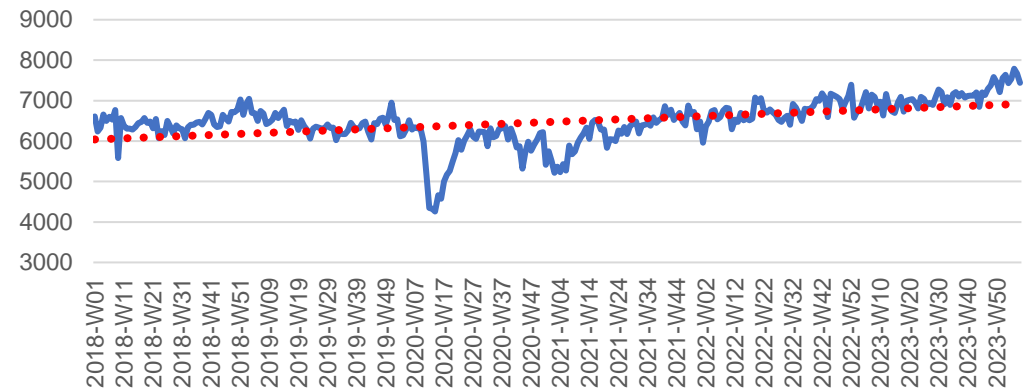


# HE UEC demand is increasing

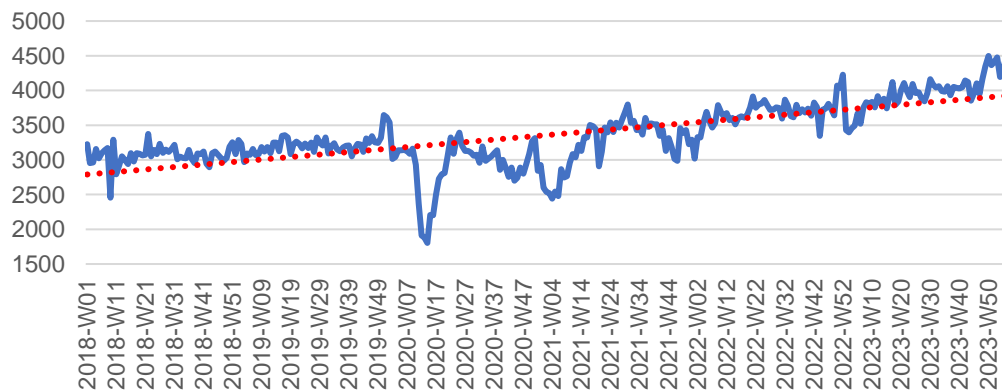
**National Weekly ED attendances - ALL ages  
2018 to current**



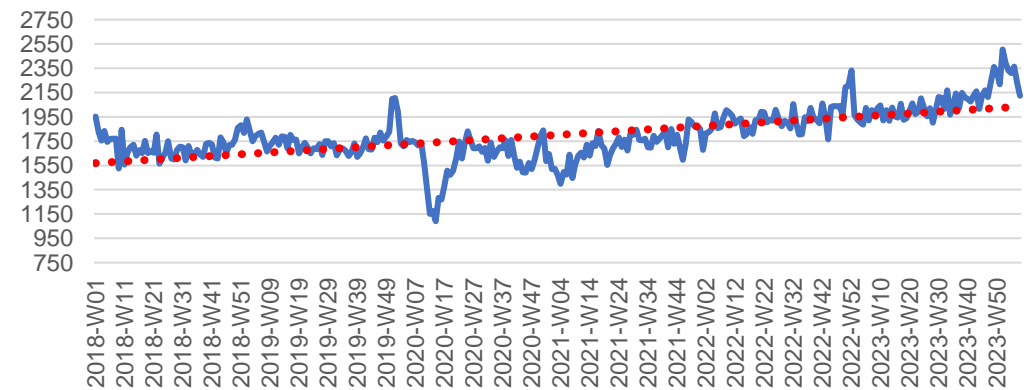
**National Weekly ED admissions - ALL ages  
2018 to current**



**National Weekly ED attendances - 75 years+  
2018 to Current**



**National Weekly ED admissions - 75 years+  
2018 to Current**







# UEC activity and performance YTD (week ending April 7<sup>th</sup>)

## Activity

**+11.7%**

in attendances in 2024 vs the same  
period last year

**+10.4%**

in admissions in 2024 vs the same  
period last year

## KPI Performance

**-11.5%**

in 8am Trolleys in 2024 vs  
the same period last year

**-12.9%**

in 24hr PET Breaches in 2024  
vs the same period last year

**-34.0%**

in DTOC patients in 2024  
vs the same period last  
year

**-18.8%**

in >75yrs 24hr PET Breaches  
in 2024 vs the same period  
last year

**Despite increasing activity demands, performance across a range of metrics has improved.**



# UEC activity and performance (75 years+) YTD

(week ending April 7<sup>th</sup>)



**+16.8%**

in attendances (75 years+) in 2024 vs the same period last year



**+15.4%**

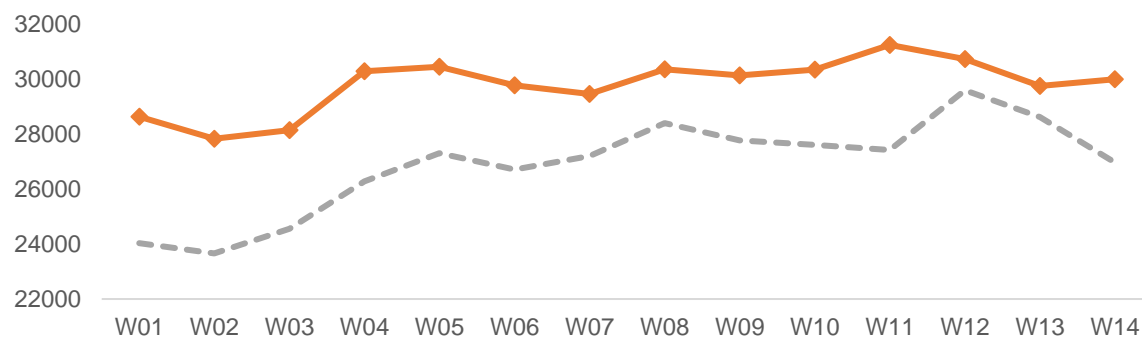
in admissions (75 years+) in 2024 vs the same period last year



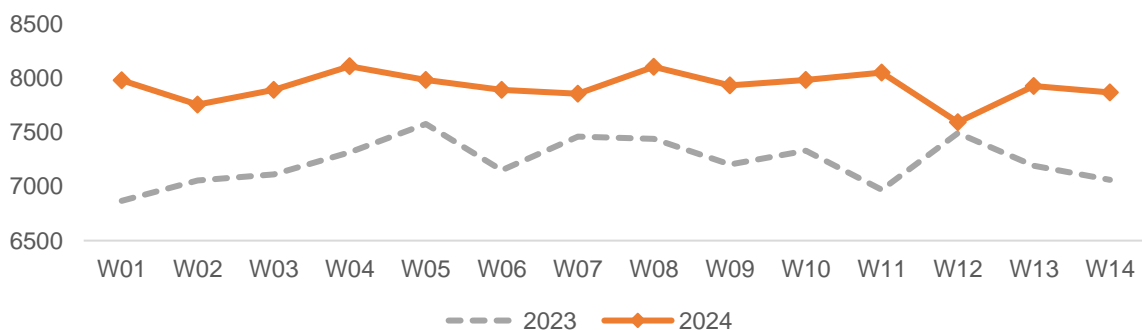
**5,059**

24hr 75+ Years PET Breaches YTD

Attendances 75 years+



Admissions 75 years+





# The challenging delivery context in Ireland

We know that patients are experiencing delays in accessing services and long waits, despite the continuing efforts of our hardworking staff.


 Irish Examiner

## Emergency departments under 'significant pressure' as HSE issues plea

Emergency departments under 'significant pressure' as HSE issues plea ... The HSE has said that a number of emergency departments are under "...

23 Jan 2024




 The Irish Independent

## More than 600 patients fit for discharge cannot leave hospitals as scores of others wait for a bed

Hundreds of patients who are fit for discharge cannot leave hospital as scores of others on trolleys in emergency departments endure...

20 Dec 2022



 The Irish Sun

## Urgent HSE warning as over 491k patients on waiting lists with pressures causing knock-on effects...

Urgent HSE warning as over 491k patients on waiting lists with pressures causing knock-on effects.

14 Aug 2023



 RTE.ie

## Ambulance response times increase annually since 2019

New figures obtained from the National Ambulance Service show that the average response time by ambulances for Category 1 life-threatening...

21 Apr 2023





# The need to share learning

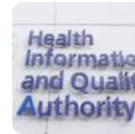
Despite the challenging service delivery context and increasing service demands, staff and services continue to innovate.

 The Journal

## HIQA praises EDs in Beaumont Hospital and University Hospital Waterford after recent inspections

THE HEALTH INFORMATION and Quality Authority (HIQA) has praised the "good management" of Emergency Departments that were exhibited at...

5 Sept 2023



 Irish Independent

## Number of patients on hospital waiting lists for longer than 12 weeks drops by 57000, says Health Minister Stephen ...

A cut in delays faced by patients on public hospital waiting lists last year means 57000 fewer are in the queue longer than 10 to 12 weeks,...

8 Jan 2024



 RTE.ie

## New service cuts eye procedure waiting lists

The HSE has said a new system for treating patients with eye conditions has cut waiting lists, reduced visits to hospital and allowed care...

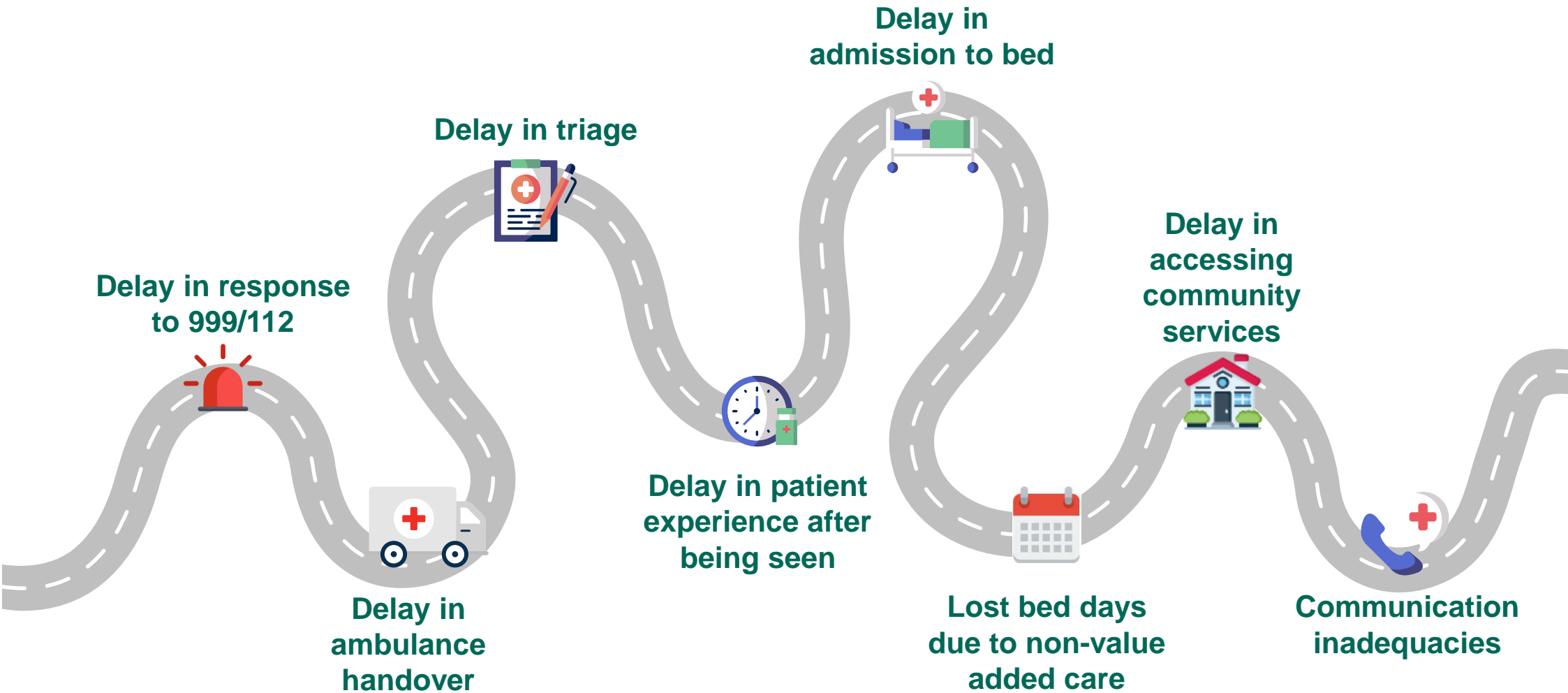
8 Aug 2023



## How can we share what works?



# Problem statements





# An overview of patient flow



## Patient flow - Why it matters

*“The number one reason to improve the movement of patients through health care settings is because “bad flow” is disrespectful to patients and families.*

*Our inability to more effectively design and manage processes also wears on clinicians and staff – decreasing their efficiency and productivity, undermining joy in work, contributing to burnout, and decreasing job satisfaction. Both our patients and families bear most of the burden.*

*We make patients wait in the wrong places. We make them seek care in the wrong units. If you were to walk through most hospitals today, you will find multiple problems with patient flow.”*

Bisognano, 2016  
(IHI President Emerita and Senior Fellow)



# What is patient flow?

## Patient flow

is the ability of healthcare systems to manage patients effectively and with minimal delays as they move through stages of care



## Poor flow

Imbalance between demand and capacity to provide timely and high-quality care

Crowded and unsafe environment

Non-cohorted wards

Boarded assessment units

Poorer clinical outcomes

Increased length of stay

Poor patient/staff experience

Delay in time-sensitive interventions

Higher healthcare costs

Increased morbidity and mortality





# Principles of Patient Flow

Effective communication



Efficient resource management



Streamlined processes



Continuous monitoring and improvement



Integrated collaborative effort





# Current Barriers to Patient Flow

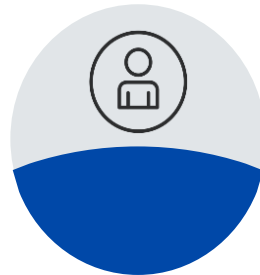
Large patient volumes



Ineffective IT



Discharge planning challenges



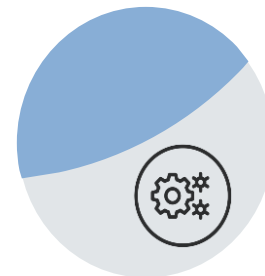
Staff shortages



Inefficient processes



Inadequate communication



Limited resources



# The importance of patient flow



# Patient flow - Why it matters

Cross-sectional retrospective observational study of every ED in England from April 2016 – March 2018

There is a **dose-response effect** to delays in hospital admission and mortality.

Between 5 and 12 hours, delays cause a predictable dose-response effect.

For every 82 admitted patients, whose time to inpatient bed transfer is delayed beyond 6 to 8 hours from time of arrival at the ED, there is one extra death.



## Association between delays to patient admission from the emergency department and all-cause 30-day mortality

Simon Jones <sup>1,2</sup> Chris Moulton <sup>3,4</sup> Simon Swift <sup>2,5</sup> Paul Molyneux <sup>2</sup> Steve Black <sup>6</sup> Neil Mason <sup>2</sup> Richard Oakley <sup>2</sup> Clifford Mann <sup>3,7</sup>

Handling editor Simon Carley

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<sup>2</sup>Methods Analytics, London, UK  
<sup>3</sup>The "Getting It Right First Time" programme, NHS Improvement, London, UK

<sup>4</sup>Emergency Department, Royal Bolton Hospital, Bolton, UK  
<sup>5</sup>Index Unit, University of Exeter Business School, Exeter, UK

<sup>6</sup>Black Box Data Science Ltd, Biggleswade, UK

<sup>7</sup>Emergency Department, Musgrave Park Hospital, Tauran, UK

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Clifford Mann deceased

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**To cite:** Jones S, Moulton C, Swift S, et al. *Emerg Med J* 2022;**39**:168–173.

### ABSTRACT

**Background** Delays to timely admission from emergency departments (EDs) are known to harm patients.

**Objective** To assess and quantify the increased risk of death resulting from delays to inpatient admission from EDs, using Hospital Episode Statistics and Office of National Statistics data in England.

**Methods** A cross-sectional, retrospective observational study was carried out of patients admitted from every type 1 (major) ED in England between April 2016 and March 2018. The primary outcome was death from all causes within 30 days of admission. Observed mortality was compared with expected mortality, as calculated using a logistic regression model to adjust for sex, age, deprivation, comorbidities, hour of day, month, previous ED attendances/emergency admissions and crowding in the department at the time of the attendance.

**Results** Between April 2016 and March 2018, 26 738 514 people attended an ED, with 7 472 480 patients admitted relating to 5 249 891 individual patients, who constituted the study's dataset. A total of 433 962 deaths occurred within 30 days. The overall crude 30-day mortality rate was 8.71% (95% CI 8.69% to 8.74%). A statistically significant linear increase in mortality was found from 5 hours after time of arrival at the ED up to 12 hours (when accurate data collection ceased) ( $p < 0.001$ ). The greatest change in the 30-day standardised mortality ratio was an 8% increase, occurring in the patient cohort that waited in the ED for more than 6 to 8 hours from the time of arrival.

**Conclusions** Delays to hospital inpatient admission for patients in excess of 5 hours from time of arrival at the ED are associated with an increase in all-cause 30-day mortality. Between 5 and 12 hours, delays cause a predictable dose-response effect. For every 82 admitted patients whose time to inpatient bed transfer is delayed beyond 6 to 8 hours from time of arrival at the ED, there is one extra death.

### INTRODUCTION

In England, by the end of the 20th century, demographic changes and reduced numbers of acute hospital beds had resulted in crowded emergency departments (EDs) and long delays for patients. In consequence, the NHS 4-hour operational standard was introduced in 2004 and shortly thereafter, the other nations of the UK and several other countries, such as Canada and Australia, introduced similar standards for ED waiting times.<sup>1–4</sup> (The 4-hour

### Key messages

#### What is already known on this subject

- Small studies from Canada and Australia have indicated that there is an increased mortality rate among patients who experience delays in admission to an inpatient bed from the emergency department (ED).
- Counterfactual modelling has shown reduced patient mortality as a result of the NHS 4-hour operational standard. The NHS Benchmarking Network found a coefficient of determination ( $R^2$  value) of 0.07 between time greater than 4 hours in the ED and a hospital's Summary Hospital-level Mortality Indicator.

#### What this study adds

- This study of over five million NHS patients shows an increase in all-cause 30-day mortality that is independently associated with delays to hospital admission from the ED rather than with crowding alone.
- The standardised mortality rate starts to rise from 5 hours after the patient's time of arrival at the ED.
- The increasing effect of long stays in the ED before inpatient admission can be measured and represented as a number needed to harm metric: after 6–8 hours, there is one extra death for every 82 patients delayed.

standard is a binary time threshold for discharge, admission or transfer; it starts when the patient arrives at the ED, and time in the ED beyond 4 hours is a 'breach' of the 'target'.)

For more than a decade, the 4-hour standard served both patients and the NHS well but, during the past few years, further increases in the demand for urgent and emergency care have exacerbated long waits for hospital admission.<sup>5</sup> By 2019–2020, over 3.2% of all ED patients waited in the ED for more than 12 hours from their time of arrival.<sup>6</sup> Long ED delays are most often caused by 'exit block' due to a lack of available inpatient beds. This was demonstrated using data collected from all English EDs over a 90-day period by an NHS economics team. They showed that higher inpatient bed occupancy was correlated with longer ED waiting times, but with a non-linear association.<sup>7</sup>





# Patient flow - Why it matters

Prospective cohort study to assess if **older adults ( $\geq 75$  years) who spend a night in the ED waiting for admission** to a hospital ward are at increased risk of in-hospital mortality

Two groups compared: those who stayed in the ED from midnight until 8:00 am (ED group) and those who were admitted to a ward before midnight (ward group).

Patients who spent the night in the ED had a **higher in-hospital mortality rate** of 15.7% vs 11.1%.

Patients who spent the night in the ED had a **higher median length of stay** of 9 versus 8 days.

Research

JAMA Internal Medicine | Original Investigation

## Overnight Stay in the Emergency Department and Mortality in Older Patients

Melanie Roussel, MD; Dorian Teissandier, MD; Youri Yordanov, MD, PhD; Frederic Balen, MD; Marc Noizet, MD; Karim Tazarourte, MD, PhD; Ben Bloom, MD, PhD; Pierre Catoire, MD; Laurence Berard, MD; Marine Cachanado, MSc; Tabassome Simon, MD, PhD; Said Laribi, MD, PhD; Yonathan Freund, MD, PhD; for the FHU IMPEC-IRU SFMU Collaborators

**IMPORTANCE** Patients in the emergency department (ED) who are waiting for hospital admission on a wheeled cot may be subject to harm. However, mortality and morbidity among older patients who spend the night in the ED while waiting for a bed in a medical ward are unknown.

**OBJECTIVE** To assess whether older adults who spend a night in the ED waiting for admission to a hospital ward are at increased risk of in-hospital mortality.

**DESIGN, SETTINGS, AND PARTICIPANTS** This was a prospective cohort study of older patients ( $\geq 75$  years) who visited the ED and were admitted to the hospital on December 12 to 14, 2022, at 97 EDs across France. Two groups were defined and compared: those who stayed in the ED from midnight until 8:00 AM (ED group) and those who were admitted to a ward before midnight (ward group).

**MAIN OUTCOMES AND MEASURES** The primary end point was in-hospital mortality, truncated at 30 days. Secondary outcomes included in-hospital adverse events (ie, falls, infection, bleeding, myocardial infarction, stroke, thrombosis, bedsores, and dysnatremia) and hospital length of stay. A generalized linear-regression mixed model was used to compare end points between groups.

**RESULTS** The total sample comprised 1598 patients (median [IQR] age, 86 [80-90] years; 880 [55%] female and 718 [45%] male), with 707 (44%) in the ED group and 891 (56%) in the ward group. Patients who spent the night in the ED had a higher in-hospital mortality rate of 15.7% vs 11.1% (adjusted risk ratio [aRR], 1.39; 95% CI, 1.07-1.81). They also had a higher risk of adverse events compared with the ward group (aRR, 1.24; 95% CI, 1.04-1.49) and increased median length of stay (9 vs 8 days; rate ratio, 1.20; 95% CI, 1.11-1.31). In a prespecified subgroup analysis of patients who required assistance with the activities of daily living, spending the night in the ED was associated with a higher in-hospital mortality rate (aRR, 1.81; 95% CI, 1.25-2.61).

[Invited Commentary  
page 1385](#)

[Supplemental content](#)



# Patient flow - Why it matters

**We know that extended lengths of stay for patients can be associated with direct and indirect inpatient complications**



Reduced mobility



Cognitive decline



Falls



Functional decline



Depression



Infections



Hospital readmission



Morbidity and Mortality



## Patient flow - Why it matters

- A high proportion of the patients that we care for are **OLDER PEOPLE**.
- The “Last 1,000 Days” campaign in the NHS, led by Prof. Brian Dolan, recognises that **TIME** is the most important currency in healthcare.
- Patient time should be considered the **KEY METRIC OF PERFORMANCE AND QUALITY** and is best measured from the perspective of the person.

How many of your last 1,000 days would you chose to spend in hospital?



Where would you want to spend your time?



How can we maximise time, minimise waste time and prioritise patients' time?

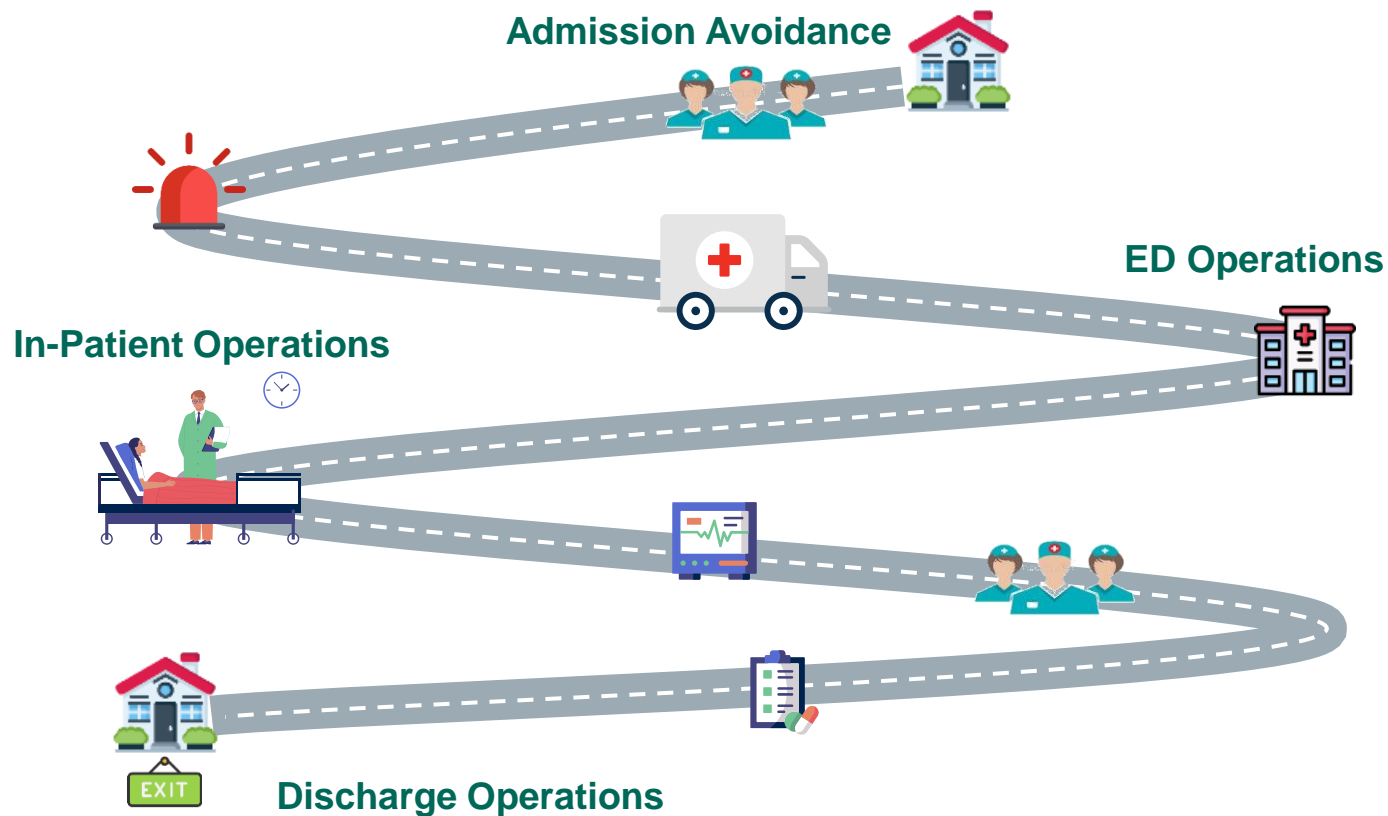






# The need for a whole system approach

Effective patient flow is essential to ensure all patients have the right access, to the **right care**, at the **right time** and in the **right place** with minimal waiting times.



The interdependencies along the patient journey requires a **whole system approach** to improving patient flow.





Improving patient flow



# International Experience of Patient Flow Academies

*Patient flow academies have been established in other jurisdictions including the UK, the USA and Australia:*



## Flow Coaching Academy, NHS UK

Flow Coaching Academies (FCA) focuses on teaching improvement science and coaching skills required to achieve sustained improvement.



## Getting It Right First Time Programme, NHS UK

Getting It Right First Time (GIRFT) is a national programme in the NHS developed to improve patient care and deliver efficiencies by removing unwarranted variation.



## Hospital Flow Professional Development Program, IHI, USA

The IHI programme guides teams through detailed reviews of 'high-leverage strategies' to improve patient flow through hospitals. The IHI programme focuses on learning from the success of others.



## Patient Flow Collaborative, Safer Care Victoria, Australia

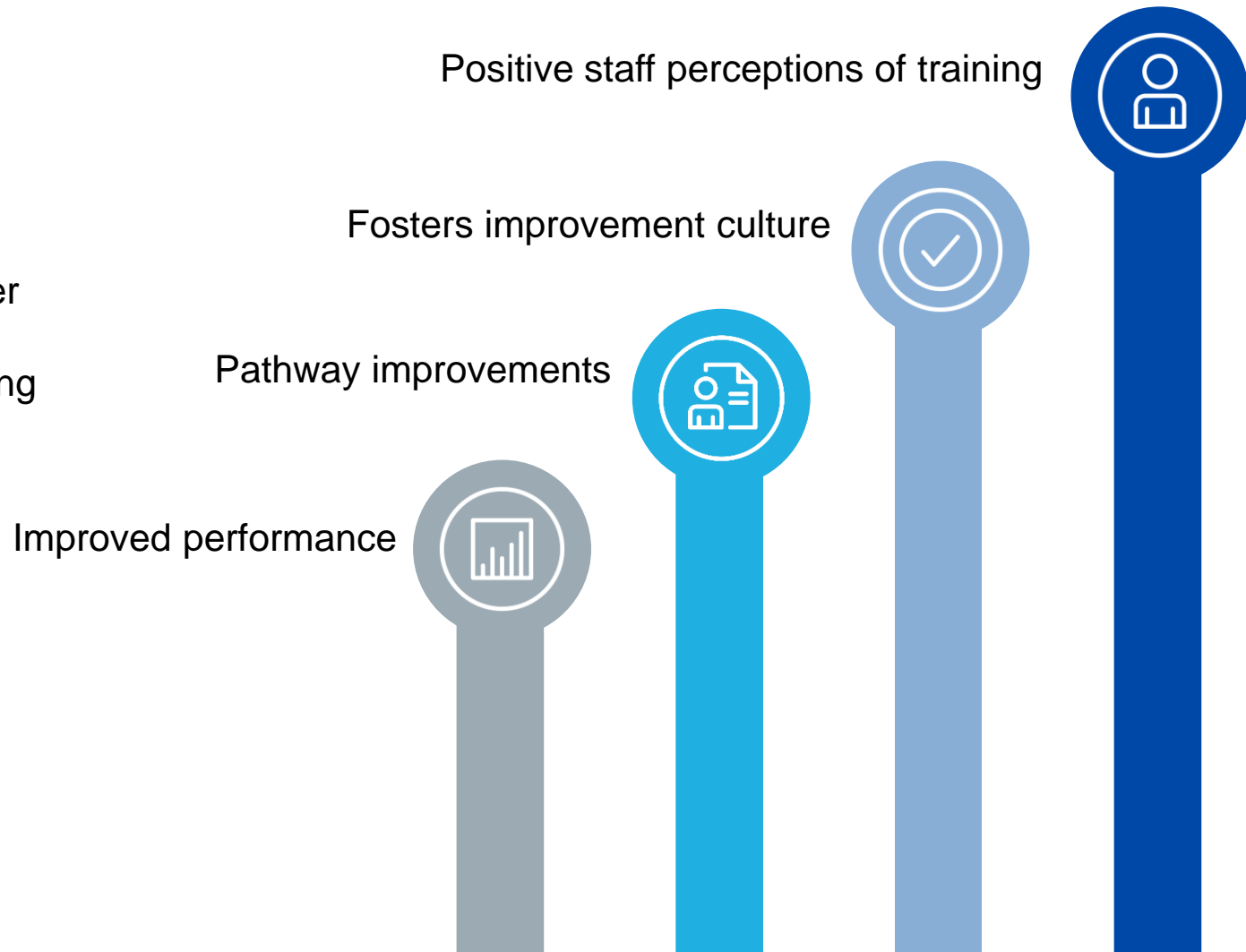
Safer Care Victoria worked with 15 health services through a Patient Flow Collaborative. The services collaborated with coaches to provide mentoring and capability development.



# International Experience of Patient Flow Academies

## Evidence of Impact

Evaluations of patient flow academies in other jurisdictions suggest evidence of the following benefits:





WHITE PAPER



# Achieving Hospital-wide Patient Flow

The Right Care, in the Right Place, at the Right Time



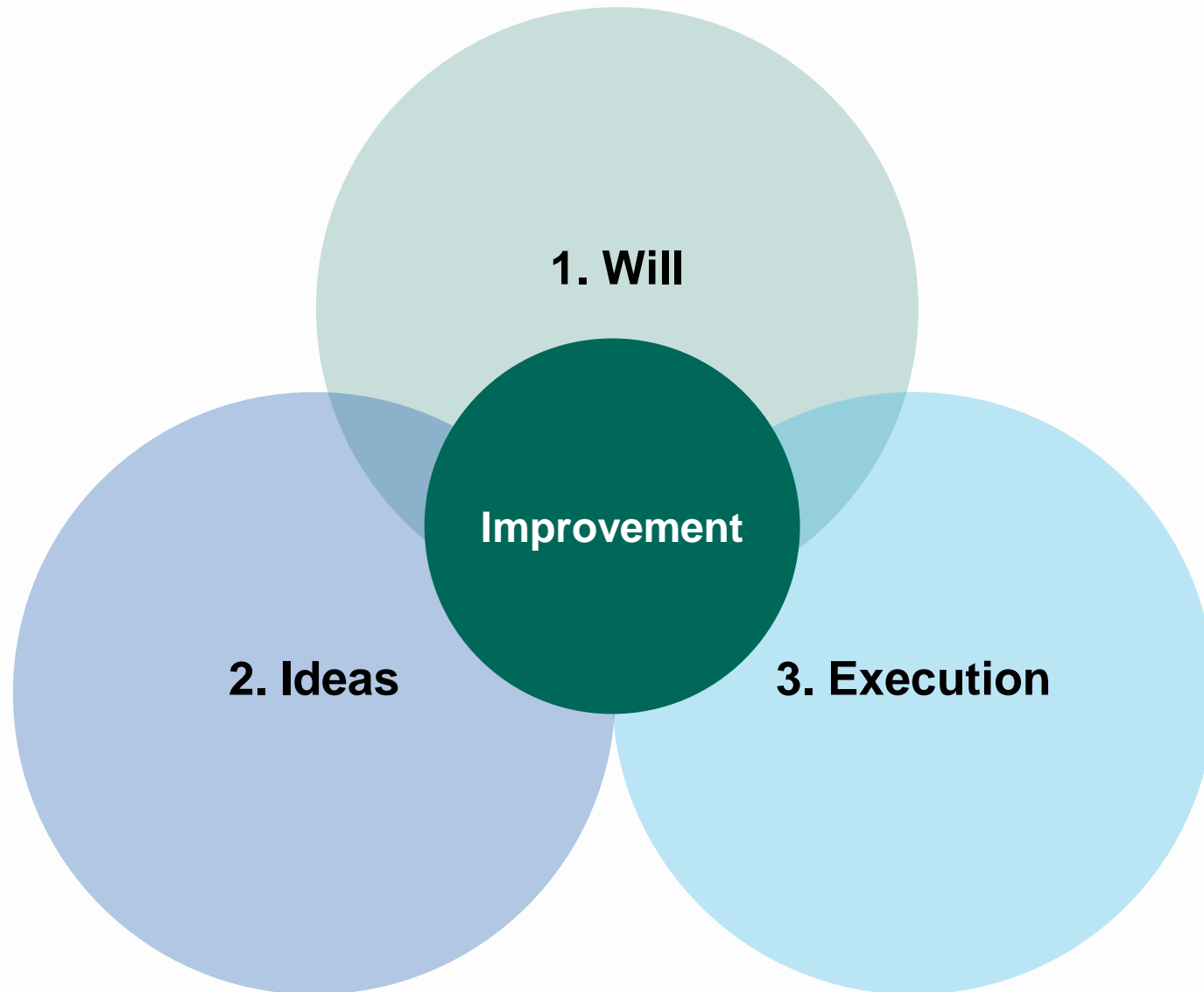
AN IHI RESOURCE

20 University Road, Cambridge, MA 02138 • [ihi.org](http://ihi.org)

**How to Cite This Paper:** Rutherford PA, Provost LP, Kotagal UR, Luther K, Anderson A. *Achieving Hospital-wide Patient Flow*. IHI White Paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2017. (Available at [www.ihi.org](http://www.ihi.org))



# System level improvement requires will, ideas and execution





# The HSE Patient Flow Academy



# HSE Patient Flow Academy

The HSE Patient Flow Academy will improve patient flow by supporting health and social care staff to identify, define and improve processes, pathways and systems for the safe, timely and effective delivery of care driven by a culture of continuous improvement. This will be achieved through the development and delivery of supports and resources targeting the following workstreams:



## Leadership development

To develop competent and capable leaders who are able to drive, achieve and sustain improvements.



## Staff engagement and training

To develop staff awareness, knowledge, skills and attitudes regarding patient flow as part of a whole system approach.



## Integrated working and knowledge transfer

To develop communities of practice which facilitates integrated working, sharing of best practice and knowledge transfer.



## Innovation and transformation supports

To provide a suite of best practice resources and toolkits alongside practical supports to enable transformation.



## Monitoring and evaluation

To monitor and evaluate the impact of the Patient Flow Academy including national and local patient flow improvement initiatives to support evidence-based practice.



# Principles of Patient Flow Academy

The HSE Patient Flow Academy is designed based on the six guiding principles below:

Patient at the centre



Patient flow is everyone's responsibility



Connect top down and bottom-up approaches to support continuous improvement



Collaborate through an integrated whole system approach



Building staff capability through empowerment and engagement



Supporting and evaluating innovations







# Patient Flow Academy Structure: National Focus

*The HSE Patient Flow Academy will develop materials, guidelines and tools to support education and knowledge transfer for tailored local improvement actions:*

## 01 Training and educational materials

## 02 Community Platform/Hub


## 03 Best Practice Guidelines and Tools







# Patient Flow Academy: Guidelines and Toolkits

Integrated operational hubs	Integrated operational grip	Demand and capacity analysis	Effective ward processes SAFER Huddles Red2Green
Escalation principles	Patient flow data and dashboards	Discharge to Assess (D2A) and Trusted Assessment	Ambulance handovers
Clinical Decision Units	Emergency Departments	Acute Medical Unit and other assessment services	Ambulatory emergency care
Frailty	Optimal integrated discharge processes	Primary Care/ECC streaming	Mental Health



**HSE Patient Flow Academy: Best Practice Guidelines and Toolkits**



Application locally to support improvement efforts



# Initial six-month programme of work

## Our National Approach

Develop  
resources

Share best  
practice



## Patient Flow Academy Working Group

Established to support and provide advice to the implementation of the initial programme of work

WEBINARS



BEST PRACTICE  
GUIDELINES



EXEMPLAR SITE  
VIDEOS



## Focus Areas 2024

Integrated  
Operations

Demand  
and  
Capacity  
Analysis

Ward  
Processes

Integrated  
Discharge  
Processes

Older  
Persons  
and Frailty

Length of  
Stay  
Reduction



# Initial six-month programme of work

## Upcoming webinar Integrated Operations

More information to follow



## Community Platform

A Patient Flow Academy Microsoft Teams channel will be launched to facilitate discussion and knowledge sharing across regions for those with an interest in patient flow.



## Future Supports



Educational webinars



Local innovation



Community of practice

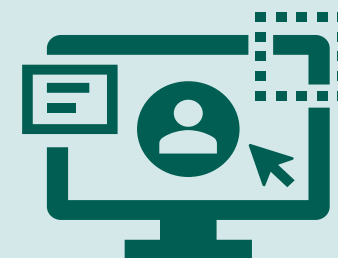


Events

## Want to get involved?

If you are interested in upcoming HSE Patient Flow Academy events and joining our national MS Teams community channel please email:

[ncagl.acutehospitals@hse.ie](mailto:ncagl.acutehospitals@hse.ie)



## Webpage

<https://www.hse.ie/eng/about/who/national-services/patient-flow-academy/>



**We have tremendous assets**





**You don't get excellence from pieces, you get excellence from connections**





**For more information:**

<https://www.hse.ie/eng/about/who/national-services/patient-flow-academy/>

**End**