

Critical Intelligence Unit

Evidence brief

Time-based targets for ED stays

18 June 2024

Evidence check questions

What are the time-based targets for length of stay in emergency departments (ED) across major health systems and what is the impact of these targets on outcomes?

How do they compare to the new targets in NSW?

NSW hospital access targets

≥80% of discharged patients should have an ED length of stay no more than 4 hours

≥60% of patients admitted to an ED Short Stay Unit should stay no longer than 4 hours

≥80% of admitted patients should have an ED length of stay no greater than 6 hours

≥95% of patients should have an ED length of stay no greater than 12 hours.

Summary

- In Australia, the time-based access targets for ED stays varied across jurisdictions. NSW and Victoria have similar targets set at 81% for all patients presenting to a public hospital ED to be discharged home, admitted to inpatient or referred to other hospitals within four hours (Table 1).^{1,2} Queensland does not appear to have a specifically defined target for ED length of stay and states, the higher the percentage of patients admitted to hospital or physically left ED within four hours of arrival at ED, the better.³ In South Australia, there are specified targets for each corresponding performance score as specified in the performance framework. For example, for a performance score of 5 (range 5-0), the length of stay target is set at ≥90% within four hours for non-admitted patients.⁴ Both Western Australia and Tasmania have targets that align with Hospital Access Targets developed by the Australasian College for Emergency Medicine.⁵⁻⁷
- The United Kingdom, Scotland, Wales and Northern Ireland all have a target of 95% for patients to be admitted, transferred or discharged within four hours of their arrival.⁸ England introduced a minimum target of 76% within four hours in 2022 following increased pressure on the National Health Service (NHS). The target is anticipated to be increased to 78% in 2024/25. In 2018, NHS England reviewed the standard and proposed replacing the four-hour target with a collection of standards.⁹
- In Canada, the National Ambulatory Care Reporting System uses the 90th percentile ED length of stay to represent the maximum length of stay for nine out of ten patients. According to the Canadian Institute for Health Information latest report, from April 2022 to March 2023:

- For those admitted to the hospital, nine out of ten ED visits were completed within 49.0 hours; for those who were discharged, it was 7.6 hours.¹⁰
- Alberta, Canada does not appear to have a specific target for 90th percentile ED length of stay; however, states that the lower the number the better.¹¹ No publicly available English language information on ED length of stay targets for British Columbia or Quebec was retrieved from searches on government websites. For Ontario, an archived source from 2009 mentions targets for shorter emergency room times (i.e., 90% within four hours for patients with minor or uncomplicated conditions); however, no recent reports on targets were retrieved.¹² No searches for other provinces or territories were undertaken.
- Literature on assessing the impact of time-based ED targets on patient, clinician and system outcomes comprises mainly observational studies with varying degrees of quality. A 2021 systematic review on time-based targets for ED length of stay concluded that compared to pre-introduction, there is evidence to demonstrate the benefits of introducing targets in reducing mortality, ED crowding, time to assessment and admission.¹³ Similarly, an earlier systematic review (2018) reported improved ED length of stay and access after the introduction of time-based targets in ED, but also some unintended consequences such as performance data manipulation or increased pressure on staff.¹⁴
- A systematic review of qualitative evidence suggested that ED clinicians perceived the time-based targets as having both positive and negative impacts on quality of care.¹⁵
 - Positive perceptions were more likely when health services adopted a whole-of-hospital response and targets were used as a lever to improve patient flow and timely care.¹⁵
 - Negative perceptions were more likely when meeting the target was prioritised over patient care, inadequate engagement or resources to implement or maintain targets.¹⁵
- An analysis based on administrative data from NHS England from 2011 to 2013 found that the imposition of a four-hour target reduced the mean wait time in ED, increased admissions, marginally increased costs (due to an increase in inpatient admissions), but significantly reduced mortality. This paper concluded that the four-hour target is a cost-effective intervention for reducing mortality.¹⁶
- Analysis from NHS Scotland involving more than 5.5 million attendance data found that older age (85 or older) was associated with a higher probability of breaching waiting time targets in EDs.¹⁷ An earlier study from NHS England also suggested that old age, presenting at night or on Mondays, receiving multiple investigations and not being self-referred were all associated with a higher likelihood of breaching the ED four-hour target.¹⁸
- In New Zealand, a mixed-method study identified gaming the ED target behaviours across four sites, which included 'clock-stopping' and moving patients to short stay units or observation beds.¹⁹ Independent verification of ED length of stay data and monitoring and minimising the means or motivations to game were suggested as potential solutions.¹⁹
- Evidence from pre-post studies suggests that time-based targets for ED length of stay are associated with benefits including reductions in mortality, ED crowding, time to assessment and admission.^{16, 20}
- The evidence base informing the initial development of the Australasian College for Emergency Medicine Hospital Access Targets is not well described. Published correspondence notes that while

there is a need for performance indicators, there is a greater need for these to be clinically relevant.^{20, 21}

Table 1. Time-based targets for ED stays in select Australian and international jurisdictions

Jurisdiction	Discharged (non-admitted unless specified)	Admitted to inpatient	Other
NSW	81% within 4h (includes discharge home, admitted to hospital or referred to another hospital)	50% within 4h	
Victoria	81% within 4h (includes discharge home, admitted to hospital or referred to another hospital)		Stayed for more than 24 hours: 0%
South Australia	<u>Metro target (target for a highest performance score)</u> ≥90% within 4h <u>Regional target</u> ≥90% within 4h (non-admitted patients, includes time to physical departure from ED, transferred to Extended Emergency Care Unit) <u>Metro target</u> ≥85% within 6h <u>Regional target</u> ≥90% within 6h (includes time to physical departure from ED)	<u>Metro target</u> ≥60% within 4h <u>Regional target</u> ≥90% within 4h	Length of stay greater than 24 hours: 0%
Western Australia	<u>Mental health patients</u> 80% within 4h <u>Non-mental health patients</u> 80% within 4h <u>Combined</u> 80% within 4h	<u>Mental health patients</u> 80% within 6h <u>Non-mental health patients</u> 80% within 6h <u>Combined</u> 80% within 6h	Attendances with a length of episode less than or equal to 12 hours: 100%
Tasmania	≥80% within 4h ≥95% within 8h 100% within 12h	≥60% within 4h ≥90% within 8h 100% within 12h	Admitted to Emergency Medical Unit: 100% within 12h
	≥80% within 4h ≥95% within 8h	≥60% within 4h ≥80% within 6h	Admitted to a short stay unit for observation:

Jurisdiction	Discharged (non-admitted unless specified)	Admitted to inpatient	Other
	100% within 12h	≥90% within 8h 100% within 12h (patients needing to be admitted or transferred)	<ul style="list-style-type: none"> • ≥60% within 4h • ≥90% within 8h • 100% within 12h
New Zealand	95% within 6h (admitted, discharged or transferred)		
NHS England	76% within 4h (includes admitted, transferred or discharged) Plans for further improvements, likely 78% target in 2024/2025		
Scotland	95% within 4h (includes admitted, transferred or discharged)		
Wales	95% within 4h 100% within 12h (includes admitted, transferred or discharged)		
Northern Ireland	95% within 4h 100% within 12h (includes admitted, transferred or discharged)		
Ireland	<u>All patients</u> 70% within 6h 85% within 9h <u>Patients aged 75 or over</u> 95% within 6h 99% within 9h 99% within 24h (includes discharged or admitted)		All attendees at ED who are in ED <24 hours: 97%
South Korea	95% within 24h		

Jurisdiction	Discharged (non-admitted unless specified)	Admitted to inpatient	Other
	(includes admitted, transferred or discharged)		

Methods

PubMed search terms

("emergency medical services"[MeSH Terms] OR "emergency department"[Title/Abstract] OR "ED"[Title] OR "emergency"[Title] OR "A&E"[Title/Abstract]) AND ("target"[Title] OR "performance"[Title] OR "indicator*"[Title] OR "metric*"[Title] OR "benchmark*"[Title]) AND ("length of stay"[Title] OR "time"[Title] OR "hour"[Title]) AND 2018/01/01:2024/12/31[Date - Publication] 91 hits on 19 April 2024

((("emergency medical services"[MeSH Terms] OR "emergency department"[Title/Abstract] OR "ED"[Title] OR "emergency"[Title] OR "A&E"[Title/Abstract]) AND ("target"[Title] OR "performance"[Title] OR "indicator*"[Title] OR "metric*"[Title] OR "benchmark*"[Title] OR "length of stay"[Title])) AND ((systematicreview[Filter]) AND (2018:2024[pdat])) 48 hits on 19 April 2024

Google search terms

Emergency department access target, emergency department length of stay

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