

Unused ('Just-in-Case') Peripheral Intravenous Cannulas in the Emergency Department

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1 Background & methods

The problem

Peripheral intravenous cannulas (pIVCs) are often inserted in the emergency department (ED) 'just in case'. Each unused one adds infection risk, discomfort and cost without benefit.

 **23.5%** of healthcare-associated *S. aureus* bacteraemia was pIVC-related, and 26.5% of these died within 30 days¹

 **Hospital policy:** remove a pIVC with no IV therapy planned within 12 hours²

 **National standard:** the unused pIVC rate is the first quality indicator³

Aim & method

Aim: measure how often ED pIVCs go unused, and who receives them

 9-15 Feb 2026, Northern Hospital Epping ED (~119,000 presentations a year)

 **1,556** eligible adult presentations, **509** (32.7%) had a pIVC

 **Unused:** no IV fluids, drugs or contrast in ED (blood tests alone do not count)

 Retrospective audit (QA 71.2026), 95% CIs and multivariable logistic regression

2 Results

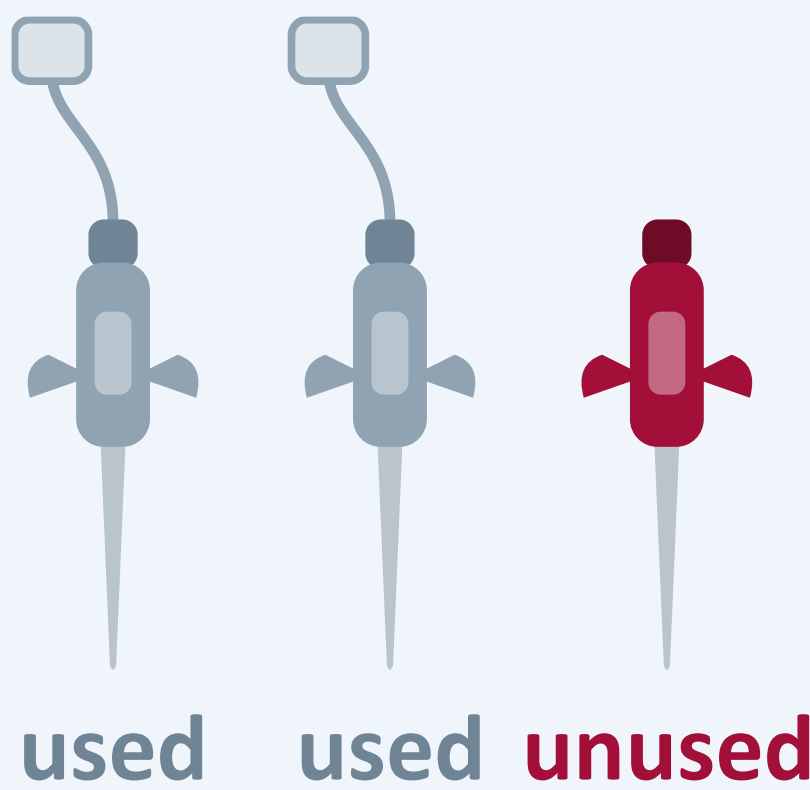
Unused at ED discharge

1 in 3

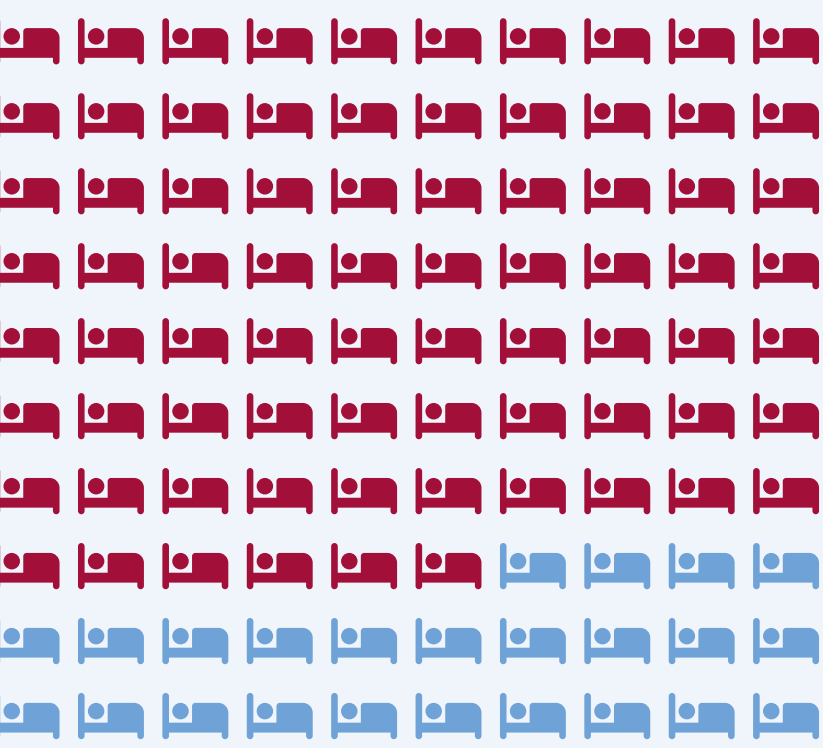
33.2% unused

169 of 509 (95% CI 29.1-37.3)

Similar to the 32.4% median in ED studies⁴



Still unused 72 h after admission



76%

76 of 100 admitted with an unused pIVC had no IV use by 72 h

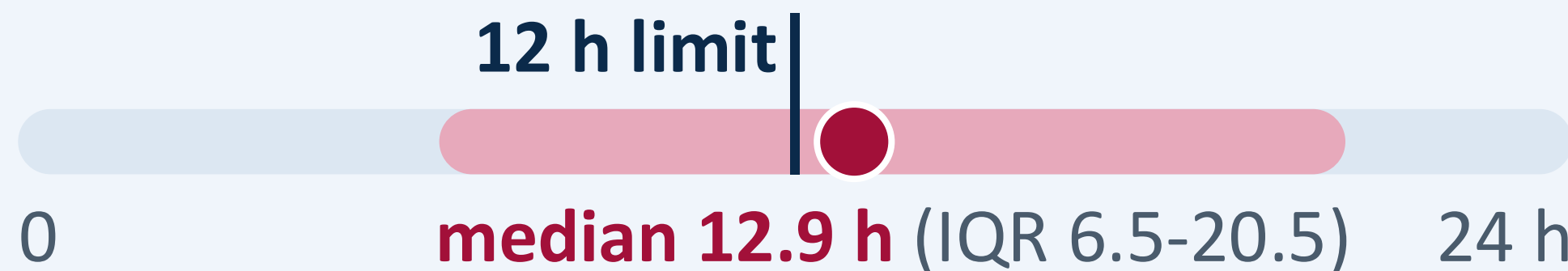
95% CI 67.5-84.5

 unused  used

Left in beyond the 12-hour limit

52%

23 of 44 with a recorded removal time were still in after 12 h



Higher odds of an unused pIVC

	Cardiac complaint	3.50×	2.07-5.92
	Discharged home	3.47×	2.24-5.37
	ATS 4 (vs ATS 2)	3.16×	1.58-6.31
	ATS 3 (vs ATS 2)	2.28×	1.42-3.64

Adjusted odds ratio (95% CI), n=509, all p≤0.001.
ATS, Australasian Triage Scale

What it costs

$$\text{A\$6.48 per pIVC} \times \text{169 unused} = \text{A\$1,095 in one week}$$

≈A\$57,000 a year consumables only

3 Discussion

 **First local baseline** for quality improvement

 Insert only with a clear indication³

 Think twice in **cardiac**, **ATS 3-4** and patients **likely to go home**

 Remove by 12 hours², then re-audit

Limitations: single-site, one-week retrospective audit reliant on documented pIVC use.