

Why Nothing Has Worked: NHS A&E and the Promise That Wasn't Kept

Bootstrap CUSUM applied to 184 monthly observations of NHS A&E four-hour performance (Aug 2010–Feb 2026) finds four stages of structural decline at 99.7% confidence. Not one policy intervention appears as a detectable upward change point in the data.

Data: NHS England Monthly A&E Time Series · N=184 · Loops=5000 · By Syd Stewart, StepChangeAnalysis.com · May 2026

Four findings

Finding 1 — Four stages of structural decline

Bootstrap CUSUM on 184 monthly observations finds four statistically distinct stages at 99.7% confidence. The CUSUM line has been in continuous decline since 2013. Not one policy intervention — the Five Year Forward View, the Long Term Plan, the Clinical Review of Standards, the revised interim targets — appears as a detectable upward change point in the data.

Finding 2 — The constraint is not in A&E;

An average of 13,700 hospital beds every day in early 2025 were occupied by patients clinically ready for discharge but with nowhere to go. Each blocked bed prevents an admission from A&E.; Each blocked admission is a breach counted against A&E; performance — against the department where the problem is visible, not against the social care system where the constraint lies.

Finding 3 — One genuine bright spot

At 95% confidence, Stage 10 (November 2023–present) shows a +2.8% structural improvement at 99.6% confidence — under full demand pressure, with narrowing variation as well as an improved mean. This is the hallmark of genuine process stabilisation, not a COVID-style false positive. The CUSUM has found the signal; the investigation should now ask what caused it.

Finding 4 — The tampering problem

Policy changes take 18–24 months to produce a detectable CUSUM signal. Every new intervention in this dataset was layered onto a system that had not yet had time to respond to the last one. Deming called this tampering — adjusting a system still within its natural variation, making things worse. The CUSUM provides a pre-specified test: wait 18–24 months, then let the data speak.

The four structural stages

Stage	Period	Mean	What happened
1	2010–2015	~95%	At target. Demand rising but capacity still sufficient. The CUSUM of underlying capacity was already declining.
2	2015–2020	~88%	First structural break. Target missed nationally July 2015, never recovered. Austerity cuts to social care from 2010 reached full effect — a 5-year lag.
3	2020–2022	~82%	COVID. Attendances fell 37%. False positive improvement. System emerged from COVID structurally weaker than it entered.
4	2022–2026	~73%	Post-COVID collapse. 13,700 blocked beds daily at peak. Stage 10 (Nov 2023) shows first genuine stabilisation at 99.6% confidence.

★ THE CONSTRAINT: SOCIAL CARE DISCHARGE, NOT A&E;

Goldratt's Theory of Constraints identifies the binding constraint as social care discharge capacity, not A&E; process efficiency. Until the 13,700 daily blocked beds figure falls substantially, improving anything inside A&E; is secondary. The constraint must be identified before it can be addressed. Twenty years of policy have addressed the output metric. The CUSUM shows the result.

★ SIGNAL DETECTION TIMELINE: HOW LONG TO WAIT

With NHS A&E; data (SD \approx 9 percentage points), approximate detection times:

- Large improvement (+5pp): 9–12 months at 95% confidence; 15–18 months at 99.7%
- Moderate improvement (+3pp): 15–20 months at 95%; 24–30 months at 99.7%
- Small improvement (+1pp): may take 3–4 years at 95% confidence

Minimum observation period before evaluating any intervention: 18 months. Abandoning a policy before this point is tampering on common cause variation.

Deming's critique

Deming's central argument in *Out of the Crisis* (1982): you cannot sustainably change a result without changing the process that produces it. Four criticisms apply directly to NHS A&E; policy:

- 1. By what method?** Setting a goal of 95% is useless unless management also provides the beds, social care capacity, and primary care access needed to achieve it.
- 2. Distortion and gaming.** A sharp spike in patients discharged in the final 10 minutes before the four-hour threshold — more than 10% of all patients in that window. The target was met; the system was managed around the measurement point.
- 3. Management by fear.** A&E; staff held accountable for a target determined by social care capacity, bed availability, and GP access — factors entirely outside their control.
- 4. The target moved, not the process.** 98% (2004) → 95% (2010) → 76% interim (2022) → 78% operational (2024). Each time performance fell, the number moved. The process did not change.

★ STAGE 10: THE ONE GENUINE BRIGHT SPOT

From November 2023, performance has held at a mean of 74% — a +2.8% structural improvement at 99.6% confidence, under full demand pressure with record attendances. Crucially, the 3SD control limits have narrowed — both mean and variation improved simultaneously. This is genuine process stabilisation, not a COVID-style false positive (Stage 7 improved the mean but widened variation enormously as attendances collapsed).

Four mechanisms converged around November 2023: virtual ward scaling (50,000 beds), dedicated hospital discharge funding, urgent community response 2-hour teams, and same-day emergency care expansion to 84% of hospitals. All four address the constraint — blocked beds and demand diversion — rather than A&E; itself. The CUSUM found the signal. The Positive Deviance investigation should now ask which mechanism drove it.

References

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Read the full article and download the data

stepchangeanalysis.com/why-nothing-has-worked-nhs-ae-performance.html

The NHS England A&E monthly time series CSV is available for download directly from the article. Upload to StepChangeAnalysis.com to reproduce this analysis in approximately 15 minutes.