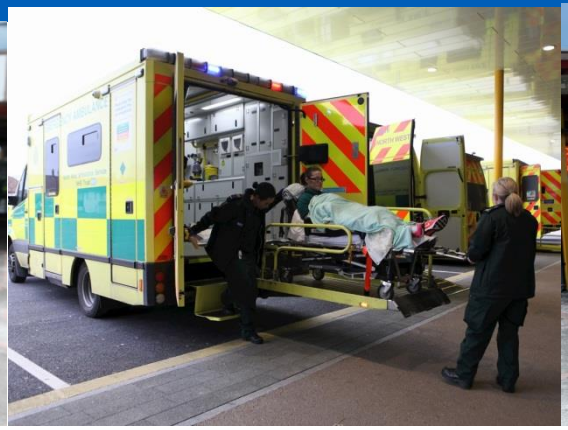
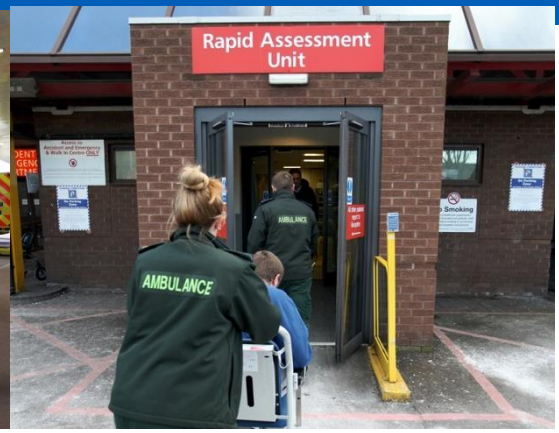
NHS
North West
Ambulance Service
NHS Trust

Tackling the challenge of safe and efficient Hospital Handover: Every Minute Matters

In collaboration with:

Aintree University Hospital NHS Foundation Trust
Wrightington, Wigan and Leigh NHS Foundation Trust
Wirral University Teaching Hospital NHS Foundation Trust
Lancashire Teaching Hospitals NHS Foundation Trust
East Lancashire Hospitals NHS Trust
Blackpool Teaching Hospitals NHS Foundation Trust
NHS Blackpool Clinical Commissioning Group
NHS Improvement
NHS England

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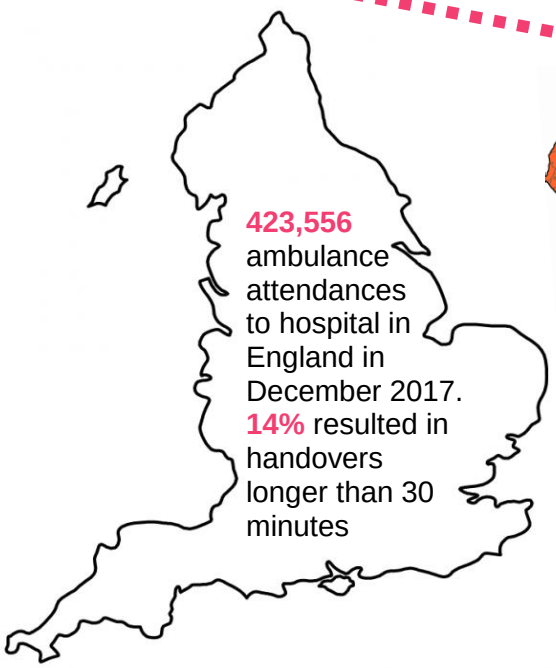
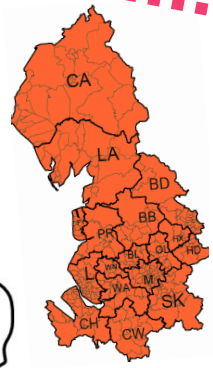
#everyminutematters

Background





Over **700,000** ambulance attendances to hospital in the North West in 2018, with average weekly handover turnaround time of **33** minutes.

In 2018 **95,126** hours were lost in the North West due to handovers that took longer than 30 minutes.

What is Hospital Handover?

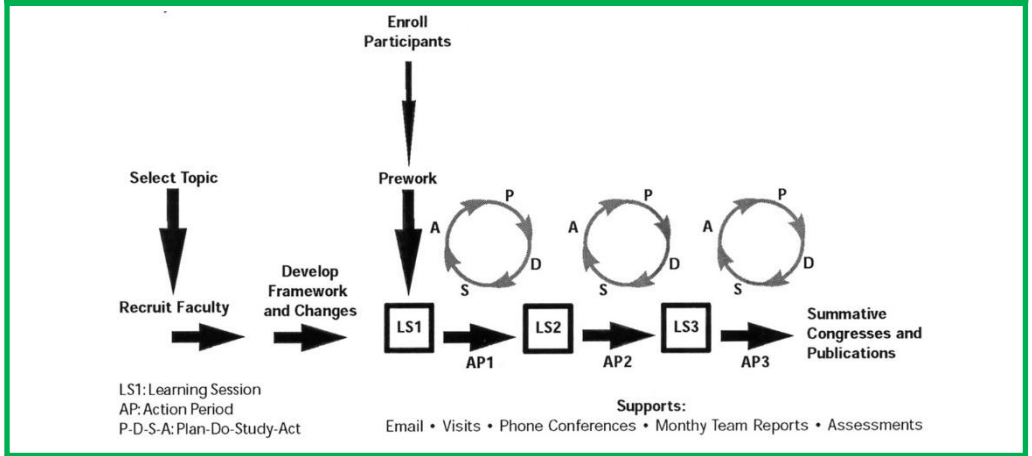
Hospital Handover refers to the transfer of patients attending hospital by ambulance or other emergency vehicle to the care of Emergency Department (ED) clinicians. It involves a 'triage' whereby ambulance staff provide critical patient information to hospital staff, the physical transfer of the patient to hospital equipment, and the release of ambulance staff to attend the next emergency.

Working Together

In October 2018 six hospitals ('Super Six') and local NWAS partners agreed to work together for 90 days to improve the hospital handover process, reducing handover times and lost hours. The collaborative aim was ***to reduce daily average hospital handover time across the six teams to 20 minutes by March 2019***.

Participating Sites	Av Weekly Attendances	No. of Hospital Beds
Aintree University Hospital	621	860
Arrowe Park Hospital	626	900
Blackpool Victoria Hospital	701	767
The Royal Blackburn Teaching Hospital	897	700
Royal Preston Hospital	581	700
Wigan Infirmary	527	513

How does a Collaborative work?
The Breakthrough Series Collaborative Model



Reference: The Institute for Healthcare Improvement, Boston, MA (www.ihi.org)

90 days of improving

Using quality improvement (QI) methodology and supported by organisational and QI leaders, the six sites developed local project teams of key NWAS and hospital staff (consultants, nursing staff, HCAs, hospital managers, porters, ambulance paramedics, ambulance consultants, senior leaders, improvement professionals etc) to create a firm understanding of the local hospital handover process, develop change ideas to improve the process and test and re-test improved and new ways of working. These teams met together for four separate one-day events to share the work they had undertaken locally and to collaboratively develop ideas and tests of change driven by data. This was complemented by regular collaborative data packs and an executive site visit to each of the participating hospitals involving hospital and NWAS senior leaders.

Activity	Timescale
Learning Session 1 - Event	19th October 2018
Action Period 1	
Learning Session 2 – Event	14th November 2018
Action Period 2	
Learning Session 3 – Event	4th December 2018
Action Period 3	
Learning Session 4 - Event	10th January 2019
Action Period 4	
Summit - Event	1st April 2019

Every Minute Matters: 7 ideas to improve hospital handover

Handover Safety Checklist

During times of poor hospital flow or excessive demand on the ED, queuing and delays remain evident. Utilising the checklist method, a set of criteria was developed with the support of senior clinicians to identify patients that could be suitable for waiting in the ED without continued support from ambulance crews. Seven questions were developed, classified into four 'clinical' and three 'procedural' questions. Clinical criteria was focused on key assessment scores (GCS/NEWS) and previous administration of medicines, whilst procedural elements were around access to equipment, adequate identification of the patient and transfer of the patient record. Failure on any of these would result in staff waiting with the patient, but where the criteria was met those patients would be left in the ED. A series of tests were undertaken between December 2018 and January 2019 across all six sites, with executive level communication and support as well as implementation assistance by NWAS senior clinicians. In total the checklist was applied 582 times and 66% of patients were or would have been consistently safely left and crews released with no patient safety incidents reported. The results have shown at times a **4 minute reduction in average handover turnaround times** between the test and not-test periods.

An Emergency Triage Team

Delays are more likely when one individual is responsible for undertaking handover from ambulance crews, particularly at busy times. A multi-disciplinary 'triage' team has helped improve consistency, achieve timely consultant review and care planning, and support patient flow. Most triage teams include an ED consultant, a senior ED nurse, a 'triage' nurse, and a Healthcare Assistant, although local variations also included a junior doctor (F1), a phlebotomist and other staff dependent on requirements. Forming a triage team is not about creating new job roles, but rather re-allocation of staff at the start of the patient attendance who have clearly defined responsibilities. It is key that triage is focused and allocated space and equipment is readily on hand. 5-6 minute handovers can be achieved as a result. A key challenge is maintaining reliability during evenings and weekends.

Structured verbal handover – SBAR

How information is transferred verbally, the methods used, and the detail included can be different from crew to crew. SBAR (Situation; Background; Assessment; Recommendation) is a standardised prompt tool that encourages consistent and concise transfer of information. It consistently reduced verbal handover times (to between 50 and 90 seconds) and the variation between different triage times – although it should be used as part of a combination of interventions. SBAR is a recognised tool in hospital settings, but ambulance staff required preparation and training, using prompt cards and poster reminders.

Making hospital handover an organisational priority

While handover process improvements have resulted in fewer delays, it has been evident during the collaborative that the environment for change is key. Where sites have had leadership and operational support to make hospital handover a priority it has removed barriers and resulted in faster and more sustainable improvement.

Timely access to equipment

On arrival at ED, patients are usually transferred using an ambulance trolley or chair and then to hospital equipment post-handover. A lack of timely access to hospital equipment can cause delays. Some teams tested working with hospital porters, who became responsible for monitoring trolley and chair availability within the ED, saving nearly 3 minutes in testing. Others focused on consistently equipping at least one triage bay with a trolley or chair, with an ED colleague responsible for re-stocking after handover. For ambulance crews, understanding the transfer needs of patients and application of Fit to Sit recommendations often reduces demand for hospital trolleys.

Appropriate use of patient pathways

The majority of patients transferred to hospital by ambulance will go to the ED. However, for some patients, direct access to hospital departments specific to their attending clinical complaint results in them receiving the right care more quickly. Patient Pathways have been developed by hospital medical staff and with NWAS support for some key conditions e.g. low risk cardiac. Whilst test sites are reporting small numbers of daily transfers pathways can help contribute to reductions in demand on the ED. Patients are transferred either on ED arrival or by directly by ambulance crews depending on local arrangements.

Automatic clear of ambulance crews in 10 minutes

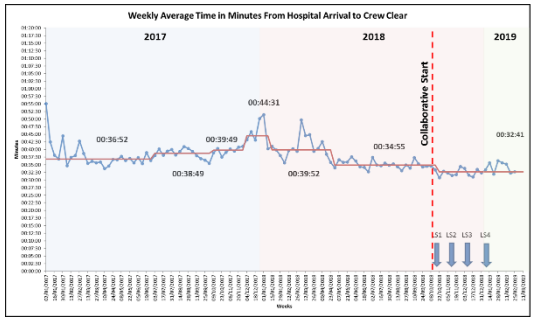
The time it takes for an ambulance crew to clear for the next emergency after handover often varies between crews. This can depend on the acuity of the patient and the interventions undertaken whilst transporting them to hospital. To reduce variation in the clear times from standard attendances, a method has been tested which automatically clears crews 10 minutes after handover. If crews meet any of the pre-defined exclusions they are not cleared – all others are made available. Early testing has been positive with all crews clear within less than 10 minutes. Senior review of individual staff data is also recommended to monitor increased times and provide support, education and training.

Collaborative results

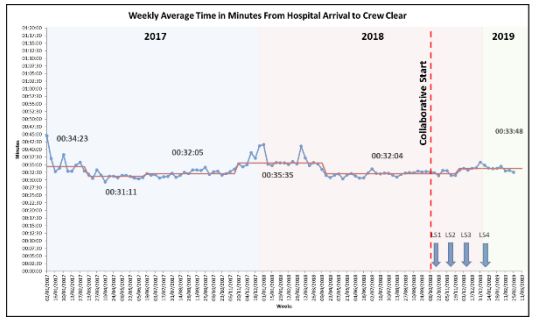
Collaborative run charts

Since the collaborative started (October 2018) the average weekly turnaround for the six teams involved has reduced by more than two minutes. In the same period the average for all the other sites across the North West has increased by more than a minute and a half. Collaborative teams appear to have been less affected by winter 2018/19 pressures than other sites.

Super Six Hospitals



NWAS Other Hospitals



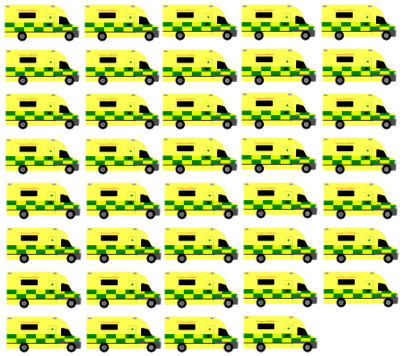
Learning from the collaborative:

- Organisations with a culture of zero tolerance, full ownership, and prioritisation of hospital handover achieve the biggest and most sustained gains.
- While the arrival to handover process is key to initial reductions in delays, there remains opportunity to achieve the lowest total handover times through improvements in the handover to clear process. While average site times for the Super Six are below the 15 minute standard, data shows wide variation among individual crews.
- Hospital handover delays are not always consistent across the day or week. Mondays and evening hours (8pm to midnight) have been a particular challenge for the six sites and remain areas for further improvement.
- When there are delays in hospital EDs, appropriate patients – around 70% - can be safely left to release ambulance crews to attend patients waiting in the community.

Total Lost Hours from Handovers >30mins

Feb 2018	Feb 2019
3,053	2,125

30% fewer lost hours, which is an estimated equivalent of **39** more ambulances available that month



Before and After Comparison

Average daily turnaround (time from ambulance arrival to crew clear)

Average

Sept 18	Feb 19
34:14	32:09

= **6% Improvement**

Best performing average

Sept 18	Feb 19
30:33	25:35

= **16% Improvement**

Average daily lost hours (from handovers longer than 30 minutes)

Average

Sept 18	Feb 19
74	66

= **10% Improvement**

Best performing average

Sept 18	Feb 19
9	3

= **70% Improvement**

Winter Comparison

Average weekly turnaround (time from ambulance arrival to crew clear)

Average

Dec 17	Dec 18
44:31	32:41

= **27% Improvement**

Best performing average

Dec 17	Dec 18
42:48	24:52

= **42% Improvement**

Average weekly lost hours (from handovers longer than 30 minutes)

Average

Dec 17	Dec 18
937	462

= **50% Improvement**

Best performing average

Dec 17	Dec 18
151	22

= **85% Improvement**