South Central Ambulance Service

Monitoring patient turnaround time

South Central Ambulance Service (SCAS) is the first NHS Trust to install a new patient handover system developed by ambulance services technology specialist Intergraph – and is measuring patient turnaround performance improvements of 50.7% (at Queen Alexandra Hospital), 47.1% (at Wexham Hospital) and 29.4% (Southampton General Hospital) where the system has gone live.

The “turnaround time” is defined as the time from the patient arriving at the hospital to the ambulance being cleared and available for further, onward use. “Turnaround” can be further split into “handover” time and “clear up” time. “Handover” is the period of time from the patient arriving at hospital to the patient being handed over to the hospital staff. “Clear up” is the time from handover to the ambulance being cleared and available.

The “patient handover” screen allows SCAS operations centres to monitor the turnaround time of ambulances at hospitals to which they transport patients.

When an ambulance picks up a patient and reports that it is leaving the scene the crew is prompted by their in-vehicle mobile data terminal to indicate which hospital they are travelling to. Immediately an external-link website presents incoming patient information to that hospital, on-screen, including an up to the minute ETA for the ambulance. Each hospital is given a login and password to view its own incoming patient information, which is generated by the SCAS ‘I/CAD’ computer-aided dispatch system.

As soon as the paramedic team reach the hospital and hand over the patient they press an on-screen button in the Intergraph system to record the exact time of handover. Significantly, for the first time, in the new environment both handover and clear up times are now accurately recorded.

Being able to view incoming patient information in this way allows hospitals to improve the patient experience as they have better, earlier information, not only on ambulance arrival but also on incoming patient age, gender and medical status.

“This helps to ensure that patients receive care in a timely manner as hospitals can now plan ahead and be more proactive in their care” says Luci Stephens, SCAS Assistant Director, EOC. “Importantly it also makes SCAS a more active partner in the healthcare economy”, Stephens adds.

The new environment also allows SCAS to improve vehicle availability. “We can now clearly see when incoming patient flow is slowing, and as the information is hospital-specific we can respond”, Stephens explains. “We can also now get crews back on the road more quickly.”

“Apart from performance improvement that saves time in an often life-critical environment, the biggest impact the system has had to date is to highlight the need for timely handover, within the hospital”, adds Patient Handover System Project Manager Georgie Cole. “Now they know exactly what is incoming the hospital can plan ahead to build capacity”.

Cole explains: “At every hospital where we deploy the system we create a project team comprised of hospital leads – who, importantly, are hospital staff – plus primary care trust members; a really multidisciplinary team”. All hospital project teams have to agree improvement targets for the new patient handover environment.

“When I first started working on the project it quickly became clear that being able to accurately measure handover time was key to the changes we needed to make”, Cole says.

“Without that measurement we weren’t able to hold the hospitals to account for their delays. Neither were we able to manage our own ambulance crew delays.

In the past SCAS had been charging the primary care trusts (PCTs) for turnaround delays, while they in turn were trying to recharge the hospital, who might then point out that they did not wish to pay for non-active ambulance crews.

“The four hour target for Emergency Departments (EDs) exacerbated the problem: if there was an influx of SCAS ambulances and the ED was full, hospital would often make us wait until they could take an incoming patient”, Cole recalls. “We estimated that 15,000 ambulance hours per annum we being lost, unnecessarily.

“But that is all changing. Measuring the handover process as we now do, accurately, saves time, money – and almost certainly, lives”, Cole concludes.