

Mobile Summary Care Record Access for Ambulances

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Abstract

For the first time, paramedics in England can access a patient's Summary Care Record (SCR) at the scene using mobile 'Toughbook' tablets. This means that key information about a patient's health such as allergies, adverse reactions and current and past medications are available at the scene enabling paramedics to make more informed decisions as to what treatment can be given, improving patient safety. In addition, clinical information is being shared across health areas previously siloed, specifically between ambulance services and primary care. The project won the 2016 eHI Award for Excellence in Mobile Healthcare.

Introduction

Access to the SCR is typically limited and involves a paramedic contacting a remote control room based clinician who in turn accesses the standalone SCR application (SCRa) and relays the relevant information. During a live incident this is time consuming and as such is often not used. Recognising that integrated and timely access to the SCR would deliver significant patient safety benefits, South Central Ambulance Service NHS Foundation Trust (SCAS), Quicksilva and Ortivus have worked together with the NHS Health and Social Care Information Centre (HSCIC), now known as NHS Digital, to provide a means to access the SCR as a Spine Mini Service – the first in the country.

Methods

In 2013, three ambulance trusts (South Central, South East Coast and South West Ambulance Service NHS Trusts) tendered for an electronic patient record (EPR) provider. Ortivus won the tender in September 2013 with their MobiMed Smart EPR, although subsequently South East Coast Ambulance Service pulled out of the procurement.

MobiMed Smart EPR provides paramedics, using a smart card login, with an electronic patient record that uses a structured model of examination and assessment. For each patient, the system captures clinical interventions and incorporates validated assessment tools. The documentation is intuitive and follows international standards for work

processes in ambulances, for example according to PHTLS¹ and AMLS² including images captured by camera in the ambulance. MobiMed is integrated with a range of external monitoring and defibrillator devices capturing vital signs as part of the patient's record. A comprehensive record of the patient's condition can be transferred directly to clinical workstations in the hospital enabling care to be planned prior to arrival. For example, coronary care units can assess if a patient with a suspected heart attack should be taken directly to them or taken to A&E. In addition, MobiMed can make referrals directly, for example, to stroke clinics and falls clinics or highlight safeguarding issues with copies emailed to the patient's GP.

A key requirement for Ortivus was the delivery of direct access to the SCR. The traditional route would have been for Ortivus to accredit MobiMed via the HSCIC Common Assurance Process (CAP). However, it was recognised that this was a lengthy, expensive and effort-consuming process and as such the need for an alternative route was identified. Ortivus approached Quicksilva because they had an established reputation and CAP accredited products. In particular, Quicksilva had a product known as orQestra®, already accredited to access the Personal Demographic Service (PDS), the national electronic database of NHS patient demographic details such as name, address, date of birth and NHS Number. With SCAS as project sponsor, Quicksilva and Ortivus worked with HSCIC to further develop orQestra® to access the SCR.

Results

Using Quicksilva's orQestra® product, Ortivus are able to seamlessly integrate their EPR with the SCR. The project has resulted in a new Interoperability Tool Kit (ITK) standard. This universally published interface standard is available to all suppliers to promote interoperability.

A bi-product of the project was orQestra's existing integration with the Personal Demographics Service (PDS), meaning paramedics can enter minimal ID factors (i.e. surname, sex and date of birth) to achieve a match with a patient, with a 99%+ success rate. This feature saves precious time as forms are prepopulated, meaning the solution is user friendly and quick.

The ease of use of the resulting integration coupled with a high PDS trace rate has resulted in rapid roll-out for SCAS, from an initial trial of two vehicles in September 2015 to the entire fleet of over 400 ambulances just two months later. The number of message requests made to the PDS has typically been more than 110,000 per month but grew to 136,000 in December 2016. For access to the SCR, the number of message requests has not been far behind with typically more than 100,000 messages per month but reaching 116,000 in December 2016.

Neighbouring South West Ambulance Service (SWAS) are now in the process of rolling orQestra® out and so far have implemented access to the PDS, with typically more than

¹ Prehospital Trauma Life Support (PHTLS)

² Advanced Medical Life Support (AMLS)

250,000 messages per month but this has significantly risen over the last quarter of 2016 to reach 343,000 in December 2016. SWAS went live with SCR in October 2016 and their usage remains low at the moment with just over 2,000 messages per month.

Further, South Central Ambulance Service (SCAS) are now rolling out a copy of the EPR for each patient contact in a PDF emailed to the patient's GP practice. This was completed for Hampshire and Berkshire by the end of December and it is planned to complete the remaining areas served (Oxfordshire and Buckinghamshire) by the end of March 2017. SCAS has requested a change to MobiMed to allow this to be integrated directly into the patient's record in their GP clinical system.

The project has resulted in high profile examples of positive outcomes. Access to information about allergies has proven to be very useful. In one case, a patient was unable to remember details of an allergy. Paramedics were able to retrieve this information from the SCR and avoided the risk of a potentially serious allergic reaction to a common medication. In some cases, the distress and upheaval of unnecessary admissions to hospital can be avoided, for example where a patient has accidentally overdosed on current medication and is not able to remember details of the medication they are taking. It is actually very common for some patients not really to understand what medication they are on or why they are taking it.

There is increasing pressure on acute services and local health economies are looking at alternative ways of responding to requests for urgent care to reduce the demand for A&E. SCAS is responding to this by providing triage and, for clinically appropriate patients, contacting their GP to see if they will accept the care of the patient instead of taking them to A&E. The ambulance staff also have a Directory of Services they can use. For example, there may be a local respiratory physician who can make a home visit to a patient with chronic obstructive pulmonary disease (COPD) rather than take them to A&E. Access to the SCR provides the ambulance staff with additional information to support these clinical decisions and provide the most appropriate care for the patient.

Discussion

Access to SCR requires patient consent. A smooth workflow carried out on the tablet enables paramedics to gain this consent at the patient's side. However, the solution is particularly valuable where the patient is not able to recall complex medical terminology or is confused, frail or unconscious, and so unable to relay information directly. In these circumstances the design includes a 'break glass' function whereby the requisite consent to view is overridden in an emergency (such as where a patient is unconscious) with appropriate Information Governance (IG) safeguards in place to ensure follow-up by a Caldicott Guardian. This feature ensures that patient safety is not constrained by red tape, while maintaining the important IG safeguards the public expect from clinical systems.

The quality of the data held in the SCR varies and is dependent on the quality of data held in the GP system, as the SCR is automatically generated by extracts from the GP system. Poor quality information detracts from the value of the data and some ambulance staff are

choosing not to use the SCR where the data quality does not meet expectations. At the same time, patients can request that their GP add additional information about their medical history, long term health conditions, personal preferences (such as for end-of-life care) and immunisations. This enhanced SCR provides a richer picture, which is more valuable to the ambulance staff in supporting their clinical decisions.

Overall, the solution has led to greater confidence of front-line paramedics since care decisions are now better informed. This is reinforced by an audit facility which retains a 'snapshot' of the SCR record at the time it was accessed, promoting accountability but also providing invaluable support in the event of future litigation.

Conclusion

As a result of this project, for the first time, paramedics in England can access a patient's Summary Care Record (SCR) at the scene and it has led to a new Interoperability Toolkit standard which paves the way for similar projects. The project has embedded and reinforced the value of mobile devices, such as 'Toughbooks', as a medium for accessing care records, demonstrating value for future procurements. Finally, given the tense governance climate that surrounds the SCR, it has demonstrated how it is possible to achieve a pragmatic balance of utilising SCR information while maintaining public trust in patient record confidentiality.

References

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