



Summary

CUSTOMER

eConsult

CHALLENGE

To make eConsult data usable across the NHS

OUTCOME

Improved experience for clinicians

Reduced waiting times for patients

Appropriate care provided more quickly

eConsult + InterSystems

eConsult transforms NHS triage in partnership with InterSystems

eConsult, the leading UK digital triaging company, has gained widespread implementation in the NHS by linking its innovation to InterSystems' advanced data management capabilities.

eConsult Health, founded in 2013 by south London GPs, is a UK SaaS business revolutionising the speed, ease and accuracy of triage in primary and secondary care.

In primary care, its first-to-market *eConsult* platform has enabled more than 30 million consultations between doctors and patients to date, and is in use with 3,300 GP surgeries serving 28 million patients.

In emergency care ten acute trusts' A&E departments use the company's *eConsult Urgent and Emergency* solution, reducing time-to-care and ensuring those most with the most acute need are treated first. In addition, the company's *eConsult Specialist* is a newer triage solution, enhancing efficiency in outpatient departments.

The company's success means it now employs more than 100 people who are governed by a passion to improve care through optimisation of resources in the NHS. This is vitally important. eConsult's own research suggests poor use of resources and inappropriate attendances by patients cost the NHS £3.25bn annually in the three areas of its focus – primary, emergency and outpatient care.



eConsult Urgent and Emergency

In urgent and emergency care, the *eConsult Urgent and Emergency* platform deploys a bank of tablets that patients use to enter their symptoms. The eConsult algorithms then identify patients by the clinical need, identifying the sickest patients within minutes of arrival, eliminating queues, giving crucial visibility of the A&E waiting room and identifying patients suitable for redirection, providing an accurate assessment for clinicians to work from.

eConsult specialist

eConsult's virtual outpatient platform *eConsult Specialist* provides a structured and specialist digital triage ahead of or instead of appointments, enabling waiting lists to be prioritised according to patient need, with built-in video functionality to enable remote consultations where appropriate.

The challenge - making eConsult data usable across the NHS

Data is critical to eConsult. With more than 30 million consultations so far, the company has accumulated a high volume of valuable, structured, anonymised data about the front end of the patient journey.

Yet for eConsult to be successful in an organisation as vast and varied as the NHS, it must achieve seamless integration with a very large number of systems including electronic patient records and patient management systems. Fail to achieve this and the chances of eConsult solutions achieving widespread NHS implementation would be severely curtailed.

To complicate matters, the NHS has very disjointed triage. If it is to provide seamless care, eConsult has to ensure the triage data it captures from each patient can follow them wherever they go in the NHS. This demands data interoperability which is technically complex and must conform to very strict NHS data standards. With so many different data systems, it is vital clinicians and health professionals can share data and process it to benefit the patient.

In primary care implementations, for example, healthcare professionals want to maintain a holistic view of the patient, rather than having a fragmented picture from different solutions creating data that is not interoperable.

Data is essential," said Dr Mark Harmon, Chief Strategy and Brand officer, eConsult. "Clinicians need enough information to make robust and safe decisions."

As a highly successful business built on innovation and hands-on clinical experience, eConsult sought to achieve the necessary integrations itself but found the task immensely difficult.

Integrating with the EMIS and SystemOne clinical systems, for example, took years. “While our engineers are good at this, it is not our expertise,” said Dr Harmon. “Our expertise is in clinical triage and the patient journey, which is why our relationship with InterSystems is so important. It enables us to integrate with all patient record systems.”

The solution - InterSystems IRIS for Health

With interoperability increasingly critical throughout the NHS, eConsult needed a much more effective solution. After reviewing the market, it selected InterSystems to help achieve full data interoperability and integration for its platforms. eConsult’s vision is to work with best-of-breed partners in technology and life sciences that can plug into its platforms and offer value right along the triage process.

InterSystems’ expertise in healthcare data management made it an obvious choice to be one of the first strategic partners in this longer-term plan. InterSystems has exceptional experience, having integrated nearly 200 different health information systems. One of the drivers of its success is InterSystems IRIS for Health – a comprehensive data management platform purpose-built to clean and prepare health data at scale. It is specifically engineered to facilitate the seamless integration of proprietary data with the masses of pre-existing clinical data, achieving full compliance with mandatory data standards, such as HL7 V2 and Fast Health Interoperability Standards (FHIR™).

The Spine connectivity is important for eConsult to look up patient NHS numbers and verify their identity, after which further data is collected for the Emergency Care Data Set, which provides more consistent information about reason for attendance, giving reliable insight into activity at England’s emergency departments. It improves communication between health professionals and processes the information supplied by the patient for use in a hospital’s clinical system.

USING THE CAPABILITIES OF INTERSYSTEM IRIS FOR HEALTH, THE ECONSULT PLATFORM VALIDATES PATIENT IDENTITY ON THE NHS SPINE SYSTEM WHICH ENABLES DATA TO BE SHARED SECURELY BETWEEN 23,000 HEALTHCARE IT SYSTEMS IN 20,500 ORGANISATIONS.



“ WE KNOW INTERSYSTEMS WILL PLAY A CRITICAL ROLE IN HELPING US TO BECOME AN INTEGRATED TRIAGE PLATFORM. THEIR EXTENSIVE EXPERTISE MEANS THAT WE CAN MOVE DATA BETWEEN OR WITHIN INTEGRATED CARE SYSTEMS AND TRUSTS TO INFORM COMMISSIONING DECISIONS AND IN TURN, IMPROVE PATIENT AND CLINICAL OUTCOMES.”

Dr Mark Harmon, Chief Strategy and Brand officer, eConsult

The benefits – for clinicians, patients and the NHS

By partnering with InterSystems and deploying IRIS to manage and prepare data, eConsult Health has ensured the NHS can work with its solutions, avoiding the barriers to adoption that defeat so many medical technology companies.

The partnership has been highly successful, enabling eConsult to make its data interoperable with a huge range of healthcare systems and organisations. eConsult data can, for example, flow between and within NHS Integrated Care Systems.

Because InterSystems IRIS takes care of data interoperability, eConsult’s developers can concentrate on improving triage and the patient journey, saving clinicians’ and healthcare professionals’ time.

“We know InterSystems will play a critical role in helping us to become an integrated triage platform,” said Harmon. “Their extensive expertise means that we can move data between or within Integrated Care Systems and trusts to inform commissioning decisions and in turn, improve patient and clinical outcomes.”

Proof of success

The success of the A&E integration is evident from an independent study at Queen Mary’s Hospital Urgent Care Centre in Sidcup, where *eConsult Urgent and Emergency* reduced total waiting times. **More than 99% of visitors used the solution and underwent initial assessment within 15 minutes.**

This high level of interoperability enables all relevant clinicians and the applications, diagnostic and treatment tools they use, to employ eConsult data to accelerate and improve care. The result is that it also gives the patient a much better experience, as they receive appropriate care more quickly and are not repeatedly required to give their details.

The future - research, AI, vital signs and diagnostic testing

As eConsult achieves wider implementation and generates more data, the process of making its data interoperable through InterSystems IRIS for Health continues.

“Data is becoming a really interesting component of our strategic thinking, going forward, so the InterSystems relationship is critical to that,” said Harmon. “Our strategic aim is to have a digital ecosystem of triage, moving patients seamlessly between systems so clinicians can see patients by clinical need, at the right time, in the right place. Intelligent triage will quickly highlight, for example, if back pain is a symptom of cancer and enable routing into a 2ww pathway or refer A&E patients to more appropriate care provided by their GP.”

The company wants to partner with the NHS to share data in trusted research environments. As part of this, it is developing its own AI engine. The company also wants to capture vital signs in triage as well as a patient’s history to get an even more accurate clinical picture and potentially save thousands of lives. As an extension of this, eConsult is exploring how to integrate diagnostic testing after triage, along with other clinical decision support tools.

Longer-term the company’s major aim is to support the development of preventive medicine through the examination of trends, bio-markers, genomics and propensity-to-disease data.

“Thanks to our partnership with InterSystems, the potential for data is hugely exciting, and has the potential not only to fuel research, but also improve the all-important patient outcomes as well,” said Harmon.