As healthcare changes, data integration must change with it

Arjo Boendermaker, a healthcare consultant working in The Netherlands, argues the spread of healthcare networks across Europe and the UK means new thinking is needed about interoperability.

As an example, he outlines how six hospitals in the central Netherlands are implementing the Parsek Vitaly platform to support multi-disciplinary team meetings.

The Netherlands has seen an evolution in healthcare over the past ten-years. As in other parts of Europe and the UK, there has been a move away from the traditional model of general practice and hospital-based care.

Increasingly, medical professionals operate in networks in which specialists can pool their expertise for the benefit of the patient; and this has led to an evolution in thinking about healthcare technology.

Fifteen or twenty-years ago, GPs and hospitals in the Netherlands implemented electronic medical record systems that supported their operations but didn't interoperate with each other.

Subsequently, there was a focus on the patient journey within a healthcare provider, and on the patient being sent from their GP to the hospital. This led to an investment in data sharing and on sending data with the patient as they moved through the system.

Now, we need to shift the focus again, this time to preserving the characteristics of the patient as they engage with the network, so professionals can access the information they need to make the best diagnostic and treatment decisions. The focus is on collaboration between healthcare providers to support the patient in the total care process to provide the best, most efficient personal care.

Oncology networks and MDT meetings

The requirement for new kinds of technology is particularly evident in oncology. In 2013, three of the Netherlands' major hospital networks backed a plan to reorganise cancer care into comprehensive cancer networks.

The goal was to offer patient centred, high-quality and efficient care, by reorganising services, introducing standardised working practices, improving diagnostics, and streamlining referrals.

The result has been a high degree of specialisation, with patients being referred to different centres within a network according to their tumour type and their requirement for surgery, radiotherapy or drug therapy.

Diagnostic and treatment decisions are made at multi-disciplinary team meetings, which have become much more important than they were a few years ago, when the cancer networks were first introduced.

Unfortunately, the lack of interoperability between hospital EMRs means the data required has to be manually collected and entered into their collaboration platform.

This is time consuming for administrators, and can be frustrating for participants and patients, if documents and images are missing on the day that a meeting is held.

The Parsek Vitaly platform in the central Netherlands
Six hospitals in the central Netherlands have decided to address their integration challenges by modernising their data sharing architecture.

In 2021, the major hospital in Utrecht and five related institutions (the Meander Medical Centre, St Antonius Hospital, the Tergooi Medical Centre, Rivierenland Hospital in Tiel and Diakonessenhuis Utrecht) instituted the Data Dalen Midden-Nederland project.

DDMN, where I work as project lead, has decided to implement an Open Line B.V.'s cloud-based architecture to automate the exchange of data across the region. To support MDT meetings, we have decided to work with Parsek to implement the Vitaly platform in combination with Open Line's MDT as-a-service model.

Vitaly is being used to integrate patient data from the Chipsoft, Epic, EasyCare EMRs, at our hospitals, as well as Philips Enovation XDS, a solution for exchanging medical images.

This will make it easier and faster to book a patient into a regional MDT meeting - in a pilot project that ran for more than two-years some 4,000 patient cases were efficiently discussed on the Vitaly platform ensuring patient data was available digitally throughout the MDT process.

The project will also improve the quality of the information available to participants. And, importantly, it will make it easier to document the outcome of MDT discussions, because patient decisions will be captured and written back to the EMR.

Standards based and built for expansion
DDMN has been working with four oncology MDTs (urology, gynaecology, liver and upper gastrointestinal cancer). The latest iteration of our solution is 95% built and should be ready for testing by November 2022. Once it's live, we have another five MDTs that are anxious to start using the new platform. With the implemented solution it is expected that the hospitals involved will discuss more than 8,000 patients each year.

However, there is no reason to stop at oncology because we have built this platform with further uses in mind. When we started the DDMN project, we anticipated that we would face challenges with privacy and clinical engagement.

In practice, privacy has not been a problem; the Netherlands has the legislation in place to do this. Nor has it been difficult to get clinicians involved; this is of real interest to clinicians, and they want to see it work. The challenges that we have spent time overcoming have been IT challenges.

When we started to develop the MDT meeting solution, we decided to use FHIR standards and XDS because all the vendors involved said they understood them. In practice, we discovered something that will be very familiar to UK health tech, which is that standards are not standards.

Every company and every organisation interprets them differently. So, one outcome of this project is an understanding of what those standards mean in the context of an MDT meeting. We have defined those standards and that should make it easier for other suppliers to adopt them in the future.

It should also make it easier to adapt the solution to support MDT meetings for other diseases and conditions (e.g., cardiovascular, birth care and pulmonary) by linking to other healthcare information exchange initiatives, such as the LSP, which holds medication data, or the PGO, which enables patients to view and share their own information.

As healthcare evolves, IT must evolve with it

The Netherlands is not unique in developing networks for oncology and other, increasingly specialised, areas of medicine. Healthcare in the UK is evolving in the same direction.

At the same time, there is a focus on joining-up care across integrated care systems and giving professionals in traditionally siloed institutions access to the information they need to wrap care around the patient.

As that happens, health tech professionals will discover what we have discovered, which is that as our healthcare logistics change our idea of data needs to change with it.

It is going to become more and more important to preserve the characteristics of the patient as they move through the network, and to make sure information is available wherever it is needed and not just pushed through the system.

Projects like DDMN are showing the way: and they need companies like Parsek with platforms like Vitaly, because they work with all the other components that are required to make them work.

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