RIS – the Core of Radiology

Performing over 230,000 examinations a year, Radiologie Herne is one of the leading radiology service providers in the Rhine-Ruhr region, Germany. The 150 staff, who are responsible for overseeing the care of both outpatients and inpatients at three associated hospitals, rely on the RADIOLOGY INFORMATION SYSTEM (RIS) from medavis. The system was implemented back in 2002 and has been continually developed over the years to meet the ever changing user needs. Thanks to the interface connection of the RIS to the Hospital Information Systems (HIS) of various vendors, a sophisticated image archive (PACS), barcode scanners and the integration of speech recognition, the highest level of medical care is guaranteed.

As reliable as ever

"We've been using the medavis RIS for over 12 years, and we couldn't imagine working without it now. In all the years it has never once let us down," says Dr. Labisch, radiologist and person responsible for image archiving and communication systems at Radiologie Herne. Back then it was important to select a product capable of fulfilling technical and medical requirements and whose vendor was able to interact with and create a close working relationship with its customers. This was the reason for choosing medavis, a medium-sized, owner-managed company.

Key Criteria

The decision to replace the DOS-based practice management system was what prompted implementation of the RIS in 2002. The new system was primarily intended to simplify the documentation workflow. What sounds like a simple task today was a milestone back then, because up to that point there had been no word processing system, no templates for automatic service entry and billing and no way of being able to parallel retrieve reports and images. Plus the new system would also have to be able to store patient and referral data. From a technical perspective, the availability of standardised interfaces (HL7) was a key criterion for the choice of the medavis RIS. Even in 2002, data had

to be transferred from a hospital which used Radiologie Herne as an external service provider. With other hospitals soon to follow, interoperability was crucial.

Going digital

Fast forward to 2015, these requirements have been well and truly standardised. Today's agenda includes multimodality and process orientation. Dr. Labisch: "Any treatment involves a multitude of data. The patient arrives with documents, there are more forms to fill out with us, we generate new images with our modalities, to which reports have to be created. These documents all contain information which is required by various staff during the course of the treatment. Too much time would be wasted collecting and the required information would no doubt end up lost on somebody's desk if it wasn't available immediately and centrally in the RIS." Whether referral forms, external images, reports and preliminary reports, admission or patient information sheets, every kind of document is now being digitised at Radiologie Herne. To simplify this, a barcode system for automatic scanning was also integrated. The medavis RIS MULTIMEDIA ARCHIVE with integrated scan functionality efficiently manages all kinds of documents (paper, CD) and a sophisticated image archive (PACS) is also connected to the RIS. To streamline the documentation workflow even further,

speech recognition was introduced in 2005. Because of its high level of interoperability, the medavis RIS makes it easy to work intuitively throughout the entire treatment process.

Vital Functionality

"If we still had to carry paper from A to B, we would be less efficient and less productive," says Dr. Labisch, summing up the result of the collaboration with medavis. All data are available in the central DIAGNO-STIC PATIENT CENTER of the medavis RIS from the four sites of Radiologie Herne. This is a prerequisite for working across sites. Based on their user roles, which are managed with Windows, staff are able to access all documents and files from any one of the four sites. It is not uncommon for a second opinion to be provided in real time by a specialist at one of the other facilities. Data are transferred at a rate of 100 Mbit/s. All documents are available to staff at any time, instantly and with no loss of data. Consequently, waiting and treatment times for patients have been reduced. From an organisational perspective, the beauty is also that multiple workflows can be triggered in parallel. For instance, a service can be billed and an additional examination scheduled at the same time.

Besides the advantages on the healthcare side, the RIS also offers vital features for the management team. Individual process steps can be evaluated and their cost-effectiveness can be analysed. Optimising the workflow has allowed each individual step to be performed more quickly. For instance, introducing the medavis RIS has resulted in a reduction in the average report creation time from 48 to 26 hours. Further figures can be used for quality assurance purposes, with regular assessments being made in the context of ISO certification.

For a RIS to effectively support and facilitate the day-to-day work of physicians, radiographers and admin staff, it has to be used intensively. "The medavis RIS is very intuitive. Even temporary staff or colleagues joining us from the hospital are able to operate the main functions and work with the system after 30 minutes," praises Dr. Labisch.

Ongoing Development

Whenever new features are introduced, medavis always involves the users, "because their acceptance is crucial to the system improving our work." For any new feature there is a joint process analysis to discuss the challenges staff face at work and what can be done to overcome them.

Because new features often result in a change to the usual way of working, medavis regularly invites users to training sessions. The purpose is to gain acceptance of new features and to make sure they are used. The vendor introduces the new features and can benefit from any feedback from the staff.

Always available

"The software must benefit the user. With medavis, this is something which works very well," says Dr. Labisch, commenting on the friendly, almost familial relationship between Radiologie Herne and the vendor's employees. The decision to go with a medium-sized, owner-managed company for the central software has proven to be absolutely the right one. The excellent working relationship has enabled ideas and requests to be channelled into product development. The result has been a stable IT solution with the RIS at its heart, a system which runs seamlessly and which has been accepted by the users. With the exception of updates, which are announced in advance and generally take about 30 minutes to install, the system has not had any downtimes for over 12 years. Dr. Labisch: "There are still a lot of documents to be digitised. But medavis is a reliable partner who supports us tirelessly."

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