



Case Study: Borås Hospital

Customer Overview:

Borås Hospital is part of Sweden's Södra Älvsborgs Läns Landsting Regional Health Authority, and is situated some 65 km from Gothenburg. Employing some 4,200 staff, Borås Hospital carries out 210,000 consultations, 185,000 treatments, and 33,000 in-patient visits each year. A knowledge-based organization with the highest standards of medical knowledge, technology, and nursing care, its philosophy is to fulfill each patient's requirements for good healthcare, competency, and security.

The benefits of the Global 360 solution have been so widely recognized that the Hospital's senior management team has set a target for all departments to use File360 within approximately a year.

Challenges

For more than two decades, Borås Hospital has taken a proactive approach to managing the ever increasing volumes of paper documents that need to be archived and accessed. Back in 1985, the hospital started archiving all its inactive patient medical records onto microfilm, for storage-saving and for more efficient retrieval. In 1994, the hospital invested in two new cameras to speed up the microfilming process. And in 1996, the finance department began to introduce electronic imaging to streamline invoice-handling and manage accounts payable, account receivables, and other financial records.

By the beginning of the new millennium, Borås Hospital was starting to look at ways of harnessing electronic imaging to deliver faster access to patient records. At that time, all current patient records were still being stored in paper form. But in some departments, the sheer volume of patient medical files meant that it could take a matter of days to retrieve a file. It also took time to access the inactive patient files, stored on microfilm. The situation in the hospital's Internal Medicine Department was particularly pressing. The Internal Medicine Department spans cardiology, endocrinology, hematology, nephrology, pulmonary disease, rheumatology, neurology, diabetes, and medical emergency.

"By 2001, the Internal Medicine Department's current patient files, all in paper-format, were taking up a massive 550 metres of shelf space. Doctors and other hospital staff requesting to see a patient's file had to wait days," says Per Ljungblad, Director of Archiving at Borås Hospital. In addition, the Department had some 150,000 inactive patient records stored on microfilm.

The hospital therefore decided to implement a pilot project with the Internal Medicine Department to speed up access to patient records. The hospital needed a hybrid electronic document solution, which would not only provide access to the paper-based current files, but would also integrate the microfilm archives, so that these could be accessed through the same system.

Solution

Global 360's File360 document management system provided the most appropriate solution. Global 360's File360 provides electronic delivery of documents stored on microfilm, DVD, and magnetic media. And with its open systems approach, File360 is easily integrated with other systems and applications. In 2001, Borås Hospital began piloting Global 360's File360 system in its Internal Medicine Department.

Challenges

In 2001, the Internal Medicine Department's current patient files, all in paper format, were taking up a massive 550 meters of shelf space. Retrieving requested files sometimes took days and the hospital knew that it had to move to an electronic document management system.

Solution

Borås Hospital deployed File360 to provide electronic delivery of documents stored on microfilm, DVD, and magnetic media. With its open system approach, File360 has been easily integrated with the hospital's Electronic Patient Record System, MELIOR, as well as several other specialist systems.

Results

Following the success of the initial Internal Medicine Department project, the hospital's senior management team has set a target for all 20 departments to be using File360 within a year, to ensure that an Electronic Patient Record exists for every patient and is available to some 3,000 medical staff across the hospital.



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The hospital appointed Global 360 Solutions Provider KIBI Svenska to assist with implementation.

The migration to the new File360 Electronic Patient Record System went well, allowing instant access to patient records on the desktop. "We had a smooth transition," says Per Ljungblad. "We started scanning all our current paperbased records into the File360 system and writing them to DVDs. And we made older film-based records available on the network as well."

While a DVD is being written, these records can be retrieved from the server. And as new paper documents are received by the hospital, these are also scanned into the system.

The Global 360 File360 system has been integrated with Borås Hospital's Electronic Patient Record System, MELIOR, as well as with several other specialist systems. This enables Borås Hospital staff to access all types of patient records through whatever software application they are using, instead of having to swap between different applications to access the information they need.

More recently, Application Programming Interfaces (APIs) within Global 360's File360 system have been used to create a new browser interface customized for each type of search. And Optical Character Recognition (OCR) has been introduced to automate the indexing process, as documents are scanned into File360.

Documents are stored according to nine main categories: pharmacy documents, doctor's notes, laboratory records, radiologist's notes, ECG, clinical physiology, referrals and replies, inpatient notes and letters, and certificates.

Results

As a result of implementing the File360 solution, the Internal Medicine Department has dramatically reduced the volume of paper files: from 550 meters down to only 30 meters by 2004. And access to patient records now takes only a matter of seconds.

"From a budget perspective, the annual cost for the archive area only for this department has cost the Hospital \$30,000 a year. We can therefore expect a good ROI just by reducing the archiving space", confirmed Per Ljungblad.

The administrative workload has also been reduced significantly. "A simple work management study showed that during a given timeframe in 2002, a typical member of the Internal Medicine Department administrative team had to go to the filing shelves to fetch or replace medical records 295 times, compared with only 20 times in the same timeframe two years later, in 2004," says Per Ljungblad.

Following the success of the initial pilot project with the Internal Medicine Department, the File360 system was then rolled out to six more departments in the Hospital. By the end of 2004, there were already 2,500 users of Borås Hospital's File360 solution, and around 10,000 sheets of new patient information were being scanned into the system every day, using the two Kodak i810 scanners.

The Global 360 File360 system is providing Borås Hospital with an Integrated Electronic Patient Record solution. It provides secure simultaneous access to all types of patient information, in a few seconds, from anywhere in the hospital. This represents a significant improvement for doctors and nurses and other staff, who no longer have to wait for patient information. In addition, staff are no longer looking for records in dusty work areas or lifting and carrying heavy files.

The benefits of the solution have been so widely recognized that the hospital's senior management team has set a target for all 15 or 20 departments to be using File360 within approximately a year. This will ensure that Electronic Patient Record for every patient will be available to some 3,000 medical staff, across the hospital.

"The beauty of our Global 360 File360 document management system is that we can retrieve and integrate film-based patient records into our electronic imaging system and make all these records available to everyone who needs them," concludes Per Ljungblad.