



Pen saves time and avoids errors in cancer screening

FACTS

Customer: Gard-Lozère Dépistage, departmental breast cancer screening agency of France.

Challenge: Speed up readings and returning interpretations of bi-annual mammograms. Avoid changing established routines for medical staff. Eliminate potential error by non-medical staff when entering data. Reduce transcription time and costs.

Solution: Reporting of annual standard mammogram results is simplified by using digital pen & paper solution provided by Forms Management Systems (FMS) using Anoto functionality. The software integration component is provided by EpiConcept.

Benefits: Transcription error is removed as only the radiologist's written data is stored. Significant cost and time savings.

"The major advantage to the DP&P solution is that there isn't a need for special tools or new software".

Loïc Flachet, Project Director for EpiConcept.

Early detection saves lives

No one wants their medical tests delayed or worse, misinterpreted. This is particularly significant when it comes to one of the most life threatening dangers to women: breast cancer. In France all women aged 50 to 75 are offered bi-annual mammograms paid for by their national health insurance.

Women visit their radiologist of choice and go through a thorough screening including a mammogram. The notes from the exam are written on detailed forms. The completed forms are sent to the departmental agency for a second interpretative diagnosis and record keeping.

Painstaking process

Every exam goes through a second check once at the regional agency, or even a third if necessary.

A radiologist at the regional agency

reviews the examining radiologist's notes and scrutinizes the mammogram. All notes including a hand-drawn marking and description of exactly what the mammogram shows are written with a digital pen. These forms provided by FMS are pre-printed with Anoto's dot design.

Until this new solution, the second interpretation was transcribed and entered into the system by clerks with no medical training.

"The major advantage to the DP&P solution is that there isn't a need for special tools or new software" explains Loïc Flachet, Project Director for EpiConcept. "We know that doctors are not good at using computers."

High volume

Up to 50,000 mammograms are reviewed annually at each of the 100 departments totaling an estimated 2.5m exams.

Each reviewing radiologist handles 100 cases per session. After one session the pen is downloaded in its cradle. The exact information as the radiologist has written is now uploaded and incorporated into NeoScope, the screening information system supplied by EpiConcept.

Cut out the middleman

The removal of strictly clerical data entry serves two purposes. First, there is no error when transcribing notes. Second, employee hours have been slashed.

As the exact information written or drawn by the radiologist is recorded by the digital pen, no woman will ever be misdiagnosed due to clerical error.

The reduction in transcription time can be calculated in labour costs. The average time spent per mammogram has been reduced from three hours to 20 minutes.

The only difficulty so far reported is the

similarity of the digital pens to regular ones. Loïc Flachat reports, "We needed to remind physicians to use the digital pens, sometimes they forget and used their own."

Future expansion of usage: Stage two

The next phase currently in the planning stage will continue to reduce administrative costs. Stage two will equip the examining radiologists with a digital pen & paper.

Via an internet secured transmission the data will be automatically centralized at the breast cancer screening departmental agency. Thus, the global workflow will be greatly simplified.

Stage two is anticipated to go live by the end of 2006.

Partner Profile:

With FMS's OedipSystem integrated solutions, paper-based forms are the most efficient way to collect and structure any type of data and use them in your organization's information system. OedipSystem solutions do not require users to deviate from their normal work habits or make any changes to existing application processes. The corresponding investment is reduced and enjoys high levels of profitability. FMS were amongst the first to adopt the wide-scale use of such essential technologies as the Anoto Functionality. Furthermore, FMS has formed a close partnerships with such benchmark players as Logitech and France Telecom.

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Anoto Digital Pen and Paper technology

An Anoto Digital Pen looks and feels like a normal ballpoint pen. However, it contains an integrated digital camera, an advanced image microprocessor and a Bluetooth® transmitter. Any paper can be used with a digital pen, if the Anoto dot pattern is added to the layout before printing the paper. The Anoto dot pattern consists of numerous black dots that can be read by the digital pen, but are almost invisible to the naked eye. The pen reads the pattern and registers what and where the user writes.