VOICE STARTS TO TRANSFORM
CLINICIAN EXPERIENCE IN
JORDANIAN HOSPITALS

CHALLENGE:

· Doctors in the Radiology department of a set of busy Middle Eastern medical facilities were spending time painstakingly writing up cases
· Notes have to be in English – not a first language for many staff, or even a second one, as many trained in the former Soviet Union
· Money was being spent both on transcription services as well as wet X-ray film

SOLUTION:

· As part of a national move to integrated computerized hospital systems and a common EHR platform – Electronic Health Solutions (EHS) through its flagship program "Hakeem" the first national e-Health initiative in Jordan – speech recognition from Nuance Healthcare has been introduced (PowerScribe 360 | Reporting and Dragon Medical)
· The chosen EHR system is a highly customized version of the Veterans Health Information Systems and Technology Architecture (VistA), An enterprise-wide information system, used throughout the United States Department of Veterans Affairs (VA) medical system, fully integrated, fully functional scalable information system built around an Electronic Health Record implemented by Electronic Health Solutions, a dedicated non-profit innovative, technology–driven company established as a partnership between Jordan's main healthcare stakeholders
· Speech is also a key interface to the new PACS of the hospital

RESULTS:

· Clinicians have rapidly accepted the new system, praising the accuracy
· Both the quality and the detail, plus frequency, of their reports has been improved
· Savings have been made in a number of areas – including a sharp cut in the need for physical X-ray images, thanks to the association new PACS/speech recognition

SUMMARY

Prince Hamzeh Hospital in Amman, Jordan is the first site in Hakeem pilot phase, the country's first national e-Health initiative, to make the latest information and communications supported health informatics available to the Kingdom's 6.5 million inhabitants. As part of the rollout, a new Nuance Healthcare based dictation system – PowerScribe – was introduced in June 2012 and currently has 11 regular users. The system is helping both experts in radiology process CT and MRI scans as well as regular X-rays, it is also acting as an interface to a new PACS.

A SYSTEM USERS RESPOND WELL TO

Use of speech seems to be that far too rare a beast – an IT system that users actually like. "This is a very nice system, very useful," enthuses Dr. Ahmad Abu Ain, a Consultant Radiologist. "Before speech, I had too much work," he jokes, pointing out that it was a slow and sometimes painful process for him to physically record his notes (in English), with his many spelling mistakes and trips to consult his dictionary.

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"This system saves me time, saves us all money – and is very easy to use."

Dr. Ahmad Abu Ain
Head of the Radiology Department
Prince Hamzeh Hospital, Amman,
Jordan

Now, he says, his day is much more productive, allowing him to process over 50 reports a day now (versus 40 before) – accurately, he says. "There were mistakes by the start but as the system and I have learned from each other, things have improved dramatically. This is highly sophisticated software." So successful has his experience been that he claims colleagues in other departments – especially his Laboratory co-workers – want their own speech systems too. "This is proving to be a very beneficial system," agrees Engineer Omar Aubada of the HIM Department at Prince Hamzeh. "It's cost efficient and allows doctors to access information faster so as to provide better healthcare for patients. I can say it's definitely met our expectations. "

NEW DATA, BETTER ANALYSIS

For Dr. Mohammad Ammar, a Consultant Radiologist in the Hospital, the new system is also "working very well". In particular, he likes the way that his new ability to fill out a report using just voice means he can spend more time on individual cases, adding more detail and information, which in turn improves their care, he believes.

"Before this it took a lot of time to make a report," he says. X-rays had to be delivered physically, images did not always come in the format he wanted for a full analysis (e.g. hadn't been taken from the angle he wanted) and generally caused more work to program technology, he says, the time needed to produce reports has been both cut and the quality of the information he can work with improved.

Hospital managers also praise the beneficial impact of the system in terms of productivity and that highly vital aspect – bottom line savings, which range from reduced secretarial overhead to the fact that previous annual outlay on physical X-ray production media has now disappeared for good in a new paperless environment.

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"When we had to take the system offline briefly recently, they all came to my office and started complaining that they couldn't do any work because their PACS and speech recognition system were down!"

Dr. Ali Hyasat, Prince Hamzeh's General Manager

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Engineer Omar Aubada of the HIM Department at Prince Hamzeh

RAPID ACCEPTANCE

It's striking both how quickly the Vista and PowerScribe system have become part of the normal way of doing things at Prince Hamzeh. "Our doctors were initially reluctant to use this new system," says Dr. Ali Hyasat, Prince Hamzeh's General Manager. "But when we had to take it offline briefly recently, they all came to my office and started complaining that they couldn't do any work because their PACS and speech recognition system were down!"

What could the future hold? As Hakeem progresses, says Dr. Hyasat, the aim is to introduce its benefits to other Jordanian hospitals as well as medical centers across the country. "I'd like to see the Hakeem program program implemented across Jordan's healthcare facilities because of its positive effect in improving healthcare services. It reduces paper-work, shortens waiting time for patients, enables nurses and doctors to spend more time with patients. The ability to see patients information in one file and not need to search elsewhere avoids losing time. This will improve the efficiency of the health facilities and increase patient satisfaction."

"I also see great potential for efficiency in terms of savings on incorrect prescriptions, drugs that don't need to be dispensed, quicker laboratory processing; there are many aspects," he says. Key to this: a promised electronic billing system, the next step in the Hakeem program, says Dr. Hyasat.

And in the near future – administrators see great potential for speech as a tool nurses and even eventually patients could start using to navigate IT systems.

AN UNSTOPPABLE COMBINATION?

Jordan's vision of integrated, modern healthcare driven by the latest technology is being proven in practice in the efficient and smart new environment of its speech-enabled radiology departments.
And it seems like the power of speech, PACS and EHRs in combination is proving its worth in this demanding context, too.

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About Nuance Healthcare

Nuance Healthcare, a division of Nuance Communications, is the market leader in creating clinical understanding solutions that drive smart, efficient decisions across healthcare. Nuance Healthcare provides solutions and services that improve the entire clinical documentation process — from the capture of the complete patient record to clinical documentation improvement, coding, compliance and appropriate reimbursement. More than 10,000 care giver organizations and 450,000 physicians worldwide trust Nuance's award-winning, voice-enabled clinical documentation and analytics solutions to support the physician in any clinical workflow and on any device. For more information, visit **www.nuance.co.uk/healthcare**

About Emerging Technologies

Emerging Technologies is a regional company serving the Gulf and Middle East markets for the past decade with Multi-accents, Multi-dialect voices and speech recognition solutions. **www.em-t.com**

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THE HAKEEM VISION: A TRULY NATIONAL EHR

In 2009, Jordan decided to revolutionize its healthcare system by deploying an EHR (electronic health record) system through Hakeem program with an aim for a nationwide implementation covering 45 hospitals and 85 clinics in the public health sector. Hakeem initiative is based on a highly customized version of Vista system developed for the United States Department of Veterans Affairs (VA) medical system. Hakeem program will allow clinicians to view their patients' details safely online via their national ID number, including comprehensive procedural and surgical reports, current medications, allergies, medical and surgical history, as well as hospitalization and clinic visit notes. In addition, the new national system will provide online access to lab results and digital radiological exams. Hakeem is being implemented by a dedicated non-profit technology company, EHS (Electronic Health Solutions), which is a partnership between the Kingdom's main healthcare stakeholders, helping Hakeem partner technology companies to install their technology and train the users.

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