

At CHU Nantes the next generation of **speech recognition** is helping **clinicians embrace digital technology**

Goals:

- Facilitate the clinical transformation to digital
- Encourage the adoption and use of the EHR
- Share medical information in real time across different locations and with GPs in the local area
- Abandon paper and cassettes in favour of a more efficient document-creation process that complies with the governmental regulations

Solutions:

- Nuance Dragon Medical Direct
- Cerner Millennium® electronic medical record

Results:

- Accelerated adoption of the EHR
- 50% of the medical reports are now available the same day
- Greater availability of secretaries to undertake reception and quality assurance
- Strong qualitative impact with local GPs

CHU Nantes has 3,000 beds and employs close to 2,000 clinicians across nine sites in Greater Nantes. The hospital began its digital revolution in 2013 with the adoption of the Cerner Millennium® patient management solution. This project to digitise healthcare and research activities represents an investment of 20 million euros over five years and is expected to be completed by 2018-2020.

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Thomas Lechevallier
Head of Applications and Projects
of the Digital Services Department of CHU Nantes.

Next generation speech recognition at the heart of the clinical transformation strategy

While switching 2,000 hospital beds to a multi-modal digital prescription system in May 2015, CHU Nantes tested the EHRs on 200 beds and immediately selected Nuance speech recognition to encourage its adoption and use. Head of Applications and Projects of the Digital Services Department of CHU Nantes, Thomas Lechevallier explains:

“Soon after the initial deployment of the EHR, we had to rethink our strategy. During the often very short time allowed for the consultation, the clinician finds it difficult to type into a digital patient file what he wrote on paper or dictated into a microphone before going digital. Also, prior to inputting all that is required for the EHR in a structured manner, it is very often necessary to begin the adoption of a digital solution with a simpler process: a mixture of structured information, keyboard shortcuts and longer writing. In short, a patient’s entire story and medical record can’t be captured, in a structured way, in 5 minutes using a keyboard and a mouse! That’s where speech recognition comes in.”

When used in combination with the EHR, speech recognition becomes a powerful tool which keeps

pace with the ever-increasing requirements placed on clinicians to provide comprehensive and relevant patient records.

“When integrated into Millennium® EHR, speech recognition is a logical development of any hospital’s digital transformation. This allows us to accelerate the clinical adoption of current solutions and solutions to come,” says Harold Juillet, CEO of Cerner France.

Speedy uptake of speech recognition by 400 clinicians

The commitment to speech recognition was fast. Across the departments, clinicians have got to grips with speech recognition and are dictating their medical reports themselves. Some have adopted an entirely transparent process towards the patients by editing and delivering the records at the end of the consultation. Most dictate their reports themselves and send it to their secretary to finalise, approving subsequently proposed corrections. Thereafter it is directly distributed to the related beneficiaries, such as the patient or the referring GP. “We were struck by the very quick and sophisticated routine that clinicians have developed in certain departments,” says Adam Gouge, project leader at CHU Nantes.

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Doctor Jérôme Gournay

Head of department, gastroenterology, gastrointestinal oncology and nutrition assistance at CHU Nantes.

“I was already an occasional Dragon user on my own PC. Integrating Dragon Medical Direct into our EHR at CHU Nantes has provided such speed and fluency that clinicians are saving time. Delivering reports in real time has greatly contributed to improvements in the quality of care,” explains Dr Jérôme Gournay, head of, gastroenterology, gastrointestinal oncology and nutrition assistance, Institute for diseases of the digestive tract (IMAD), CHU Nantes.

The cooperation between clinical and IT teams – essential for the success of the project

A dedicated team was set up to ensure the speech recognition project was conceived and conducted as a full value IT project. Deploying the solution on a large scale required considerable preliminary work not only to create the technical architecture, but also to collaborate with healthcare professionals on specialist vocabularies and the integration of proper names. “A clinical transformation project such as ours required us to work closely with clinicians and a committee that is outside the IT department. The use of speech

recognition should be addressed by all the various healthcare stakeholders,” adds Thomas Lechevallier.

Change habits to achieve a successful digital transformation

When speech recognition launched most of the clinicians wanted to keep the process as done previously, in essence, to send their reports to secretaries to type, format and correct. “Changing habits requires time,” says Thomas Lechevallier. “Gradually, a new relationship developed between the clinicians, who are now more self-sufficient in producing the documents, and the medical secretaries who are now free to focus on patient reception and preparing medical records beforehand.”

A working group has been set up to look at how the secretarial role will develop. General management is rethinking the entire organisation. “We have 400 medical secretaries who are very well trained, incredibly motivated, and who have a strong relationship with patients. What we need to do is to put that expertise to good use,” says Thomas Lechevallier.



Delivering medical reports on the same day

Since 1st of January 2017, CHU Nantes complies with the decree of July 2016 which requires hospitals to deliver medical reports to the patient on the day of discharge. Missing information, like test results, is added to the EHR afterwards. To be in complete compliance with the decree, CHU Nantes's short term goal is to deliver 100% of the discharge letters on the same day that their patients leave the hospital.

Last year the IT Department at CHU Nantes observed considerable time-savings generated by the combination of their EHR and speech recognition. Almost half of the medical reports were distributed on the same day and the average was 4-5 days. Before the introduction of the EHR and speech recognition, average waiting times for sending out medical reports were as much as 30 days.

"The impact in healthcare for our region has been enormous. GPs using the secure email service were very impressed to be receiving the reports on the day of discharge when previously they would sometimes be waiting more than a month after the examination," adds Thomas Lechevallier.

Using speech recognition has also changed the way some medical reports are written. Feedback has demonstrated that certain clinicians have changed how they document the data. They are more concise now and are adopting a common language among their departments.

Speech recognition soon to be available in more departments

The second phase of the EHR deployment involves surgical departments which will soon be benefiting from speech recognition too. We undertook a complex technical project, solving site and user specific demands to optimise the use of speech recognition. Nuance was a reliable and trusted partner each step of the way. By late 2018 almost 1,000 surgical beds will be digitised for prescriptions and patient records. In the second half of the year much of the Women's and Children's Hospital will be using Millennium in conjunction with Dragon Medical Direct," he concludes.



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Nuance Healthcare empowers healthcare organisations and individual doctors to accurately capture and transform the patient story into meaningful, actionable information in 22 languages. Today, over 10,000 healthcare organisations and 500,000 users worldwide trust Nuance speech recognition technology to deliver higher quality care, improve financial performance and enhance compliance efforts.