



## SpeechMagic

**Document quality on the rise. Costs down.**

**At Norway's Sykehuset Telemark HF hospital (STHF), working without speech recognition has become completely unthinkable. Costs are down 900,000 Euros a year. Document quality is perceived as being identical or better than in the age of transcription. Report availability is excellent. Next the psychiatrists plan to switch to speech recognition.**

"When you introduce a new IT solution, there are always some doctors who want to go back to the old days", says Per Urdahl, head of the medical department. With Nuance speech recognition, though, this number is low: "Almost everybody in our hospital is highly satisfied. We have around 400 doctors who use speech recognition regularly at around 450 workstations in all departments except psychiatry." It is not that STHF's psychiatrists are particularly conservative.

They are waiting until the psychiatric vocabulary is ready in Norwegian: "We expect this to happen within a year. If so, we will extend the existing installation to the psychiatric departments immediately", says Urdahl.

### **Content and layout are perceived equal or even better**

There are several reasons why STHF's doctors are so satisfied with their Nuance solution. One is that document quality is so good. This was demonstrated in a recent analysis in which 200 discharge summaries before the introduction of SR were compared to 200 discharge summaries created with the help of SpeechMagic. The results were unambiguous. Urdahl: "We used an eight point scale to quantify document quality. It turned out that, in terms of content and layout, the new SR documents were rated as being as good or better than the transcribed documents."



*"Speech Recognition is the only IT solution I have introduced in 20 years that led to measurable cost savings. This is the first time we can say that a new technology generates savings in terms of staff and costs. Preformatted texts that only have to be completed with speech recognition make document creation even easier for our doctors. I am convinced that, within two years, more than 50% of all Norwegian hospitals will use SR regularly. The general practitioners, in particular, are more than satisfied. Some are absolutely amazed about how quick documents are available now."*

Per Urdahl, Head of the medical department

# SpeechMagic CASE STUDY | Norway's Sykehuset Telemark HF hospital (STHF)

## Most patients receive their discharge report immediately

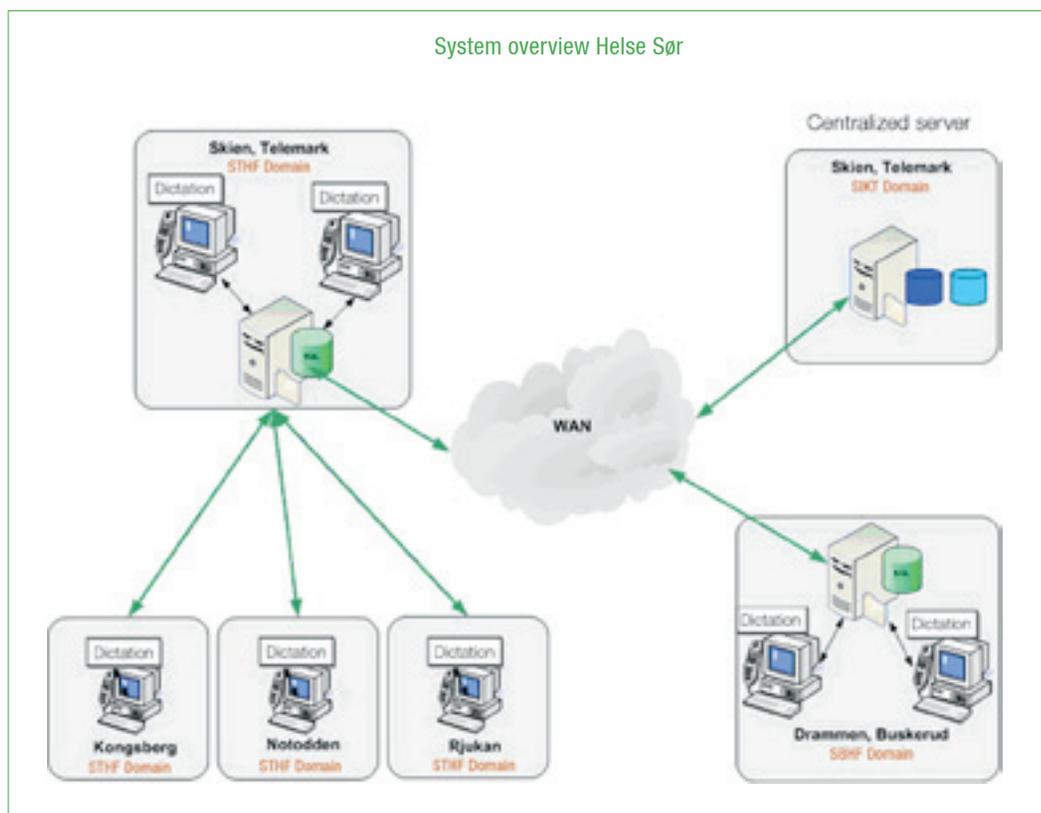
The other reason why doctors' satisfaction is so high at STHF is that document turnaround times have decreased dramatically: "In every single month after the introduction of SR we have managed to deliver 90% of all medical reports to the referring physicians within seven days", Urdahl emphasizes. This is well above the national target of 80% that was set by the Norwegian ministry of health. At STHF, in fact, around 70% of the documents are handed out directly

to the patients before they leave the hospital. In parallel, documents are sent electronically to the referring physician. "Some of them are really flabbergasted", says Urdahl. "They come into their office on Monday morning to find a discharge summary of one of their patients. And they didn't even know that this patient was in hospital during the weekend."

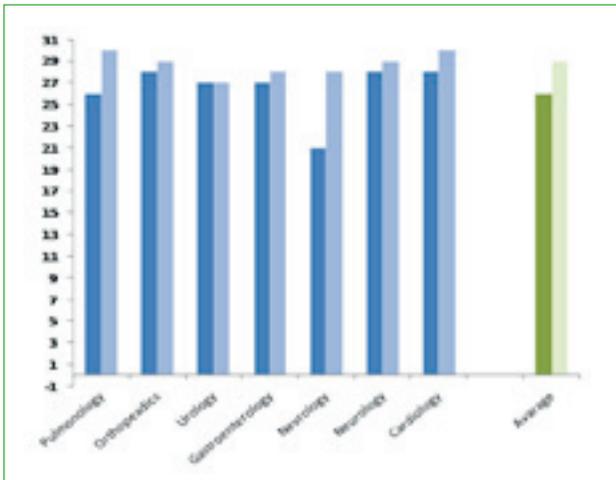
## Unstoppable diffusion of speech recognition in Norway

The hospital administration, too, is happy with the switch to SR-based document creation.

"We have calculated the costs and benefits thoroughly. We generate savings the equivalent of 900,000 EUR per year", says Urdahl. This is due to a 66% reduction in the number of full time secretaries in the hospital. Half of the money saved goes to the respective department on top of the annual budget. This means that not only the hospital as a whole, but also the departments that use SR, have an immediate financial benefit from it.



- Seven out of ten patients receive discharge summaries right away
- More than 90% are being delivered to referring physician with a week
- Annual cost savings of 7.2mn NOK (900.000 EUR)
- World's first academic training center for speech-activated medical reporting



Quality improvements (content, formatting, structure) of the discharge reports



*"We no longer have a waiting time. Almost all discharge reports are available immediately. My documents are more accurate now, because once I understood how the system thinks, I was easily able to generate reports of consistent quality. You have to be motivated to make it work, then the benefits materialize quickly."*

Dr. Ørnulf Paulsen from palliative medicine is one of many doctors working with SpeechMagic.

## Key facts:

- Implementation of Nuance SpeechMagic by partner Max Manus AS in 2006.
- Deep integration into IMX classic/IMX-doctor from Tieto.
- More than 600 licenses are installed in the southern region , 250 of them in Telemark.
- Increase in document quality is shown in a before-after-analysis.
- Seven out of ten patients receive discharge summaries right away. More than 90% are being delivered to referring physician with a week.
- Annual cost savings of 7.2mn NOK (900,000 EUR).
- Almost hospital-wide implementation. Introduction in psychiatry planned next.

The experience speaks for itself™