

Understanding the information needs of medical doctors



Margreet Michel-Verkerke

She doesn't wear a white doctor's coat or stethoscope. Margreet Michel-Verkerke is indeed a medical doctor, but she is a student in Business Information Technology as well. In some months, she hopes to start her PhD research, in which she returns to the medical world, via information and communication technology. She's exploring the ways handheld computers can help a doctor on his or her way to a patient, and 'on the spot'. "To computer scientists, I can explain the -sometimes incomprehensible- choices a medical doctor makes."

"When you look at all information and communication lines within the 'chain' of medical care, you see a true crisscross of lines between various people and institutions. Take a patient suffering a stroke, for example. Any delay in this process is unacceptable. In the city of Enschede, a special Stroke Service was therefore established. Doctors, hospital, rehabilitation center and a nursing home came to working agreements on the way they communicate. This has made the process much more transparent. What we now want to do is find ways to facilitate this chain by using mobile communication. This is particularly urgent in the first phase, in the first contact between the patient and his or her family doctor, and the contact this doctor has with the hospital. That's why we have focused on this phase. What does a doctor 'en route' need to make his work more efficient and easy. And fast: this phase means the difference between fast recovery of the patient or a long period of rehabilitation with risks of remaining paralysis."

"We don't want to simply design an application, supply doctors with the new tools and then wait for the response. In this way, a project is doomed to end up as a pilot and never be used in practice again. Therefore, we have been doing extensive research on what the doctors and other care providers want themselves. We therefore have introduced a research tool called Use IT. After having gained experience in other 'healthcare chains' like cases of multiple sclerosis and rheumatic arthrosis, we now explore the process in case of strokes."

"What you often hear is 'Medical doctors don't want computers, they're not going to use them because they're so damned headstrong'. In reality, doctors often have reason enough to act in a certain way. They are highly skilled professionals choosing their own way of working. If you are able to personalise a system, then the doctor is much more willing to adapt to new methods and to adapt the methods to his own way of working. My research showed that doctors primarily want to be informed before they visit a specific stroke

Examples of current projects:

- MobiHealth: Mobile Health Care (EU/FP5)
- TeleCare: ICT Applications for tele-consultation to increase efficiency and effectiveness of care (Freeband Applications)



patient. They have the information available when they are in their practice, but visiting a patient or driving from one patient to another, they want this information at hand, to be able to give full details to the neurologist. At present this is done by phone, and no-one records the information that can be useful again later in the process.”

“In the beginning of the care chain, a lot of information has to be entered into the system, whereas the doctor who has to do this, uses small part of this himself. ‘Why should I do this’, he or she might ask. But at the same time a handheld system can have something to offer in return, easing other typical ‘overhead’ tasks. If the doctor returns to his practice and can easily print the letters to specialists, then he on his turn profits from the possibilities the system offers. These are truly convincing advantages, I noticed.”

“As I am somewhat older than most of the students, teachers from the Business Information Systems (BIS)-department soon noticed me and asked: ‘Why are you doing this?’ After having heard that I am a doctor, they invited me to talk about a project they needed someone for. In that way I am returning to the medical field via ICT.

I admit I like it more this way than being a ‘real’ doctor. In discussions with computer scientists, I have noticed that it is an advantage to be a doctor myself. I know why they make certain choices, and I can communicate them to the technical people. On the other hand, I’m becoming an ICT-professional as well.”

“My current project is called TeleCare, in which we cooperate with Roessingh Research and Development, Atos Origin and the hospitals of Medisch Spectrum Twente, and I am graduating in Business Information Technology soon. After that, we hope to continue with a large project called FreeHealth. We see possibilities of co-operation with other CTIT-projects like MobiHealth. These projects all merge to create new solutions, I expect.”