



Skåne University Hospital, Malmö

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Petter Hannerz, Business Developer/Strategist,
University and Regional Laboratories Region Skåne

Fast transport of blood samples optimises flow and response times

Skåne University Hospital, Malmö has 600 beds and is one of the biggest hospitals in the region of Skåne in Sweden. Petter Hannerz, Business Developer/Strategist, University and Regional Laboratories Region Skåne, is responsible for the automation project at the laboratories at Skåne University Hospital, Malmö, including the Tempus600 project, whose aim is to optimise the transport of blood samples from the emergency room, the hospital departments and incoming samples from general practitioners. The overall goal is to save time, improve the working environment and optimise patient flow and treatment.

One of the biggest obstacles to the process right now is that samples must first be ordered in writing. This problem will soon be solved because electronic ordering of laboratory tests is part of the new regional IT platform, Skånes Digitala Vårdmiljö (SDV), which has now been purchased and is being prepared for introduction throughout the whole of Region Skåne.

Automation streamlines the flow of blood samples

The sample reception in Malmö works as a hub, receiving samples from the primary care units, from departments at the hospital and the blood collection function within the Clinical chemistry department. In total approximately 5,000 samples flow through the sample reception every day.

“Due to the extreme lack of space in, and in direct proximity to the laboratories, the sample reception

is situated at the ground floor together with the blood collection function. After years and years of walking and transporting samples in elevators, we were looking at finding a more effective way to transport the samples in the hospital,” says Petter Hannerz.

Petter Hannerz saw the Tempus600 system for the first time in 2012 and he believed that it was the perfect answer to the hospital’s search for fully automatic handling, transport and analysis of small clinical samples. Subsequently, the Management of Laboratory Medicine Region Skåne decided to invest in a Tempus600 Vita and in 2018, they decided to trial a Tempus600 Necto and at the same time help with the clinical evaluation of the system.

High throughput and even flow of samples

Necto was installed in the hospital’s sample reception unit in the ground floor, where it is used to transport incoming blood samples from General Practitioners and blood samples taken from patients in the hospital and departments. The samples are registered and inserted into the system, which organises and sends the samples to laboratories on the 2nd and 4th storey, respectively.

“The benefit of Necto is that we manage large throughput and send the samples at an even flow, so that the laboratories receive the samples at an even flow,” says Petter Hannerz.



Tempus600 Vita was installed in the hospital's emergency department and transports all blood samples individually from the department directly to the main laboratory located in another building 400 m away. Hospital staff are very pleased with the Vita sending station and for being able to send blood samples in Tempus. It is fast and efficient because the samples do not need to be packed and there is no waiting time. Hospital staff save time and the system is secure and reliable.

New workflow reduces response times

Today, the turnaround time of analyses performed in the 24/7 laboratory is set to maximum 2 hours for routine samples and 1 hour for urgent samples. That is the time from when the samples are registered until the analysis results from the laboratory are ready. Response times for samples that are sent from the emergency department using the Vita directly to the laboratory are most often shown to be under 60 minutes, but now from the time the sample is drawn to results are ready.

Petter Hannerz expects that major improvement and reduction in response times will be achieved once the system is fully automatic with electronic ordering and transport via Tempus600 or pneumatic tube. The Tempus600 systems are directly connected to the automated laboratory analysis equipment. This means that the samples can be handled at once on registration and the aim is to reduce response times for all samples to a maximum of 45 minutes, from sample is drawn to results are ready.

“Both of the Tempus systems have quickly proved their worth and we have decided to invest in the Necto and to purchase an extra sending module for the system.

In addition, another Vita is on the way and will be installed in another part of the emergency reception centre, so that the staff do not have to walk far with the samples. Many other departments also want a Tempus600 solution as soon as possible,” says Petter Hannerz.

Experiences from Necto and Vita adds value to planning of new hospital

The Region of Skåne is currently building new hospital buildings on the Skåne University Hospital Malmö site and by 2022, all of the laboratory functions in the hospital area will be located in a new laboratory and logistics building.

“With Necto and Vita, and by using other sample and IT logistics, we can now find different ways of working and can design better processes at the new hospital,” says Petter Hannerz.