ZEBRA PRINTERS HELP WITH BLOOD TESTS

University of Göttingen Hospital Relies on Space-Saving, Cost-Effective Barcode Printers

About University of Göttingen Hospital

The University of Göttingen Hospital's clinical chemistry lab processes some 1,500 patient samples and performs up to 12,000 analytic procedures each day. In total, this amounts to roughly 4.2 million analyses per year. In the light of this volume, the decision was made back in 1999 to provide access to all clinical findings from every clinical work station in the hospital using the ixserv clinical work management system offered by ixmid in Cologne. The system not only offers a completely web-based overview of clinical findings on a daily basis, but also enables cumulative findings to be reviewed quite quickly using a graphic presentation method that shows the progress that has been made. In 2003, Opus::L, a laboratory information system from OSM in Essen, was introduced to allow for clinical findings to be recorded more easily. This system was installed at all 90 work stations inside the main lab.

Safety Comes First

When it comes to patient identification, errors can potentially pose a threat to a patient's life. For this reason, the University of Göttingen Hospital uses label printers from Zebra Technologies to produce barcode labels that accurately identify patient samples and allow for laboratory tasks to be completed in a more efficient manner. Today, these labels are produced in advance, primarily for use with secondary test tube samples in order to meet the respective analytic requirements.

In the past, all work orders were printed out well in advance. However, these were often no longer up to date when they were finally needed for use. "Today, our daily lab routines are really built around label printers from Zebra," Dr. Hillmar Luthe explains.

Mobile Labeling at a Patient's Bedside

In the future, in order to be able to complete tasks directly at a patient's bedside that currently can only be completed at centrally-located work stations, they would like to use mobile label printers which communicate wirelessly. Both conventional and Zebra® QL 220™ mobile label printers are now undergoing parallel field testing. "Thus far, our experiences with Zebra printers have all been very positive. This is why we elected to participate in field testing to find out more about printing in a WLAN environment," explains Ernst Münster, Managing Director of ixmid.

Zebra® QL 220™ Printer

Customer
University of Göttingen Hospital

Industry
Healthcare

Challenge
To produce barcode labels that accurately identify patient samples and allow for laboratory tasks to be completed in a more efficient manner.

Zebra Solutions
Zebra LP 2844/24 desktop printers
Zebra QL 220 mobile label printers

Results
- Hardly any advance work orders need to be generated any more, thus producing annual savings of up to 60,000 Euro.
- Greater data security and increased efficiency with fewer errors.

Field trials are currently being performed in two wards and one outpatient clinic. All three are testing conventional stationary products. For comparison purposes, another ward has started to use wireless LAN technology. The goal is to investigate whether work processes can actually be organized in a more efficient manner. After all, notebooks and tablet PCs have all been equipped with WLAN interfaces on a standard basis.

Those participating in the pilot study are able to make direct use of the application software. Depending on which specific tests are necessary, the program recommends printing either only one label or multiple labels. As a result, the exact quantity of labels required for the actual samples is printed. Each and every label also has a barcode that contains information in a coded form, such as order number and material identification. The patient's last name, first name and date of birth are also printed adjacent to the barcode. This helps prevent errors from occurring.

Test Findings Are Transmitted Electronically
ixserv sends the actual test orders electronically to OPUS::L, the laboratory information system. The actual test-tube samples are then sent to the lab for further processing. Once all of the tests have been completed, the clinical results are transmitted back to ixserv electronically.

"Without barcode labels, it never would have been possible to organize work in such a manner. In selecting desktop printers from Zebra, we gained access to extremely durable, yet cost-effective printers that are easy to use as part of our overall system. They also really save us a lot of space," Münster says.

The broad range of Zebra desktop printers (LP 2844/24, TLP 2844/24, TLP 3842) was quite helpful, due to the fact that both direct thermal and thermal transfer labels can be produced in two separate resolutions (200 dpi and 300 dpi).

Major Cost Reductions Achieved
By relying on barcode labels, hardly any advance work orders need to be generated any more. This results in annual savings for the University of Göttingen Hospital of up to 60,000 Euro. Even more importantly, however, no more errors occur when samples are processed.

As the number of analytic procedures and the need for greater data security and efficiency increases, so will the use of barcode labels in healthcare. "The medical market for barcode printers continues to grow strongly. For this reason, being able to count on products from Zebra is extremely important to us," Ernst Münster concludes.