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Gdansk University Health Centre & Centre for Invasive Medicine

The aim of the Gdansk University Health Centre (UCK) is to provide healthcare services and promote good health. This includes using the latest medical technologies and treatment methods. The hospital provides healthcare services in diagnostics, rehabilitation as well as inpatient and outpatient treatment and focuses on highly specialised services within individual specialities. The University Health Centre is made up of clinics, consultation rooms, laboratories and other units, including long-term nursing and care services. In 2012 a new complex of buildings commenced operation – the Centre for Invasive Medicine - which is currently one of the newest hospitals in Europe. This new hospital is made up of 12 treatment departments, each with a minimum of 10 beds. The hospital can therefore accommodate up to 311 inpatients at any one time, in single or double rooms, and currently admits around 60 patients every day.

Customer

Gdansk University Health Centre & Centre for Invasive Medicine

Sector

Healthcare

Zebra Solution

Zebra LP/TLP2824 Plus, Zebra GK420T, Zebra S4M, Zebra TLP2844, Zebra P430i, Zebra HC100, and Zebra Z-Band Direct ID wristbands

Apart from their impressive life-saving equipment, a number of other interesting solutions are used in the hospital to facilitate the staff's work, as well as reduce patients' waiting times for, for example, test results. This includes a pneumatic tube transport system where tubes travel around the whole hospital sending samples to the laboratory, or medicines to a specific patient, in just a few seconds. As patients wear ID wristbands with a barcode, every document and every sample is now easily identifiable and matched to the correct person.

The whole centre has been computerised for many years. The ample hardware infrastructure has been further supplemented with wristband, label and plastic card printers - another aspect of the hospital's ongoing modernisation. These increase the safety of patients and medical staff, as well as streamlining the costs involved with treatment - a major consideration for the centre.

Patient identification

"The main priority in my job is to have an efficiently operating hospital which has been making patient safety a consideration for years. Thanks to Zebra printers, we have streamlined numerous processes. Using barcodes to uniquely identify people, things and processes ensures that everyone has a safe stay in hospital. Another very important aspect is that it has helped make treatment more cost-effective. Our analyses of laboratory tests have shown that implementing the ID system has reduced spending by 20%, which, in the case of such a large hospital, generates huge savings every month," says Arkadiusz Lendzion, Director of Technical Administration at the Centre.





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The Polish Ministry of Health's regulation of 20 September 2012 clearly states the obligation for ID wristbands to be worn by inpatients. The aim of introducing this was to speed up the identification process and ensure patients are identified correctly, thereby reducing the risk of error in the provision of any medical treatment. During the patient's stay in hospital, before any medical treatment is given, the patient's identity should be confirmed by scanning the coded information on the wristband.

As soon as the regulation came into force, UCK introduced waterproof, antibacterial Zebra Z Band Direct patient wristbands, which are suitable for adults, children and newborns alike. The centre operates several patient admission points: a planned admission point for adults, one for children, as well as admission points for both the maternity and student hospitals. Patients are given an ID wristband (printed using a Zebra HC100 printer) at all of these points. The information on the wristband includes the patient's full surname and first initial, the name of the department, the patient's registration number, a 1D code containing his/her ID number from the IT system, as well as a 2D barcode containing complete data (surname, first name, date of birth, gender etc.). At the same time, Zebra LP/TLP2824 Plus label printers have been installed at each of these admission points meaning that along with receiving the wristband, each patient is also given a set of labels featuring a barcode, which can be used on test samples and all the documentation generated during their stay in hospital.

"The University Health Centre is among the biggest hospitals in Poland. Two years ago there was further expansion with the addition of the newly built Centre for Invasive Medicine, which has now been joined by Gdansk's Student and Maternity Hospitals. This poses a major challenge in IT terms. The hospital's fundamental aim is to provide treatment and not to be implementing IT systems. Thanks to the efforts of many people in the hospital and from those companies supplying IT software and hardware, we have managed to streamline the work in our hospital. New technologies, such as barcodes, not only help us do our job, but have also helped streamline processes and make them more cost-effective,"

says Marcin Wojciechowski, ICT Manager at UCK.

70 Zebra LP/TLP2824 Plus printers have also been purchased for departments throughout the hospital, allowing barcode labels to be printed at any time, in any location.

Laboratory system

Thanks to the introduction of the integrated LIS LAB3000 IT system, inpatients and their tests can now be accurately identified and matched. Using Zebra's GK420t barcode printer has not only streamlined the process but has also reduced the laboratory's operating costs by an estimated 20% in recent years. Test samples have barcode labels fixed to them before being sent to the laboratory via the pneumatic tube system. In the laboratory they undergo internal labelling before being inserted into state-of-the-art analysers, equipped with barcode scanners. Barcode labelling technology saves on the amount of material collected, the working time spent and the costs involved in the treatment process. Just as importantly, they eliminate any identification errors.



Central pharmacy

The central pharmacy is the collection point for all the hospital's medicines before they are sent to other departments or specific individuals. It is also the place where drugs are prepared for chemotherapy, as well as prescription medications and nutritional products.

The University Health Centre's central pharmacy uses six Zebra GK420t printers and one Zebra S4M printer. The 10x10cm printed labels are used on nutrition bags, drip bags and bags containing anticancer drugs. Smaller labels are used on tubes or bottles containing drops and ointments prepared on site. Every medicine is labelled with a barcode allowing the drug to be accurately identified and indicating its intended use.



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Sterilisation room

The sterilisation process involves destroying all micro-organisms in order to achieve the sterile conditions required during hospitalisation. The Centre for Invasive Medicine has a state-of-the-art sterilisation room. Every smallest element is protected, with the collection container featuring a special label with a barcode, printed on Zebra GK420t printers.

Identification of medical staff and other hospital workers

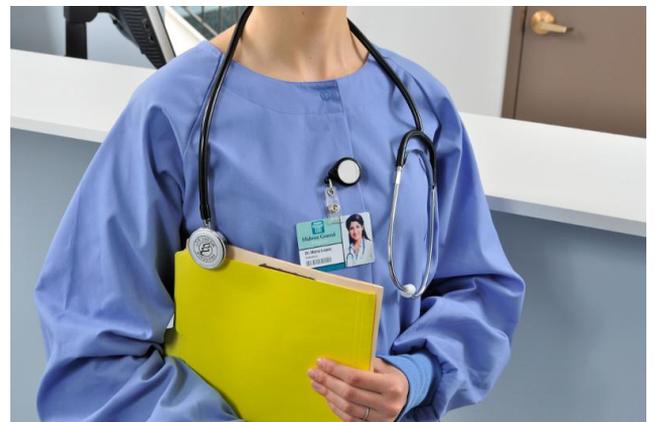
One of the most interesting projects implemented in the hospital involved the introduction of plastic ID security cards, produced by Zebra P430i printers. They have been specially designed, with different colours to differentiate between disciplines, functions, departments, etc. Every card features a surname, first name, function, photo and 1D barcode containing the employee number. All the important telephone numbers for the hospital are on the back of the card. The security cards are used to control the access to premises on the hospital grounds, based on the level of authorisation held by each individual. Zebra Card Studio Pro software has been purchased as part of the project, which automatically collects the information printed on the card as it is integrated into the main system. Interesting, too, is the option to produce ID cards for ancillary staff, such as security staff, cleaners, undertakers etc.

The printed cards project a positive and professional image of the hospital and instil trust in patients by clearly stating the functions carried out by the wearer.

Using card, label and ID wristband printers projects a positive image of the hospital as a cutting-edge, trustworthy medical institution. The barcode technology used also guarantees patient safety during the period they spend in hospital by uniquely identifying people, things and test samples or processes. Another extremely important consideration is that accurate identification of the costs involved in a patient's treatment, through the integration of the hospital's IT, has contributed to a significant decrease in expenditure.

SUMMARY:

- 85 Zebra LP/TLP2824 Plus printers – Patient admission points, departments, laboratory
- 10 Zebra GK420t printers – Laboratory, sterilisation room, central pharmacy
- 1 Zebra S4M printer – Central pharmacy
- 1 Zebra P430i printer – Printing of plastic and proximity cards
- 9 Zebra HC100 printers – Identification of patient at admission points



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