PANASONIC TOUGHBOOK CF-19 IN EMERGENCY MEDICAL SERVICE VEHICLES OF THE CZECH REPUBLIC

The Emergency Medical Service of the Vysocina Region, p.o. of the Czech Republic (Zdravotnická záchranná služba kraje Vysocina, p.o.) has started a pilot project and during the course of 2009 it will equip all emergency vehicles with the most modern durable laptops: Panasonic Toughbook CF-19. As a result, each and every vehicle will have permanent access to the integrated information system ePCR made by PURO-KLIMA, a.s. This is a one-of-a-kind solution in Central and Eastern Europe. A similar system, although not as complex, is being used by EMS paramedics in Western Europe. Uninterrupted access to vital information and efficient data processing were the chief reasons for implementing the system.
TOUGHBOOKS CF-19 IN MEDICAL EMERGENCY SERVICE VEHICLES

Any equipment for the EMS vehicles needs to be highly durable and must be installed in special anchoring systems to prevent the equipment from falling and injuring patients or crew when driving at high speed or upon impact. Durable Panasonic Toughbook laptops were therefore the obvious choice when selecting a computer. The Panasonic Toughbook CF-19 model is resistant to vibration, extreme temperatures, falls, spills and dust, making it suitable for the extreme conditions that may arise during the work of the emergency service. It offers a combination of traditional notebook and tablet (a mobile device controlled via a touch display). To switch to tablet mode, all that is required is to flip the 10.4” TFT display vertically over the keyboard. The paramedic can then enter data at the touch of a finger or using an electronic pen, making work in the field or on the road much easier.

IMMEDIATE, COMPLEX, ON-LINE ACCESS

When using the new Toughbooks, the entire operation is as follows. The dispatcher receives a call on the EMS phone line; they enter the patient data into the central PC: address and vital details of patient status or the characteristics of the operation logistics. This information is immediately displayed in the on-call crew’s computer, which is equipped with GPRS and GPS. The CF-19 supports connections to the Internet via GSM networks, GPRS, Edge, 3G and even HSPA at speeds of up to 7.2 Mbps. Every EMS paramedic and emergency vehicle driver is highly familiar with the region in which they work, but if they are dispatched to a location with which they are less familiar, they can obtain information from the navigation system. This avoids any problems in finding their way and guides them directly to their destination.

“And in the future the mobile durable laptops will also be linked to the IZIP medical system, serving to further expand the interconnection of “emergency information” on the patient. The dispatched team then has immediate, complex, online access to a lot of necessary information directly in the field,” says MUDr. Edita Richterová, a pre-hospital medical care assistant and chief physician at the medical operation centre ZZS KV, p.o.

However, the use of durable Panasonic laptops in the field not only offers paramedics vital preliminary information, it also gives them the opportunity, thanks to being connected to the devices monitoring the patient’s vital signs, to record and save the results of the readings and examinations directly in the system. Direct connection to two docking stations enables blood pressure or heart activity data to be stored.

ELECTRONIC MEDICAL DOCUMENTATION

While out on call, the paramedic will complete an electronic patient report. This can be completed by checking fields on the touch display and avoids the paramedic having to write out most of the data. The report is then sent to the emergency service’s information system automatically, eliminating subsequent rewriting of data and saving precious time. The ambulance is also equipped with a mobile printer which the crew uses to print complete documents. These are then submitted to staff at the medical facility, together with the patient. All reports in the system have a uniform layout, enabling easy subsequent evaluation of calls to which the emergency service has replied. The paramedic will record, store and submit all the data while still out in the field and is ready to go out again practically as soon as they return to the dispatch centre.

“The mobile support system for the dispatched crews produces uniform, complete and legible medical documentation and opens up other possibilities for acquiring, storing and transmitting medical data between the ZZS and other medical facilities,” MUDr. Richterová adds.

EFFICIENCY OF THE SOLUTION

Durable Panasonic Toughbook laptops are equipped with the latest Intel Core 2 DUO SU9300 processors, with a long battery lifetime and one of the best performance/power consumption ratios. The battery offers approximately 9 hours of operation on a single charge and the paramedic can use the device in the field for a very long time without a power network. The Toughbooks can also be charged while in the docking station inside the vehicle.

Their very positive experience is motivating system users to try to equip all the ZZS vehicles of the Vysočina Region with the modern and resilient laptops and access to the ePCR system from PURO-KLIMA, a.s. It is clear that there is great confidence in the efficiency of this modern solution and long-term use will certainly result in fundamental time-saving and improvements in the very demanding work of the paramedic.