Patient Monitoring from
NIHON KOHDEN
The NIHON KOHDEN system is uniquely user-friendly. Advanced development of new parameters improves non-invasive patient monitoring (e.g., PWTT, CO). From a technical standpoint, the multiconnector technology is setting benchmarks – in flexibility and economy. Thanks to the quality of the products, reliability is high and follow-up costs are low.
Networking – Basis for effective information management

Network and NetKonnect

NIHON KOHDEN offers three different communication options between patient monitors or patient and central monitors: hard-wired (LAN), wireless (WLAN) and digital telemetry.

The structure of the network is based on user requirements. NIHON KOHDEN recommends physically separating the patient monitoring network from the hospital network as the safest and most cost-efficient solution for networked patient monitoring. If preferred, the system can be integrated into the hospital network after on-site testing and provided NIHON KOHDEN specifications for secure patient monitoring are met.

The availability of a network structure is the basis for system-relevant functions of a patient monitoring system. The NIHON KOHDEN patient monitoring system includes an extraordinarily comprehensive inter-bed function. This function enables individual and targeted access to data on a remote patient monitor. Furthermore, it offers simultaneous display of data from patient monitors of an entire care group – independent of a central monitor.

The NetKonnect server, a PC-based server system, is the interface between the patient monitoring system and the hospital network. This interface is used for accessing vital signs data on a patient monitor in the network – from anywhere on the ward, in the hospital, or outside the hospital.

Documentation

To support clinical documentation, NIHON KOHDEN offers two interfaces for linking data management systems. One is a traditional RS-232C interface, which allows cost-efficient and simple patient monitor integration into the hospital’s data management architecture. The other is an HL7 gateway server (QP-993PK), which can bundle the communications from up to 128 patient monitors and forward them to the hospital’s data management systems. Numerical and graphical data such as arrhythmia results, results of our 12-channel ECG analysis function, full disclosure information and other data are transferred to the data management system. The data supplied by the NIHON KOHDEN patient monitoring system feeds directly into quality analyses and accounting tasks, thereby contributing to the efficiency and effectiveness of hospital operations.
Telemetry – Wireless Patient Monitoring

Tradition, Perspective, and Outlook

Telemetry has traditional significance in monitoring post-infarction patients. NIHON KOHDEN goes one step further, with the introduction of the first multiparameter transmitter integrated into the NIBP cuff (NIBP—noninvasive blood pressure). The transmitter is a comfortable and flexible way to monitor patients wirelessly, supporting early patient remobilization. The patient can get out of bed while his or her basic parameters are still being monitored.

In the USA and Australia, new approaches are being developed to improve patient monitoring and patient outcomes. Rapid Response Teams (also known as Medical Emergency Teams) are being put in place, which can contribute to lowering the in-patient mortality rate.* ** These Rapid Response Teams enable early intervention, contributing to the quality of patient care. They also contribute financially—early introduction of treatment measures after an episode can have a positive effect on the patient’s length of stay.

The NIHON KOHDEN multiparameter transmitter ZS-940PG provides data on four to seven criteria that were defined in the US and Australia for mobilising the Rapid Response Teams. It therefore supports the quality of patient monitoring, the clinical outcome and the cost-effectiveness of patient care.

** Institute for Healthcare Improvement (Cambridge, Massachusetts, USA), www.ihi.org

NIHON KOHDEN Transmitters

Monitor transmitter
For telemetric data transmission from bedside monitors to a central monitor.

Patient transmitter with single-lead ECG
Patient transmitters that optionally provide respiratory and pulse oximetry data in addition to ECG monitoring.

Patient transmitter with multi-lead ECG
Patient transmitters that optionally provide respiratory and pulse oximetry data in addition to multiple ECG leads.

Multiparameter patient transmitter
A patient transmitter with ECG monitoring, vital respiratory and pulse oximetry data and NIBP measurement integrated into the NIBP cuff.
NIHON KOHDEN accessories for patient monitoring: Focused on patient safety and user-friendliness

The range of NIHON KOHDEN SpO₂ probes is extremely accurate and robust. The probes from the BluPRO® family are also washable. With the new P311C probe, NIHON KOHDEN developed an SpO₂ probe that can remain at a measuring site longer than conventional probes. On average, a reusable SpO₂ probe must be relocated to a new measuring site after 4 hours. The new P311C probe doubles the time to 8 hours. It supports both care and work processes as well as patient safety.

In the field of capnography, NIHON KOHDEN has the most innovative and comprehensive portfolio of CO₂ sensors in patient monitoring. NIHON KOHDEN developed the first mainstream sensor (CapONE) for intubated and non-intubated patients. Thanks to its proximity to the patient, the sensor delivers top-quality measurement results, especially when monitoring non-intubated patients breathing oro-nasally or purely orally. Its versatility makes it a cost-effective solution.

The interface between the patient and the monitor also determines the quality and reliability of the patient monitoring system. In other words, accessory components contribute significantly to optimal patient monitoring. NIHON KOHDEN therefore works continually on refining its measuring algorithm for non-invasive blood pressure (NIBP). Hence patient movement during NIBP measurement is becoming less and less a factor. The new Yawara NIBP cuff, made of skin-friendly materials, virtually eliminates trauma to the patient’s arm.
Anesthesia

The intuitive operation of NIHON KOHDEN patient monitors supports the anesthetist particularly in the critical phases of anesthesia, such as start and termination. Concentration can remain largely on the patient. The supply of comprehensive hemodynamic and gas measurement values makes NIHON KOHDEN patient monitors a reliable partner to the anesthetist.

Intensive care

The flexibility, innovative components and reliability of the NIHON KOHDEN patient monitoring system enable the creation of both individual and yet economical solutions for every user. In particular, the documentation of patient vital signs is growing in importance, and NIHON KOHDEN is meeting that need with a broad array of numerical and graphical patient data. The data is made available by the HL7 Gateway Server from NIHON KOHDEN.

Neonatal and Pediatric ICU

To adequately monitor rapid hemodynamic changes in infants, a wealth of data is needed. NIHON KOHDEN supports this requirement through different OCRGs (oxycardiorespiragrams). For this area of care in particular, NIHON KOHDEN offers specially developed $\text{SpO}_2$ probes, NIBP cuffs, ECG leads and other accessories.