This is what drives us: Improving Acute Care

We envision a future where medical devices are connected as systems in high acuity environments and interact with one another in a safe and secure network enabling new clinical applications that improve the efficiency and quality of care that is being delivered.

Let us lead you into the future of connectivity in intensive care units with our integrated solutions, services and expertise that:

- Improve clinical outcomes
- Optimise workflows
- Reduce treatment costs
- Increase staff and patient safety

This is why we are Your Specialist in Acute Care.
Ensure future-readiness

Interoperability is the ability to seamlessly, automatically and securely exchange interpretable data between devices and systems within a network in a standardised way without technical restrictions.[1] [2] [3]

Interoperable medical technologies are used best to actively enhance human capabilities in delivering care, not replacing them.

As Your Specialist in Acute Care, we are striving for:

- **Data Integration** into hospital EMR systems for improved decision-making
- Workflow-supporting **Alarm Management** solutions
- **Modern Remote Care** technologies supporting healthcare workers
- Interoperability-based **Assisted Therapies** to improve outcomes at the point-of-care
- **Hospital Data Analytics** to leverage the power of data to increase efficiency and drive health outcomes
- Value-adding **Digital Services** to keep system performance at peak levels
- A high level of **Cybersecurity** to maintain system uptime and keep assets secure
Electronic documentation into patient records makes data available in a more timely manner and can significantly reduce errors that are a potential threat to patient safety. It contributes to improved delivery of care by providing a decision-supporting integrated database and improving staff satisfaction by streamlining clinical and administrative processes for data management.

87% of physicians perceive administrative tasks as the primary source of the increasing burden of job-related stress. Symptoms of burnout can be observed in nearly half of physicians putting patient safety potentially at risk.

Create higher efficiency in administrative workflows with electronic documentation
- Reduction of errors in data files through automated data management processes
- Less time spent on administrative tasks for healthcare workers

Achieve seamless connectivity to electronic medical records
- Standard-compliant data export in HL7 formats to hospital systems
- Integration into HL7-compatible electronic medical records
- Consistent time stamps for transported data packages*

Access comprehensive information at the patient’s bedside
- Import of patient data to the bedside from hospital systems
- Improved reliability of displayed information with medical-grade data*

* Medical-grade data can be provided with infrastructure based on ISO/IEEE 11073-SDC principles.
Intelligent Alarm Management reduces stress levels

Up to 350 alarms a day can occur at an intensive care bed. Of these alarms, up to 95% are clinically irrelevant leading to alarm fatigue amongst caregivers.

In a busy critical care unit with several patients, the volume of audible alarms from medical devices is typically high. Signals can overlap and compete for the attention of care providers. Clinical alarms need to be managed correctly to reduce the stress levels for both patients and healthcare workers.

As the number of medical devices featuring clinical alarms rises, and more patients are connected to them, the alarm management challenge grows more complex.

Receive patient alarm status notifications wherever needed

– Distribution of alerts of patient monitors and ventilators to healthcare staff’s mobile devices for flexible and prioritised delivery of care
– Decision-supporting alerts delivering context information with our Alarm Distribution System
– Monitoring of health conditions of ICU patients with Infinity CentralStation

Reduce stress levels and alarm fatigue

– Reduction of false-positive alarms as a part of our tailored consultancy services
– Derive actionable insights to optimise alarm management procedures based on our Alarm History Analytics application
– Smart alarm validation to reduce clinically irrelevant alarms with the Infinity Acute Care System

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Modern technologies enable clinical information to be available wherever it is needed throughout a hospital. Utilising remote and mobile capabilities allows to bridge distances within clinical processes around the point-of-care. Additionally, staff safety can be increased by reducing exposure to potentially infectious patients.

**Access to data wherever and whenever it is needed**
- View near real-time data on mobile devices to supervise patient status with Mobile Patient Watch
- Receive comprehensive, real-time and retrospective patient data as well as fast access to alarm notifications with Infinity CentralStation
- Provide continuous surveillance for mobile patients with the Infinity M300/300+ Telemetry monitoring solution

**Protect staff with remote care capabilities**
- Enable clinical supervision of patients from remote locations with Mobile Patient Watch
- Remotely view data and control Evita ventilator settings* from an actionable vicinity
- Remote access to hemodynamics and ventilation data with the independent display for the Infinity Acute Care System

* The user must remain in hearing distance of the acoustic alarm signals.

The International Council of Nurses (ICN) claims that at least 90,000 healthcare workers have been infected during the Covid-19 pandemic just within the first four months of the outbreak.[7]
Connectivity impacts the delivery of care all over the world

“Today, work processes have become simpler. Every patient gets his monitor at admission and drives through the whole house with it. To CT, the OR and ICU. This way, we have no data loss through monitor changes.”

Björn Rahn, Head of Intensive Care and Medical Functions, Marienkrankenhaus, Hamburg, Germany

“The great advantage of Wi-Fi for patient monitoring is that you can have an unbroken chain of patient data from the time the patient enters the hospital until they are no longer in our care.”

Dr. Åke Jonsson, Department of Anesthesia and Intensive Care, Sunderby Hospital, Luleå, Sweden

“Working together, Dräger and Avera Heart Hospital were able to reduce the average of alarms per bed/per day by 40%. This enables the hospital to reduce the noise, nuisance alarms, redundant alarms, and too tightly set parameters – and still keep patients safe.”

Avera Heart Hospital, South Dakota, USA

“The thanks to the standardised and uniform structure of equipment, the quality of care can be maintained throughout the duration of the intensive care treatment.”

Dr. Gianni Vento, Head of the NICU department Policlinico Universitario “Agostino Gemelli”, Rome, Italy
Protect patients and streamline workflows with Assisted Therapies

With efforts for professional communication and documentation being high, clinicians in an ICU only spend 17% of their worktime on direct patient care. With Assisted Therapies, clinicians can enhance the protection of patients and improve their outcomes while streamlining workflows for healthcare workers at the same time.

Ventilated ICU patients need close attention to avoid severe lung diseases like VILI or ARDS. Efficient workflows and availability of clinical insights are important aspects of effective care delivery. Assisting technologies can support to enhance the protection of patients and improve their outcomes while streamlining workflows for healthcare workers at the same time.

Individualised treatments for patients

- Review gathered ventilation and hemodynamic data to analyse a patient’s respiratory condition and therapy effects through our Infinity CentralStation VentCentral application for our Infinity patient monitors
- Visualise and analyse ventilation information to evaluate and perform treatment strategies such as lung recruitment manoeuvres with PulmoVista 500 and Evita V-family
- Individualise recruitment manoeuvres by visualising the effects on lung mechanics and hemodynamic parameters with the Infinity Acute Care System’s analysis tool

Reduce work steps for caregivers

- Seamlessly monitor your patient from bedside to transport without interruption and no loss of data or parameters with the Infinity M540
Utilise Hospital Data Analytics for better decision-making

Data is a precious commodity - but are you using its full potential? We enable and support you in generating valuable insights out of available data from therapy devices and patient monitors, which have typically remained unused. Increase efficiency and drive health outcomes in hospitals with data-based decision making.

Our tailored process enhancement strategies include:

- Alarm consultancy services bringing in our expertise
- Professional services to strengthen the network infrastructure
- Training of the staff in the ICU environment
- Support for the implementation of efficient workflows

Leverage the power of data through customer-specific analysis

- Analyse recorded alarms to optimise systematic process flows, alarm policies, staff planning, and alarm management efficiencies with Alarm History Analytics

Working together, Dräger and Avera Heart Hospital evaluated the current state of alarms, and after initial changes, they were able to reduce the average per bed/per day alarm by 40%. [9]
Maintaining a heterogeneous installed base of medical devices and software solutions is a complex and challenging task. Enhance operational efficiencies and keep system performance at high levels with digital services and solutions.

Keep system performance up with Digital Services

Up to 75% of medical devices around an ICU bed are not integrated with the hospital’s information systems which increases efforts for maintaining uptime of the installed base.

Increase uptime within the medical device fleet
- Better first-time-fix-rate by opening a remote help ticket
- Enable secured data transport with digital certificates on medical devices and service tools. Conveniently have the security certificates managed centrally by Dräger.

Improve transparency on the fleet’s assets
- Ability to manage and distribute software updates remotely
- Easier access to networked devices for service purposes

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We implement security measures in devices, systems and data exchange

- Product development and lifecycle management with security in mind
- Dedicated product security managers*
- Security level checks with penetration tests during product development*
- Threat analysis during product development to discover structural weaknesses and take countermeasures*

Limit the access to data and systems to the right users

- Encryption of transported data to increase integrity and confidentiality**
- Digital certificate-based authentication mechanism to regulate data access**
- Authorisation of devices via whitelists**

* Not applicable for all legacy devices and systems
** Enabled by network infrastructure based on ISO/IEEE 11073-SDC principles

In the ICU, it is compulsory that therapy and monitoring devices are protected against unauthorised access and manipulation. Our goal is to help ensure continuous delivery of care while protecting assets and sensitive data of hospitals and their patients in sync with regulations.

Studies indicate that 91% of healthcare organisations have had at least one data breach involving the exposure, misuse or theft of sensitive patient data.

Your Cybersecurity is our priority
Our System Offerings

As Your Specialist in Acute Care, we know that connected solutions play a vital role in driving patient care outcomes and efficiency. If you want to learn more about Medical Device Interoperability from Dräger, visit www.draeger.com

Ventilation and Respiratory Monitoring

Systems Solutions

Patient Monitoring

Services

Connected Maintenance and Professional Services

References