

Risk management in patient work

Patient safety is a crucial part of quality health care and nursing. Intelligent care is multiprofessional. The communication between nursing staff, patients and families must be seamless.

Anna Hurmalainen, toimitus@mediaplanet.com

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The Finnish company Megical has developed an intelligent care path concept to ensure patient safety and quality. A quick and easy-to-use checklist on an iPad prevents anomalies and provides a real-time situational awareness of the safety of care. Analysing the data collected from the care path provides valuable information about the hospital's processes.

With his background as a commercial airline pilot, CEO **Mika Pyyhtiä** understands the importance of systematic safety. Two malpractice cases in the family showed him in practice how im-

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portant small, recurring details are for safety and good care.

– An intelligent checklist significantly helps prevent mistakes in routine procedures. A tool that systematically analyses reports of anomalies can identify all the anomalies in procedures and issue alerts. Routines that work properly are essential in risk management, says Pyyhtiä.

Patient safety becomes a quality factor

Repeated human errors are one of the challenges for patient safety. The intelligent checklist has been customised for each care path, thereby focusing on eliminating mis-



Markus Torkki
Chief medical officer,
orthopaediatrician,
Pohjola Hospital
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Antti Vento
Director, Heart Surgeon,
Helsinki University Hospital
Heart and Lung Centre
PHOTO: ANNI HARTIKAINEN



Mika Pyyhtiä
CEO, Megical
PHOTO: MEGICAL



takes that are typical for the operation.

Launched in the spring of 2017, the software has been adopted by the Pohjola Hospital and the Helsinki University Hospital Heart and Lung Centre, among others.

– The quality and safety of the patient's entire care path are ensured through Megical's iPad app. The infection risk after surgery, for example, is reduced by giving a correctly timed dose of antibiotics before surgery. The effectiveness of the active ingredient concentration will decrease if the operating schedule changes, says chief medical officer and orthopaediatrician **Markus Torkki** from Pohjo-

la Hospital.

According to Torkki, user experiences have already been amazing. The transparency of the nursing process, immediate reaction to anomalies and corrective actions all improve patient safety. Torkki also commends the lowered threshold for reporting and smooth use of the iPad. A uniform and standardised care path is in the patient's best interest.

Checklists as part of an intelligent care path

There is a need for a real-time system that ensures quality and safety in Finland and abroad. An intelligent care path enables transparent operation within the unit, between health care facilities and, if necessary, with the authorities. Patients' right to quality care must be guaranteed.

– In challenging surgeries, mistakes are minimised through good communication between the nur-

sing staff: what is going to be done at various stages and, particularly, at the right time. Everyone must be up-to-date in order to eliminate the risk of complications, emphasises director and heart surgeon **Antti Vento** from the Helsinki University Hospital Heart and Lung Centre.

Checklists are tailored together with the nursing staff to fit each operation. The essential parts of each procedure are marked as completed point by point. Double-checking helps reduce mistakes. Seamless cooperation is vital, and the team is only as strong as its weakest link, Vento points out.

According to Antti Vento, the best things about the system that ensure patient safety are its ease-of-use and safety. The system has been built in such a way that the software will continue to operate independently even during a telecommunications breakdown.

Safety level measuring and re-

porting are future competitive factors when comparing service producers.

Safety analysed by artificial intelligence

The reporting system enables reporting anomalies to the nursing staff within seconds. With artificial intelligence, the data can be analysed and utilised together with data from other materials.

– Next year, we'll add a capability for artificial intelligence to the system. Structural data about the care path that has been collected in the system will be analysed in an entirely new way. The situational awareness provided by the software highlights not only the challenges, but also the operating models that lead to a care path that is optimal for the customer, Mika Pyyhtiä envisions.

Megical helps its customers become forerunners in ensuring safety. ■