Interreg Danube Region

Co-funded by the European Union

DIGI4Care

Ultrasound right at the scene

Policy Factsheet

Recommendations to support national decision making in taking up digital medical technologies

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Key messages

1. **Targeted use of ultrasound makes it possible to quickly identify life-threatening causes by answering clinical yes/no questions and to guide treatment decisions immediately.**
2. **Portable point-of-care ultrasound can support earlier and better-informed decisions in prehospital patient pathway management.**
3. **Moving from traditional classroom-based training to a blended learning approach offers enormous benefits by combining e-learning and remote coaching.**

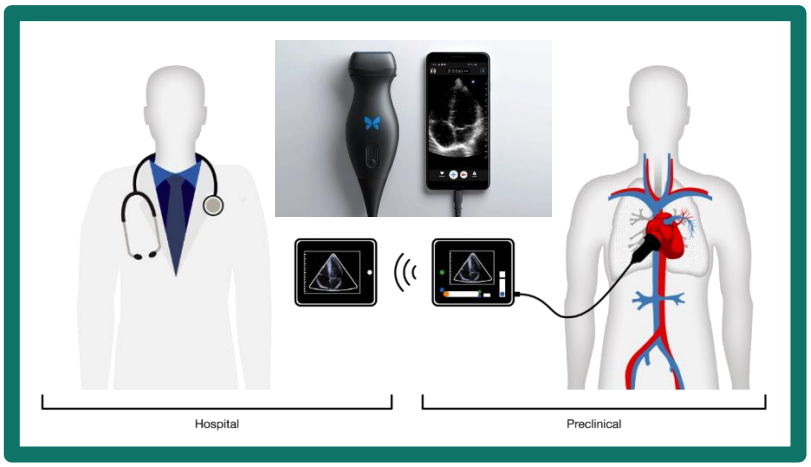
Learnings & Results

The INTERREG Danube Transnational Project "Transforming patient journeys through digital innovation in healthcare across the Danube Region", short **DIGI4Care**, has funded a pilot on in introducing and **testing portable point-of-care ultrasound (POCUS) in emergency and prehospital care**, focusing on building practical ultrasound competencies among healthcare professionals.
The pilot was implemented by the Ludwig Boltzmann Institute (LBI) for Digital Health and Patient Safety in 2025.

The pilot compared traditional face-to-face hands-on training in terms of equipped prehospital emergency personnel with ultrasound skills, with an equivalent teledidactic hands-on approach that combined a standardised e-learning course with remote, real-time practical coaching. The training focused on key POCUS competencies, including the eFAST protocol, and was **aimed at non-medical emergency responders**.
As part of the project, a **portable ultrasound device** (Butterfly iQ3) was used**, supported by digital solutions for training and remote supervision**. The probe was operated via a dedicated app on a standard tablet (Apple iOS), enabling the capture and display of ultrasound images. **Telecommunication and distance learning solutions** were used for the teledidactic practical training and remote supervision by experts, so that the expert could view the ultrasound images and guide the trainees / examinees in real time.

Key findings

- The pilot learnings shows that remote practical coaching is feasible and well received, with participants´ self-confidence and cognitive load being comparable to those of a traditional face-to-face training course.
- The standardised distance learning model addresses key bottlenecks in access to capacity-building – namely limited trainer capacity and logistical challenges associated with face-to-face training – whilst placing greater emphasis on the need for technical preparation prior to the training sessions.
- Standardised distance learning models offer the potential to drive forward the capacity-building required for integrated care, overcome logistical obstacles and ensure consistent quality across borders.
- POCUS has shown promise in improving patient outcomes and potentially reducing morbidity and mortality.



Benefits for policymakers

- Improved access to relevant training can facilitate the introduction and maintenance of integrated care pathways.
- The model offers the potential for strengthening emergency care capabilities through staff development programmes, further budget for professional development and digital health initiatives.
- Improvements in access to standardised training, faster development of staff skills, and potential subsequent improvements in pre-clinical assessment and patient care, are among the benefits, as these enable earlier and more informed decisions to be made.
- The pilot demonstrates a scalable training pathway combining e-learning with standardised practical coaching and structured assessment.
- Future implementation could be integrated within existing continuing professional education programmes for emergency healthcare professionals, ambulance services and air rescue organisations.

Recommendations for policymakers

Capacity building
Drive forward the development, testing and implementation of standardised distance learning models to rapidly expand capacity and thereby support the optimisation of healthcare supply chains.

Regulatory measures
Support the implementation of CE-certified portable ultrasound devices within their intended scope of use from a regulatory perspective, underpinned by GDPR-compliant management of training and operational data.

Quality controls
Establish a monitoring and quality assurance approach to support continuous improvement and evidence-based decisions.