

DIGI4Care Final Fact Sheet - Pilot 2

POCUS-TT: tele-didactic point-of-care ultrasound training for prehospital emergency personnel

1. Title and overview

Title of the Clinical Pilot

POCUS-TT: Point-of-care ultrasound teledidactic teaching for prehospital emergency personnel.

Brief summary of objectives and scope

Pilot 2 introduced portable point-of-care ultrasound (POCUS) combined with telemedicine-supported expert consultation and remote hands-on training. The pilot compared conventional face-to-face hands-on training with tele-didactic hands-on training after a standardized e-learning course.

The pilot was implemented in Austria and Hungary and targeted non-physician EMS providers. In Hungary, trained staff also applied POCUS in real patient care with telemedicine-based expert supervision, testing the feasibility of prehospital decision support.

Pilot timeline and current phase

Q1-Q4 2025; all planned training, assessment and independent expert evaluation phases completed.

2. Key milestones achieved

- Phase 1 recruitment completed.
- Phase 2 e-learning completed, covering POCUS fundamentals and protocol-focused content.
- Phase 3 hands-on training completed in both face-to-face and tele-didactic arms.
- Phase 4 assessment completed, including participant performance, feedback and cognitive load measurement.
- Phase 5 independent expert evaluation completed; preliminary results were presented at the Austrian Association of Anesthesiology annual congress (AIC 2025).

3. Participant and site update

Number of participants enrolled vs. target and geographical coverage

Site	Participants / scope	Target status
Austria	45 EMS providers planned and enrolled as part of the 90-participant multicentre study.	Target achieved.
Hungary	45 EMS providers planned and enrolled; clinical extension tested tele-supervised POCUS in real emergency care.	Target achieved; clinical deployment constrained by regulatory and technical issues.

4. Technology deployment and usage

Status of digital technologies implemented

Technology	Deployment and usage
Ultrasound device	Handheld ultrasound device used with tablet-based app; initial Butterfly iQ3 use in Hungary required replacement by GE Vscan Air due to technical issues.
Tele-teaching / telemedicine	Video call, screen sharing and remote expert guidance enabled tele-didactic training and, in Hungary, supervised patient-care use.
Evaluation instruments	OSAUS for ultrasound skills; NASA-TLX for cognitive load; TEI and subjective participant feedback.

5. Data and findings

Data collection and assessment

The evaluation combined site-specific activity data, technology logs or platform outputs where available, patient and HCP feedback, and structured instruments such as TAM, STAM, SUS, NASA-TLX, TEI, SF-36 or study-specific satisfaction questionnaires as applicable to the pilot.

Site-specific results

Area	Evaluation finding
Training acceptance	Participants reported similar self-confidence after both training models: 73.3% of the face-to-face group and 77.8% of the tele-didactic group felt confident or very confident in performing/interpreting eFAST.
Cognitive load	NASA-TLX was comparable during training (38.3 +/- 14.8 face-to-face vs 41.9 +/- 22.6 tele-didactic) and assessment (50.5 +/- 13.2 vs 53.8 +/- 15.4).
Patient perspective	Direct patient interaction with the technology was limited; no significant negative impact on patient care processes was observed during Hungarian real-care use.
System relevance	The model can expand access to standardized POCUS training, reduce dependence on physical instructor availability and support earlier prehospital routing decisions.

6. Challenges and risk management

Identified issues

- In Hungary, the tele-software component of the ultrasound solution cannot currently be used in routine clinical practice due to regulatory constraints.
- Hungary experienced technical issues with the initial Butterfly iQ3 device, requiring a switch to GE Vscan Air.
- Tele-didactic training depends on stable connectivity, adequate audiovisual setup and synchronized expert availability.
- Routine scale-up requires a clear financing and staffing model for specialist supervision time.

Actions taken or proposed to mitigate risks

Pilot teams used local workflow adaptation, additional training, technical support, equipment replacement or relocation, improved scheduling/referral arrangements, and supplier engagement to maintain implementation feasibility.

7. Next steps and adjustments

Planned activities / scale-up adjustments

- Map regulatory requirements and identify compliant telemedicine configurations for routine clinical use in Hungary.
- Develop a scale-up package: minimum technical requirements, SOPs, training materials and troubleshooting pathway.
- Define a hub-and-spoke or regional on-call model for expert supervision, including response times and responsibilities.
- Consolidate final Phase 5 outcomes, including OSAUS results and participant feedback, into the project evidence base.

8. Contact information

Key contacts for further information or questions

DIGI4Care Pilot 2 partner teams in Austria and Hungary;