

DIGI4Care Final Fact Sheet - Pilot 3

Digital cardiac rehabilitation and long-term monitoring in post-clinical care

1. Title and overview

Title of the Clinical Pilot

Digital monitoring in follow-up, rehabilitation and long-term management of cardiovascular patients.

Brief summary of objectives and scope

Pilot 3 evaluated wearable-based and platform-supported monitoring in cardiovascular follow-up and rehabilitation. The pilot covered Austria, Hungary, Romania and Bulgaria and focused on patients with acute coronary syndrome, chronic heart failure, post-ICU cardiovascular conditions, CVD with diabetes and related high-risk groups.

The intervention combined wearable activity trackers, blood pressure monitors, smart scales, mobile applications and clinician monitoring dashboards. Romania also integrated Kelvin Health AI-based thermography for peripheral artery disease screening.

Pilot timeline and current phase

2025-2026 implementation and evaluation, with timelines varying by site due to procurement, ethics and recruitment conditions.

2. Key milestones achieved

- Procurement and deployment of wearable devices, BP monitors, smart scales and clinician monitoring platforms.
- Development of onboarding procedures, patient information and consent packages.
- Staff training and initiation of SF-36, SUS and TAM questionnaire data collection.
- Romania and Bulgaria completed planned recruitment and onboarding.
- Austria and Hungary completed preparatory and deployment activities but faced recruitment limitations.

3. Participant and site update

Number of participants enrolled vs. target and geographical coverage

Site	Participants / scope	Target status
Romania	94 patients total: 60 in intervention groups and 34 control; Kelvin Health thermography used for PAD screening in high-risk patients.	Recruitment target achieved.
Bulgaria	90 participants across three groups, including device-only and actively monitored pathways.	Recruitment target achieved.
Austria	Post-ICU follow-up population; enrolment completed but below planned numbers due to limited eligible ICU follow-up population.	Target not fully achieved.
Hungary	Control group enrolled; intervention group participation limited. Approximately 50-60% of eligible patients declined or were excluded due to technical or motivational barriers.	Below target.

4. Technology deployment and usage

Status of digital technologies implemented

Technology	Deployment and usage
Wearables	Garmin Vivosmart for heart rate, steps and activity monitoring.
Home monitoring	Bluetooth OMRON BP monitors and Garmin Index S2 smart scales.

Apps/platforms	Garmin Connect for patient visualization and Fitrockr clinician platform for aggregated monitoring.
Romania innovation	Kelvin Health AI-based thermography for non-invasive PAD screening and risk assessment.
Outcomes	Daily steps, heart rate, BP, weight, oxygen saturation where applicable, SF-36, SUS and TAM data.

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

Site	Acceptance and findings
Romania	Over 80% positive attitudes toward wearables. TAM showed optimal median scores for perceived usefulness and ease of use; SUS median 82.5. More than 90% used fitness trackers consistently, with 68.97% maintaining continuous connection. Significant improvements were reported in vitality, social functioning, pain perception, emotional limitations and perceived health status.
Bulgaria	Good usability: median SUS 82.5, mean about 76.6. Higher compliance in the actively monitored group: 19 of 30 used all three devices regularly. SF-36 improvements were significant in several domains, including physical functioning, role limitations, emotional well-being, social functioning and health change.
Austria	Patients were generally positive, especially motivated ICU survivors tracking recovery. Concerns related to Fitrockr visualization, clarity of bi-weekly summaries, device screen size and charging.
Hungary	Acceptance was a major barrier before enrolment; lack of smartphone/internet and low motivation limited participation. Enrolled participants reported more positive than negative initial feedback.

6. Challenges and risk management

Identified issues

- Device-smartphone compatibility issues, particularly with older Android systems.
- Synchronization interruptions between Garmin/Apple/Google ecosystems and Fitrockr.
- Smart scale pairing and Wi-Fi issues.
- Legal restrictions limiting proprietary app use in Hungary and Austria.
- Digital literacy, internet access and patient motivation strongly influenced recruitment and adherence.
- Platform dashboards and health summaries need clearer visualization for clinical workflows.

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

- Introduce compatibility checks before enrolment and simpler onboarding instructions.
- Strengthen technical support and automated synchronization validation.
- Reduce multi-layer data synchronization where feasible.
- Improve clinician dashboards and patient-facing summaries.
- Use structured engagement and coaching for patients at risk of low adherence.

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- Plan recruitment realistically for specialized pathways such as post-ICU follow-up.

8. Contact information

Key contacts for further information or questions

DIGI4Care Pilot 3 partner teams in Austria, Hungary, Romania and Bulgaria;