



Co-funded by
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HEALTHCHAIN STORIES

COMPASS: DETECTING HIDDEN DISTRESS. PROTECTING PATIENT RECOVERY

THE NEED

Mental distress – in this context-levels of mental, physical, and emotional stress can be high before and after surgery (common causes of stress include anything that results in pain, including illness and surgery)- can be alert or sign that patient has medical problems after discharge from hospital and he or she for various reasons does not want to speak about them with family, relatives, or physician. Detecting mental distress in individuals can be challenging because it often involves subjective experiences and emotions.

The main objective is to improve patient self-assessment and safety after discharge from hospital (and quality of life). As a secondary objective the Challenger also wants to learn the acceptance of tailored medical mobile solutions in elderly and to learn how to easily integrate 3rd party mobile solutions through its corporate IT system. After assessing the mental distress, the application should put the patient in contact with physician or member of family.



THE HEALTHCHAIN SUPPORT

HealthChain supported Healthcare Organisations in identifying their innovation challenges and selecting companies to address them. They worked closely as an interregional team to co-create, test, and validate a solution aligned with real clinical workflows, patient needs, and organisational constraints. The project provided financial and business support to boost the solution's market-readiness and commercialisation.



THE SOLUTION

The Compass solution addresses post-surgical mental distress through an AI-powered monitoring system. It features the mPatient mobile app for self-assessment and wearable integration, and a clinician dashboard for medical oversight. Using the VR-12 method and digital biomarkers, the system identifies hidden risks in adult patients. Integrated with hospital EHR via HL7 FHIR, it provides a Slovene-language, user-friendly tool to alert families and doctors to medical complications.



IMPACT

The solution transformed the post-operative experience by bridging the communication gap between patients and care teams, resulting in safer and more efficient recovery.

- Faster, more informed decision-making and reduced manual reporting tasks without increasing administrative burdens.
- Increased awareness of recovery progress led to better adherence to post-operative protocols. The chatbot interface lowered technical barriers, making the digital tool accessible to a wider demographic of users.
- Transition of the solution from a pilot-stage prototype to a business-ready product with a validated B2B SaaS model.

OUTCOMES

The pilot successfully met its technical benchmarks, ensuring that the integration of wearable data and patient input is both stable and compliant. It completed the validation study with 20 patients, meeting all primary research targets.

- Achieved a measurable increase of up to 10 points on the VR-12 scale, indicating a significant boost in patient-reported well-being.
- Achieved a 20% reduction in emergency room visits for post-surgical complications and a 10% reduction in non-emergency follow-up visits.
- Demonstrated robust real-time synchronization between Fitbit wearables, the mPatient app, and clinician dashboards.
- Validated the normalization of physiological biomarkers (heart rate, sleep) into FHIR-compliant clinical models.
- High engagement rates achieved through questionnaire completion about the implementation of conversational AI and natural language interfaces.

SUSTAINABILITY

The project has a defined roadmap for long-term growth and commercial viability:

- Surgical Centre Rožna dolina (KSRD) will continue to serve as a permanent validation hub for iterative product refinement and long-term longitudinal data collection. Partnerships have already been secured for further deployment at two Slovenian hospitals.
- A two-phase strategy is in place, starting with early adopters (two Slovenian hospitals) in Phase 1 (2026–2027), followed by full market scale-up in Phase 2 (2027–2030).
- Securing CE marking (Class IIa Medical Device) to enable deployment beyond research exemptions.
- Expansion beyond Slovenia and neighbouring regions like Austria and Croatia.
- A tiered, volume-based subscription pricing model has been established to ensure financial sustainability and accessibility for different sizes of healthcare institutions.

TESTIMONIALS

“HealthChain was a catalyst for our growth, by bringing together hospitals, patients, investors, mentors and top-tier trainers into one powerful ecosystem. By co-creating directly with patients and clinicians, we transformed real-world needs into a product built for impact, scalability and true clinical relevance.”

