
POSTER ABSTRACT**Enhancing Telemonitoring in Transmural Care: Cataloging Telemonitoring Technologies and Platforms**

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Background: In light of an aging population and resource constraints in healthcare, digital health technologies show potential to ensure continuity of care, improve patient outcomes and reduce hospitalizations. However, telemonitoring remains underutilized in transmural care as healthcare organizations face barriers like insufficient technical expertise, limited knowledge of available technologies, and regulatory complexities. This project aims to bridge these gaps by providing healthcare professionals, technology companies, and legal advisors with an interactive catalog of telemonitoring solutions, along with essential technical and legal guidance on the implementation of telemonitoring.

Approach: To investigate the needs and barriers in adopting telemonitoring, we conducted an online survey with 12 members of the project's steering committee, consisting of healthcare and technology professionals. The survey gathered information on current telemonitoring use, challenges, and desired features for an interactive catalog. Responses were qualitatively analyzed and coded to identify key themes.

To validate and expand these findings, a co-creation session was organized with 7 participants from hospitals and home care organizations, using a design thinking approach. This session examined challenges, catalog preferences, and potential use cases to support broader telemonitoring implementation. The input was thematically analyzed to shape the catalog's development and ensure alignment with stakeholder needs.

Sensor selection for the catalog was based on a market analysis using internet searches, covering both medical and consumer devices valuable for health monitoring. The catalog includes a wide range of sensors, from wearables and oximeters to smart drinkware.

Results: The survey revealed that 50% (6 out of 12) of respondents currently use telemonitoring platforms. However, compatibility, interoperability, high costs and limited technical knowledge were common challenges. Financial barriers were noted as the most significant obstacle. Respondents expressed a need for detailed information on sensor compatibility, pricing, connectivity, and data

accessibility. Telemonitoring was seen as beneficial for supporting healthcare staff, enhancing patient autonomy, and accelerating recovery, with a particular focus on cardiac applications.

The co-creation session refined these insights, highlighting the need for information on pricing, technical support, user experiences, and a comprehensive overview of telemonitoring technologies. Technical specifications and practical usability were also prioritized. Based on these findings, we developed an interactive catalog in AirTable featuring telemonitoring technologies such as wearables, remote monitoring systems, and communication platforms. The catalog provides information on specifications, functionality, pricing, and legal aspects (e.g., privacy, ISO compliance) and includes filters to aid decision-making. The catalog, technical roadmap, and legal guidelines are embedded within the project website to support telemonitoring implementation in transmural care.

Implications: By providing a comprehensive overview of telemonitoring options, the project aims to promote digital health adoption, improving (transmural) care. The catalog and resources offer actionable insights for healthcare administrators and policymakers, supporting policy changes to integrate telemonitoring into standard care. By addressing technical and legal challenges, the project contributes to a sustainable telemonitoring ecosystem aligned with the needs of healthcare providers and patients.

A pilot study planned for 2025 will evaluate the added value, technical feasibility, and scalability of telemonitoring in a transmural setting.