

ITEA-2023-23005



Remote patient-targeted health monitoring to reduce clinical workload

Deliverable 6.2

Public summary report

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Start date Project	January 1 st 2025	Duration	36 months
Version	1.0		
Status	Final		
Date of issue	11/03/2025		
Dissemination level	Consortium Confidential		

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1. Introduction

1.1. Purpose of the document

This document provides a summary of the REMO project for public dissemination. The purpose of this summary is to increase the project's visibility and make it accessible to a broader audience.

It includes a brief description of the project's background, objectives, and structure, providing a concise introduction for interested parties. Confidential information from the consortium has been omitted to ensure the content can be widely shared without any usage restrictions.

1.2. Related documents

There are no other deliverables related to this document.

2. Public Summary

2.1. Background

Healthcare systems worldwide are facing an increasing crisis due to a shortage of medical professionals, an aging population, and rising healthcare costs. In Europe alone, there is an estimated shortage of two million healthcare workers, with the World Health Organization (WHO) projecting a global shortfall of 10 million health workers by 2030. These shortages place immense pressure on hospitals and care facilities, making it challenging to maintain high-quality, cost-effective healthcare services.

One of the most promising solutions to mitigate this crisis is the implementation of Remote Patient Monitoring (RPM), which allows continuous health monitoring outside of traditional hospital settings. Advances in AI-driven RPM and wearable sensing technologies can enable the early detection of health deterioration, facilitate timely interventions, and reduce the need for hospitalizations. This shift toward remote care not only helps alleviate the burden on healthcare professionals but also improves patient outcomes by ensuring continuous monitoring before, during, and after medical treatment.

Despite the potential of RPM, existing monitoring systems have significant limitations. Many current solutions are restricted to ICU environments, rely on wired connections, and lack the ability to provide real-time, continuous monitoring after hospital discharge. REMO aims to address these gaps by developing an integrated and scalable remote monitoring system that seamlessly integrates with clinical workflows. Unlike previous projects that primarily focused on technological innovation, REMO prioritizes clinical application, validation, and health-economic analysis to optimize resource allocation and enhance healthcare efficiency.

Through the Quadruple Aim, REMO seeks to improve patient care, reduce healthcare costs, enhance clinician experience, and promote better population health. By implementing wireless, AI-driven monitoring solutions, REMO will facilitate the transition from hospital-based care to home-based monitoring, ensuring early intervention, better patient adherence, and optimized treatment plans. This holistic approach aims to revolutionize chronic disease management, rehabilitation, mental health therapy, and sleep disorder monitoring, ultimately improving the accessibility and quality of healthcare services.

2.2. Aims

The REMO project aims to enhance healthcare efficiency by integrating continuous health monitoring into clinical workflows, focusing on both preventive and transitional care. Through remote patient monitoring, the project seeks to reduce hospitalizations by enabling early detection of health deterioration and facilitating smoother transitions between healthcare settings. By addressing key challenges in chronic disease management, rehabilitation, mental health support, and sleep disorder treatment, REMO introduces an integrated monitoring approach that leverages advanced data systems, trustworthy AI algorithms, and seamless clinical workflow integration. The project will develop open platforms to enhance real-time patient monitoring, ensuring accessibility to health data while maintaining privacy and security. Additionally, AI-driven models will be implemented to support accurate, responsible, and explainable clinical decision-making, allowing healthcare professionals to

optimize treatment strategies. By embedding remote monitoring data into clinical workflows, REMO aims to improve patient outcomes, reduce the burden on healthcare professionals, and create a more efficient and patient-centered healthcare system.

2.3. Impact and Innovation

REMO will create an advanced remote patient monitoring system that integrates seamlessly into clinical workflows, enabling continuous, real-time tracking of patients in both hospital settings and at home. By leveraging AI-driven monitoring solutions, REMO will enhance early detection of health deterioration, reduce hospitalizations, and optimize resource allocation. The project will develop open and interoperable technology platforms, ensuring secure and accessible health data. Through trustworthy AI algorithms and seamless integration, REMO will bridge the gap between hospital and home care, supporting healthcare professionals in delivering more efficient and patient-centered care. To achieve this, REMO will incorporate advanced remote monitoring technologies to track key health parameters such as blood pressure and glucose levels, providing real-time insights into a patient's condition. Continuous and unobtrusive monitoring will enable proactive interventions for conditions such as diabetes, obesity, spinal disorders, and sleep disturbances. AI-driven analytics will enhance data interpretation, ensuring healthcare professionals receive timely and actionable insights. These innovations will be fully integrated into clinical workflows, reinforcing REMO's role in transforming both hospital-based and home-based care.

2.4. The Consortium

REMO brings together a diverse consortium consisting of 4 partners from four countries (Finland, Lithuania, Portugal, and Romania). The consortium is well-balanced, covering the entire healthcare and technology value chain, with a strong focus on integrating innovative solutions in healthcare. The partners include leading academic institutions, technology providers, healthcare professionals, and clinical partners. This collaboration aims to leverage technological advancements to improve healthcare services and patient outcomes across Europe. The total eligible costs are 5095.69k€. The added value of this consortium lies in its ability to combine expertise in both healthcare and technology, facilitating access to key stakeholders and enabling impactful innovations.

3. Conclusions

A summary for the public has been created to provide an overview of REMO's goals and context. This summary will be disseminated through various communication platforms (such as the project website, LinkedIn, Twitter, etc.) to enhance visibility and engagement with a broader audience. While updates to the summary may occur as the project progresses, any changes will be minimal and will not affect the fundamental message of the project, focusing on the intersection of healthcare and technology.