Open Innovation Challenge 2026

Challenge

How can we improve the safe and effective use of remote monitoring devices in ambulatory and home-based care?

Short description

Hospital Universitari Germans Trias i Pujol is looking for innovative solutions to improve the correct use, reliability, and operational performance of remote monitoring devices in ambulatory and home-based care.

Challenge description

Hospital Universitari Germans Trias i Pujol is a tertiary university hospital with growing experience in remote patient monitoring across ambulatory pathways and home-based care models. These technologies offer clear potential to support early detection of deterioration, improve follow-up, and enable more efficient and patient-centred care beyond conventional inpatient settings.

However, real-world implementation remains limited by practical and clinical barriers that aren't solved by data analysis alone. In routine care, remote monitoring devices may be worn incorrectly, removed for prolonged periods, left uncharged, lose connectivity, or fail without immediate awareness by patients or professionals. These issues reduce monitoring continuity, compromise the quality and trustworthiness of physiological information, increase operational burden for care teams, and may ultimately affect patient safety and adoption.

We are therefore seeking innovative solutions that help ensure that remote monitoring devices are used correctly and consistently, remain operational in real-world conditions, and can be deployed safely and efficiently at scale in ambulatory and home-based care.

Unmet need

Current remote monitoring programmes in clinical practice frequently face challenges such as:

incorrect device placement or inadequate sensor contact, poor adherence to continuous or repeated use, battery depletion and charging-related interruptions, connectivity loss or silent technical malfunction, limited patient or caregiver understanding of device status, excessive troubleshooting workload for healthcare professionals, reduced confidence in the monitoring process in frail or complex patients.

These barriers are especially relevant in ambulatory and domiciliary settings, where direct supervision is limited and many patients are older, frail, dependent, or have low digital literacy.

We are interested in practical and clinically relevant solutions that address these barriers and improve the real-world performance of remote monitoring pathways.

Potential solution areas may include:

- Systems to detect and prevent incorrect device use
- Solutions to minimise silent technical failures
- Tools to improve device readiness, charging, and maintenance
- Patient- or caregiver-oriented usability support
- Smart accessories or contact-verification mechanisms
- Feedback systems that confirm correct operation to users and professionals
- Workflow solutions that reduce operational burden for clinical teams
- Innovations that facilitate safe and scalable deployment in routine care.

We welcome hardware, software-enabled, or integrated service solutions, provided they address a clear implementation need in real clinical environments.

Target setting

- Ambulatory care
- Home-based care / Hospital at Home
- Chronic and complex patients under remote follow-up
- Social services

Expected impact

Improving the safe and effective use of remote monitoring devices, increasing adherence and monitoring continuity, reducing unnoticed technical incidents and operational failure, strengthening professional confidence in remote monitoring pathways, lowering workload associated with troubleshooting and support, enabling scalable deployment in routine clinical practice.

Preferred characteristics

Clinically applicable in real-world care settings, easy to use for patients, caregivers, and professionals, adaptable to heterogeneous care pathways, scalable and operationally feasible, compatible with healthcare interoperability, safety, and data protection requirements.

Type of collaboration sought

- Pilot projects in real clinical settings
- Co-development and validation
- Implementation partnerships