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HEALTHCHAIN STORIES

KCONTROL: ADVANCING POTASSIUM MONITORING FOR CHRONIC KIDNEY DISEASE PATIENTS

THE NEED

Chronic Kidney Disease (CKD) patients undergoing dialysis face a high risk of hyperkalemia, a potentially life-threatening condition caused by elevated potassium levels. In the Region of Murcia, the Servicio Murciano de Salud (SMS) identified a critical gap in care: potassium levels are typically measured infrequently, often only during scheduled laboratory tests, offering limited visibility into fluctuations between dialysis sessions.

This lack of timely and actionable data restricts clinicians' ability to anticipate risks, adjust treatments proactively, and support patients (around 1.500 renal replacement therapy patients in the Region) in managing their condition. Patients, in turn, have limited feedback to understand how daily habits—particularly nutrition—affect their potassium balance. SMS recognised the need for a more frequent, patient-centred, and digitally supported potassium monitoring approach that could be integrated into real clinical workflows.



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

K-Control is a co-created solution that combines a potassium monitoring device developed by Renalyse and a digital nutrition and monitoring platform developed by Nootric, providing personalised dietary guidance and clinician dashboards.

The concept behind K-Control is to enable more frequent potassium measurements, even allowing patients to test it at home, securely transmitted to a digital platform where healthcare professionals can review results, track trends, and combine them with nutritional interventions to ensure stable potassium levels.

The solution includes the following features:



Integrated Digital Monitoring

A point-of-care potassium device connected to a mobile app enables secure data capture, visualisation, and sharing of results with healthcare professionals.



Patient awareness and nutritional self-management

Personalised dietary guidance helps patients better understand the link between potassium levels, nutrition, and their condition, supporting safer day-to-day choices.



Clinician guided follow-up

Dashboards provide nephrologists, nurses, and dietitians with access to patient data, supporting closer monitoring and more informed clinical decisions.



Structured Dietary Support

Targeted nutritional content and professional support help patients and caregivers translate clinical recommendations into practical habits.

IMPACT

As a result of the collaboration and the insights generated during the pilot, K-Control began to attract interest beyond the initial clinical setting, helping to validate its future market potential. This included:

- Multinational healthcare company specialised in dialysis devices whose engagement contributed to validating the business rationale and potential integration of the solution within dialysis care pathways,
- Pharmaceutical companies, which expressed interest in defining new partnerships and continuing to test and evolve the Nootric digital nutrition solution in kidney disease contexts, and
- Healthcare organisations in Spain, which showed interest in the clinical concept of more frequent potassium monitoring combined with digital nutritional support, once the technology reaches full maturity.

OUTCOMES

Results and learnings were generated through a real-world pilot conducted in dialysis units, involving a limited cohort of CKD patients and healthcare professionals. Rather than focusing on long-term clinical outcomes, the pilot aimed to assess technical feasibility, usability, integration into clinical workflows, and early signals of value. The pilot demonstrated::

- Feasibility of end-to-end digital potassium monitoring, validating secure data flow from device to app, backend, and clinician dashboards.
- Promising analytical performance of the potassium sensor under optimal conditions, confirming its potential for frequent monitoring.
- Moderate to positive patient engagement with the digital nutrition platform, with patients expressing willingness to continue using the Nootric app for dietary management.
- Clear identification of technological and operational gaps, providing a solid roadmap for further development, validation, and future scaling.

SUSTAINABILITY

Following the pilot, the K-Control consortium has a clear roadmap forward:

- Renalyse is focusing on improving device robustness, automation, and manufacturing reproducibility to reach clinical-grade reliability. They will pilot the device in another Spanish hospital in 2026.
- Nootric continues to refine its digital platform, strengthening usability, caregiver involvement, and resilience in low-connectivity environments.
- SMS has secured funds from a pharmaceutical company to keep testing Nootric during 2026 with CKD patients.

The K-Control experience demonstrates that early-stage digital health innovation benefits enormously from real-world piloting, even when results challenge initial assumptions. By uncovering risks early, the project has safeguarded patient safety and laid the groundwork for a more mature and impactful solution.

TESTIMONIALS



“As a medical device company, one of our key learnings has been understanding the real value of collaborating closely with hospitals and clinicians from the very beginning. Direct interaction with medical professionals allows us to validate assumptions early, understand real clinical workflows, and design solutions grounded in everyday medical practice.

HealthChain has been essential in enabling this collaboration — creating the conditions for open dialogue, continuous first-hand feedback, and strong alignment between all stakeholders throughout the project. For us, HealthChain i3 is not just about innovation, but about turning innovation into real clinical impact.”

- Renalyse + Nootric team



“Evaristo has been on dialysis for nine years, and his test results have never been as good as they are now. I’ve learned so much about preparing dishes and organising our meals. I tell all my friends about it because I’m so happy; this solution truly helps me every single day. I bought myself a tablet, since I’m not very good with mobile phones.”

- Evaristo (patient) and Pilar (wife)



“This project was born with great enthusiasm and high expectations. Working closely with patients has allowed us to better understand their daily lives: the loneliness they face regarding something as fundamental as nutrition, and the extent to which their everyday life is shaped by medical results that are often difficult to interpret.

Working closely with families allowed us to see beyond the data. We realized that for a child, health isn't just about clinical results—it's about the daily reality of their kitchen table and the constant responsibility parents feel 365 days a year.

This project reminded us that true innovation isn't just about monitoring; it's about listening. We've moved beyond simple tracking to develop a solution that truly accompanies families, simplifying the complex and supporting them in the moments that matter most.”

- Ana Sirvent, clinician

