

TeleCare North – Heart Failure Trial

A 12-month randomised controlled trial conducted in Northern Denmark, in which patients with chronic heart failure used a telehealth care solution (named Telekit) in addition to usual care. The aim was to enhance patient self-monitoring, improve quality of life and reduce hospitalisations.

Description of Technology or System

The Telekit platform for heart failure patients, used in the intervention group. It included devices for self-monitoring (weight, blood pressure, etc), data transmission to health professionals, patient engagement modules, and probably a dashboard or web portal for clinicians.

It enables daily (or frequent) self-monitoring at home, allow clinicians to view data remotely, intervene earlier if needed; support patient engagement and empowerment; integrate with usual care pathway.

Implementation Process

Steps Taken: Eligible heart-failure patients were identified; enrolled into intervention vs control; devices and platform set up; patients received training on the devices and platform; monitoring commenced; data collected over follow-up.

Stakeholders Involved: Patients, clinicians (cardiology/heart-failure nurses), technology/platform providers (Telekit), academic researchers (Aalborg University), possibly municipal home-care/health services.

Timeframe: The published trial reports baseline enrolment of 299 patients (145 intervention, 154 control) and ~12 months follow-up.

Impact and Results

Quantitative Results: For the primary outcome (Physical Component Summary of SF-36), the adjusted effect was -0.81 (95% CI -2.7 to 1.1) i.e., not statistically significant. For the Mental Component Summary (MCS) the adjusted effect was $+4.66$ (95% CI 1.8 to 7.5) (statistically significant). For KCCQ12 (disease-specific measure) the effect was $+3.67$ (95% CI -0.7 to 8.1) (not statistically significant).

Qualitative Outcomes: The trial suggests improved patient motivation and engagement in digital services when supported appropriately. A separate study (Future Patient Program) shows that telerehabilitation improved e-health literacy and motivation among heart-failure patients in Denmark.

Country	Denmark
Institution/Organisation	Aalborg University (Dept of Health Science & Technology) plus regional hospital/municipal partners.
Type of setting	Secondary/tertiary care plus home-care/remote monitoring setting.
National Context	Denmark has been a pioneer in digital health deployment: nationally-coordinated eHealth strategies, high levels of digital infrastructure across regions, and a well-developed remote-care mindset. For heart failure care specifically, there was interest in shifting some monitoring from hospital to home to relieve hospital burden and empower patients.

Success Factors

- High level of infrastructure, strong patient onboarding/training, integrated pathway between hospital and home-care, academic evaluation involvement.

Challenges and Barriers

- The physical component of quality of life did not significantly improve; possibly older patients, variable digital literacy; cost-effectiveness remains a question.

Resources and Funding

- Funded through regional/academic research grants (Aalborg University).
- Required resources: equipment kits, platform licence/support, clinician time, patient training.

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Case Study



Recommendations:

- Steps Taken: Eligible heart-failure patients were identified; enrolled into intervention vs control; devices and platform set up; patients received training on the devices and platform; monitoring commenced; data collected over follow-up.
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Integration in Education Settings:

- This case can be used in health-education modules to illustrate remote monitoring implementation, evaluation of digital health interventions, and patient-engagement strategies in chronic care.
- Could be adapted for simulation or case-study work in nursing/medical courses.

Specific Environment and Limitations:

- The results may not directly generalise to other healthcare systems with lower digital infrastructure or different home-care arrangements.
- The Danish system's high digital maturity and existing platforms may mean results are better than in less mature contexts.
- Cost-effectiveness remains unclear; although some budget-impact modelling shows promise in Denmark.

Key Lessons Learned:

- Even in a digital-mature country like Denmark, remote monitoring adds value primarily in the mental/engagement dimension rather than large physical-function gains in one year.
- Digital self-monitoring works better when well supported (training, follow-up) and when patients have baseline digital literacy or support.
- Implementation at scale requires careful attention to cost, staffing, workflow and integration with existing care.

Supporting Materials:

- Cichosz SL, Udsen FW, Hejlesen O. The impact of telehealth care on health-related quality of life of patients with heart failure: Results from the Danish TeleCare North heart failure trial. J Telemed Telecare. 2020;26(7-8):452-461. DOI: 10.1177/1357633X19832713.
- A "Digitalisation in Danish Healthcare" overview, Healthcare Denmark (2024) pdf.

