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Telehealth in remote cardiovascular care: patient and healthcare professional perspectives

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Introduction: Telehealth may improve access to cardiovascular care in remote communities. Its use depends on acceptance by patients and healthcare professionals (HCPs).[1,2] We explored how both groups view its benefits and limitations.

Patients and Methods: During July 2025, 35 patients from three remote outpatient clinics (Čabar, n=11; Delnice, n=9; Vrbovsko, n=15) and 18 cardiologists and cardiology nurses from University Hospital Centre Rijeka completed the Croatian 21-item Telehealth Usability Questionnaire (TUQ; scores 1–7). Patients attended in-person appointments with visiting hospital cardiologists. Questionnaires were distributed in person, and participation was voluntary and anonymous. 18 patients and 15 HCPs had no previous telehealth experience and rated its expected usefulness. Responses therefore reflected both expectations and experience. Each participant's score was calculated as the mean of answered items. Groups were compared using Welch's t-test.

Results: Mean TUQ scores were 5.71 in patients and 5.04 in HCPs (difference 0.67, 95% CI 0.00 to 1.33; p=0.051), with similar patient scores across the three clinics. Both groups rated improved access to care favorably (patients 6.15; HCPs 5.72), as well as communication through telehealth. HCPs gave lower ratings than patients to whether telehealth could meet all their needs (4.28 vs 5.79) and whether a remote examination was equivalent to an in-person examination (3.33 vs 4.70). The latter received the lowest rating in both groups. Written comments from HCPs emphasized that telehealth cannot replace the clinical examination and highlighted the importance of patient education and data security.

Conclusion: Patients and HCPs saw better access to care as a benefit of telehealth, but both recognized the limitations of remote examinations. Telecardiology services should clearly define which consultations can be conducted remotely and when an in-person assessment is needed. These results may help plan services in remote communities, although some responses reflected expectations rather than actual use.

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LITERATURE

1. Parmanto B, Lewis AN Jr, Graham KM, Bertolet MH. Development of the Telehealth Usability Questionnaire (TUQ). Int J Telerehabil. 2016 Jul 1;8(1):3-10. https://doi.org/10.5195/ijt.2016.6196
2. Takahashi EA, Schwamm LH, Adeoye OM, Alabi O, Jahangir E, Misra S, et al; American Heart Association Council on Cardiovascular Radiology and Intervention, Council on Hypertension, Council on the Kidney in Cardiovascular Disease, and Stroke Council. An Overview of Telehealth in the Management of Cardiovascular Disease: A Scientific Statement From the American Heart Association. Circulation. 2022 Dec 20;146(25):e558-e568. https://doi.org/10.1161/CIR.0000000000001107