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Telecardiology for CHF: The experience of 'SHL'-Telemedicine & Clalit Health Services Collaboration

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Background: Patients with chronic heart failure (CHF) characteristically have multiple hospital admissions for symptom control, deleteriously affecting their quality of life (QOL) and imposing a burden on national healthcare costs. The 'SHL-Telemedicine' transtelephonic monitoring and intervention program was implemented into Israel's largest HMO. We assessed its effect on hospital admission rate and length of stay, and on QOL domains of patients with chronic heart failure (CHF).

Methods: This prospective 1-year study was conducted on CHF patients of Clalit Health Services who were admitted to an internal medicine and/or cardiology department and/or intensive care unit at least once during the previous year. Their body weight measurements were now automatically transmitted, stored and updated daily in 'SHL'-Telemedicine's databank. They were engaged in 'SHL'-Telemedicine's interventions for increasing compliance and adherence to treatment, and for enhancing knowledge and awareness of disease characteristics. A 24-item questionnaire survey (Minnesota Questionnaire for Heart Failure) acquired self-rated assessments of their QOL.

Results: The study cohort included 380 patients, mean age 73 years, 52% males, II-IV class functional capacity. There was a 48% reduction in total hospitalization days, a 41% reduction in hospital admissions, and a 37% decline in emergency room visits. There was a significant improvement from study initiation to re-evaluation three months later in all 24 items of the questionnaire ($p < 0.001$).

Conclusions: Implementation of a transtelephonic system into an HMO can significantly reduce hospitalization rate and length of stay and significantly enhance the QOL of CHF patients by allowing primary care at the patient's home.