

DIABETES AND DIABETIC NURSE EDUCATION CARE AND PRACTICE

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Change in diabetes mellitus self-efficacy, compliance and hemoglobin A1c: The effect of Maccabi Telecare Center plan led by nurse compared to standard community care

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Background: The diabetes epidemic call for integrative solutions to address this challenge. Maccabi Telecare Center (MTC) is a multi-disciplinary service providing a remote treatment solution to 6,000 members who suffer from chronic illness. Proactive monitoring led by a personal nurse and MTC's multi-disciplinary staff is based on the chronic care model (CCM) empowering patients to self-management through self-efficacy.

Aim: To examine the association between MTC's treatment setting (CCM + telemedicine) and patients' DM self-efficacy (DMSE) and other health outcomes compared with the DMSE of patients receiving standard community care.

Method: A large-scale comparative prospective study with stratified sampling and repeat measures. The study population includes all HMO members with diabetes type 2, and HbA1c > 8%. Patients who were recruited to MTC comprised the intervention group. Patients matched by demographic and clinical variables encompassed the control group. During the 8-9 month intervention period MTC personal nurse proactively contacts the patient and develops a personalized care plan including clinical targets. The personal nurse monitors the patient's condition, provides guidance and empowers him/her to self-management. Patients in the control group received standard community care. All participants completed the DMSE Scale at baseline, 3-4 months and 8-9 months. Data regarding compliance index and HbA1c values were drawn from a patient's medical record.

Results: 832 patients - 433 (intervention) and 399 (control) – aged 59 (± 11.3), 8.9 (± 5.5) years of diabetes duration and HbA1c of 10.1 at baseline (± 1.7). Participation in the intervention group was related to higher DMSE during the study period. At baseline, DMSE in both groups was identical ($p = NS$), yet after 3-4 months and after 8-9 months DMSE was higher in the intervention group ($p < .001$). Second, over the study period, the compliance index increased in the intervention group and declined in the control group ($p < .05$). Hb1Ac values declined in both the intervention (-2.11%) and the control (-1.41%) groups through the decline was greater in the intervention group ($p < .001$).

Conclusions: This study demonstrates the effect of the MTC plan led by a nurse on creating a cognitive-behavioral-clinical change among diabetes patients. Tailored interventions are effective in increasing self-efficacy and achieving self-management.

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