

A nurse-led MTC plan's impact on DM self-efficacy, compliance, and HbA1c compared to traditional community care

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Abstract

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. Study population include 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 DMSE Scale at baseline, 3-4 months and 8-9 months. Data regarding compliance index and HbA1c values were drawn from 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 along 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, 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 though the decline was greater in the intervention group ($p < .001$).

Conclusions: This study demonstrates the effect of MTC plan led by 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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Biography

Angela Irony, PhD, RN is the Chief Nursing and Medical Centers Officer at Maccabi HealthCare Services, the second largest HMO in Israel. At her prior position as the

director of the Telehealth centers she led the creation and operation of the on-line platform for remote chronic care. Angela represented Maccabi's telehealth experience in the World Economic Forum in New York in September 2017. She is a guest lecturer in universities and colleges.