

Title: Telemedicine, Psychology and Diabetes: Evaluation of results and cost analysis

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Abstract:

- **AIMS:** Evidences of benefits of telemedicine in T1DM patients on continuous subcutaneous insulin infusion (CSII) treatment are limited. Aims: 1) to analyse the differences in clinical and psychological variables between subjects with T1DM on CSII treatment who were included in a Telecare (TC) program, and subjects with T1DM on CSII treatment who received Conventional care (CC); 2) Perform a cost analysis of the use of telemedicine in DM1 patients treated with CSII (TC versus CC).
- **METHODS and PARTICIPANTS:** Cross-over randomized clinical trial with duration of 18 months. 51 patients signed informed consent. Participants were randomly assigned to receive TC program or CC during 6 months, and after a 3 months wash-out period, patients changed to CC or to TC respectively. TC program included monthly visits using an Internet platform. CC comprised face-to-face visits every three months. Sociodemographic, clinical and psychological data was measured at the beginning and at the end of TC and CC. The direct and indirect costs were also measured. T Student was performed to assess differences between first and last visits in both groups (TC / CC).
- **RESULTS:** Patients with telemedicine at the end of treatment, have fewer hyperglycemia / week, less distress and greater adherence. Considering both direct and indirect costs, the cost per treatment (TC / CC) is similar.
- **CONCLUSIONS:** Telemedicine has significant implications for clinical and psychological variables and has the same cost (total) than the conventional treatment. Therefore, it can be a useful alternative for treatment of DM1 patients with CSII. However, studies with a larger sample size are needed.