IMPROVING MEDICATION ADHERENCE AND PATIENTS' EXPERIENCE AFTER HEART TRANSPLANT USING A MULTILEVEL eHEALTH INTERVENTION: THE mHEART CLINICAL TRIAL

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Background and importance

Multimorbidity and therapeutic complexity are undermining health outcomes in chronic populations. Medication nonadherence may be a consequence of this complexity and is a direct cause of graft loss and death after heart transplant (HTx). Effective interventions to improve medication adherence and lifestyle habits require a proactive interdisciplinary team and integrated care models. The development and implementation of internet-based health technologies (eHealth) may lead to implement such chronic care programs in clinical practice.

Aim and objectives

To improve recipients' adhverence to immunosupressive medication (IS)

To improve patients' experience regarding their therapeutic regimens (TR)

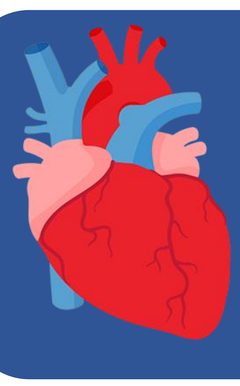
To optimize clinical practice

Material and methods

An eHealth model was implemented in a HTx hospital's outpatient clinic. The software developed (mHeart) was a mobile and website application . The model was validated previously in a pilot study[1]. For this purpose, an intensive, individually-tailored, behavioral-based multicomponent intervention performed using the mHeart features in an interdisciplinary environment was established.

Check the app https://n9.cl/ajut

Results



134 chronic-stage HTx patients were included

71 Intervention group

63 Control group

Mean age: 55 ± 14 years

Mean follow-up: 1.6 ± 0.6 years

86% engagement with mHeart at the end of the study

Immunosupressive adherence

- Nonadherence rate significantly improved in the IG versus CG according to the SMAQ questionnaire (85% vs 46%) [OR=6.7 (2.9;15.8), P-value=.000].
- Patient's awareness of the consequences of nonadherence significantly improved [P-value<.01]

Patients' experience regarding their therapeutic regimens

- Patients' experience of TR significantly improved in the intervention group versus the control group: degree of inconvenience perceived by the patient [P-value=.002], patient's knowledge of their regimen intakes [P-value=.019], drugs names [P-value=.006], drugs doses [P-value=.030] and drugs indications remembered [P-value=.003].
- The number of adverse effects reported was significantly reduced to 3±2 in all groups[P-value=.000].

Optimization of clinical practice

- Reduction of patients' in-clinic appointment needs with the clinical pharmacist and reduction of the intensity of the follow-up in the intervention (65%) versus the control group (35%) [OR=3.4 (1.7;6.9),P-value=.001].

Conclusions and relevance

- ✓ mHeart has demonstrated to improve recipients' adherence to IS (85% IG vs 46% CG), patients' experience to therapeutic regimens and to reduce in-clinic facilities because the mHeart follow-up.
- ✓ Innovative research projects on health institutions are typically short-lived practices with lack of scalability to usual care. This was a priority for the mHeart study and the intervention was extended into clinical practice in January 2019.

References and acknowledgements

M.Gomis et al. JMIR mHealth and uHealth 2020