

PREDIRCAM eHealth Platform for Individualized Telemedical Assistance for Lifestyle Modification in the Treatment of Obesity, Diabetes, and Cardiometabolic Risk Prevention: A Pilot Study (PREDIRCAM 1)

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Abstract

Background:

Healthy diet and regular physical activity are powerful tools in reducing diabetes and cardiometabolic risk. Various international scientific and health organizations have advocated the use of new technologies to solve these problems. The PREDIRCAM project explores the contribution that a technological system could offer for the continuous monitoring of lifestyle habits and individualized treatment of obesity as well as cardiometabolic risk prevention.

Methods:

PREDIRCAM is a technological platform for patients and professionals designed to improve the effectiveness of lifestyle behavior modifications through the intensive use of the latest information and communication technologies. The platform consists of a web-based application providing communication interface with monitoring devices of physiological variables, application for monitoring dietary intake, *ad hoc* electronic medical records, different communication channels, and an intelligent notification system. A 2-week feasibility study was conducted in 15 volunteers to assess the viability of the platform.

Results:

The website received 244 visits (average time/session: 17 min 45 s). A total of 435 dietary intakes were recorded (average time for each intake registration, 4 min 42 s \pm 2 min 30 s), 59 exercises were recorded in 20 heart rate monitor downloads, 43 topics were discussed through a forum, and 11 of the 15 volunteers expressed a favorable opinion toward the platform. Food intake recording was reported as the most laborious task. Ten of the volunteers considered long-term use of the platform to be feasible.

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Abbreviations: (EMR) electronic medical record, (HRM) heart rate monitor, (SMS) short messaging system

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Abstract cont.

Conclusions:

The PREDIRCAM platform is technically ready for clinical evaluation. Training is required to use the platform and, in particular, for registration of dietary food intake.

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