Efficiency mobile application to monitor the implementation of rehabilitation exercises in patients with lesions of the lower extremities

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Background: Currently telemedicine is actively developing, including mobile applications for patients. However, applications for patients with lesions of the lower extremities (RemEx - Reminder of exercises) have not yet been created, with the help of which patients can independently monitor their state of health and communicate with the attending physician remotely.

The purpose of the study is to develop and test in real clinical practice a mobile application for smartphones “RemEx”.

Material and methods: The mobile application “RemEx” has two components: the first is a mobile patient application directly, the second is a personal computer program used by a physician to monitor disease activity in patients. The patient part of “RemEx” includes filling out the questionnaires, monitoring the implementation of recommendations for therapeutic physical culture and medication. It is also possible to be in constant communication with a doctor through the mobile application. The testing of the mobile application was attended by patients from the Republic Children’s Rehabilitation center with diseases of bearing-movable system, which was created at the Department of Physiotherapy, neurorehabilitation, RChRC in 2018 by Z. Ismailov and is formed to the present.

Results: The average values of the RemEx index at the time of switching on and after 12 months of observation were 3.6±1.6 and 2.3±1.8 (p>0.5), in regimen of BRAI 1.5±1.2 and 1.4±1.1 respectively (p>0.5). It takes one minute for a doctor to analyze the state of health of 40 patients every day, with no notification of a deterioration in the health of patients. The decision in the case of receiving notification from the patient about the occurrence of a symptom or the development of an adverse reaction averages 6-10 minutes.

Conclusion: According to the study, we can conclude that the RemEx mobile application allows patients to independently monitor disease activity, store medical records and contact the doctor remotely. Continuous monitoring of the patient’s condition allows you to maintain low disease activity or remission for a long time.

Speaker Biography
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