

Can Technology Improve Adherence to Long-Term Therapies?

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Abstract

Background:

Therapeutic nonadherence is defined as the lack of equivalence between the behavior of the patients and their prescribed medical treatment. Consequences of nonadherence include not only health outcomes, but also cost saving. Thus, this issue gets paramount importance in contemporary medicine.

Method:

The aim of this article is to discuss the relationships between technology and adherence by asking the following three questions. (1) How can technology be used to monitor patient adherence? (2) Considering the mechanisms of nonadherence in chronic diseases, is there room for technology in interventions aimed to improve patient adherence? (3) What about adherence to technology in diabetes care?

Results and Conclusion:

Technology may help improve adherence to long-term therapies by (1) giving a concrete representation of adherence rewards, (2) overcoming immediate obstacles to adherence, such as the fear of hypoglycemia, and (3) providing an opportunity for patient–doctor *conversations*. This assumes, however, that both the patient and the doctor are convinced that technologies are useful.

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Abbreviations: (CGM) continuous glucose monitoring, (CI) confidence interval, (HbA1c) glycosylated hemoglobin A1c, (MEMS) medication event monitoring systems, (MPR) medication possession ratio, (SMBG) self-monitoring of blood glucose, (WHO) World Health Organization

Keywords: adherence, artificial pancreas, conversation, electronic reminders, hypoglycemia, memory, medication event monitoring systems, mental states, technology

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