

A Review of Web-Assisted Interventions for Diabetes Management: Maximizing the Potential for Improving Health Outcomes

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Abstract

Current endeavors in diabetes care focus on helping patients and providers deal successfully with the complexities of the disease by improving the system of care, expanding the reach of interventions, and empowering patients to engage in self-care behaviors. Internet technologies that combine the broad reach of mass media with the interactive capabilities of interpersonal media provide a wide range of advantages over standard modes of delivery. The technical affordances of Web delivery enable individualization or tailoring, appropriately timed reinforcement of educational messages, social support, improved feedback, and increased engagement. In turn, these have been significantly correlated with improved health outcomes.

This article is a narrative review of Web-based interventions for managing type 2 diabetes published from 2000 to 2007 that utilize Web sites, Web portals, electronic medical records, videoconference, interactive voice response, and short messaging systems. The most effective systems link medical management and self-management. Patient satisfaction is highest when the Web-based system gives them the ability to track blood glucose, receive electronic reminders, schedule physician visits, email their health care team, and interact with other diabetic patients. However, comprehensive medical and self-management programs have not been implemented widely outside of systems funded by government agencies. The cost of developing and maintaining comprehensive systems continues to be a challenge and is seldom measured in efficacy studies. Lack of reimbursement for Web-based treatments is also a major barrier to implementation. These barriers must be overcome for widespread adoption and realization of subsequent cost savings.

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Abbreviations: (EMR) electronic medical records, (IVR) interactive voice response, (SMS) short messaging systems, (VA) Veterans Administration

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