

## Telemedicine and Diabetes Management: Current Challenges and Future Research Directions

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### Abstract

Telemedicine is lying between fading and future. Several clinical studies and critical reviews have been published recently, but the results are inconclusive and the adoption of telemedicine interventions in clinical practice is slow. This article discusses some of the current problems related to the adoption of telemedicine systems and focuses on the information technology solutions that appear to be most promising for diabetes management in the near future. Context awareness, user modeling, intelligent dialogues, and integrated information systems are presented. Some potential future scenarios for the adoption of telemedicine, which combine novel technologies and new organizational models, are also discussed. Within those scenarios, telemedicine may prove to be a good instrument to support health care providers in the effective management and prevention of diabetes mellitus.

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**Abbreviations:** (DARTS) Diabetes Audit and Research in Tayside, (DIP) diabetes information profile, (DM) diabetes mellitus, (EPR) electronic patient records, (GPs) general practitioners, (HCO) health care organization, (ICT) information and communication technology, (IDEATel) Informatics for Diabetes Education and Telemedicine, (M2DM) Multi-Access Services for Managing Diabetes Mellitus, (SfMS) Serviceflow Management Systems, (VHCO) Virtual Health-Care Organization, (VoiceXML) Voice eXtensible Markup Language

**Keywords:** diabetes management, evaluation of information systems, information and communication technology, telemedicine

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