

INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Telemedicine for blood glucose in Diabetes Mellitus: an Overview of Systematic Reviews

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Review question / Objective: Can telemedicine help diabetic patients better control blood glucose ?

Condition being studied: Diabetes Mellitus (DM) is a chronic disease that is considered a global public health problem. Education and self-monitoring by diabetic patients help to optimize and make possible a satisfactory metabolic control enabling improved management and reduced morbidity and mortality. The global growth in the use of Telemedicine makes them a powerful platform to help provide tailored health, delivered conveniently to patients.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 08 June 2021 and was last updated on 08 June 2021 (registration number INPLASY202160024).

INTRODUCTION

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METHODS

Participant or population: patient with Diabetes Mellitus.

Intervention: Telemedicine.

Comparator: Usual care.

Study designs to be included: All systematic reviews (SRs) of randomized-controlled and non-randomized clinical trials.

Eligibility criteria: SR/meta.

Information sources: Relevant SRs were identified through systematic searches of the following databases from inception to 1st June 2021: PubMed, Cochrane Library, Web of Knowledge, Embase, MEDLINE, Chinese National Knowledge Infrastructure Database, the Chongqing VIP Database, Chinese Biomedical Database, and Wanfang Database. In addition, ongoing and unpublished systematic reviews were searched from the PROSPERO, while a manual search of all references included in the literature was also conducted. The complete search strategy for PubMed was outlined in the Supplementary Materials. This strategy was adapted for use in performing literature searches of other databases.

Main outcome(s): Glycemic control, such as HbA1c.

Quality assessment / Risk of bias analysis: AMSTAR2 was used to evaluate the methodological quality of included systematic reviews. The AMSTAR2 checklist consisted of 16 items, of which 7 were critical (2, 4, 7, 9, 11, 13, 15). The overall quality of evidence of each systematic review was categorized into four groups, rated "high" if only one or more non-critical items were not satisfied,

"medium" if more than one non-critical item was not satisfied, "low" if only one key item was not satisfied, and "very low" if one or more key items were not satisfied. PRISMA was used to evaluate the integrity of systematic reviews. PRISMA was a measurement tool comprised of 27 items, each of which was evaluated as "yes", "partial yes", or "no" based on whether there was a complete report. The ROBIS evaluation tool was used to judge the bias risk of each systematic review.

Strategy of data synthesis: GRADE was used to evaluate the quality of evidence of HBOT in the treatment of diabetic foot by taking into account several factors, including the risk of bias (that was study limitations), inconsistencies, indirectness, inaccuracy, and publication bias. A descriptive analysis of the included systematic reviews was conducted.

Subgroup analysis: No.

Sensitivity analysis: No.

Language: English.

Country(ies) involved: China.

Keywords: Telemedicine; blood glucose; Diabetes Mellitus.

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