

INPLASY PROTOCOL

To cite: Yuan et al.
Telemedicine effect on
rheumatoid arthritis : A
protocol for a systematic
review and meta-analysis of
randomized controlled trials.
Inplasy protocol 202210109.
doi:
10.37766/inplasy2022.1.0109

Received: 21 January 2022

Published: 21 January 2022

Corresponding author:
Bo Yuan

18810535821@163.com

Author Affiliation:

Department of Rheumatology,
Guang'anmen Hospital, China
Academy of Chinese Medical
Sciences, Beijing,
China
Department of Rheumatology,
Wangjing Hospital of China
Academy of Chinese Medical
Sciences, Beijing, China.

Support: No.

**Review Stage at time of this
submission:** The review has not
yet started.

Conflicts of interest:
None declared.

Telemedicine effect on rheumatoid arthritis : A protocol for a systematic review and meta-analysis of randomized controlled trials

Yuan, B¹; Cao, W²; Zhang, X³; Yang, Y⁴; Zhao, J⁵.

Review question / Objective: The role of telemedicine has been highlighted by researchers in many fields as a potential advantage for improving quality of life, increasing patient adherence, and alleviating patient concerns. Telemedicine is patient-acceptable with high satisfaction rates in patients with rheumatoid arthritis (RA). However, there is a lack of consistent results among important indicators regarding RA, such as patient pain assessment and health-related quality of life. Thus, we plan to perform a systematic review and meta-analysis to assess the effect of telemedicine on patients with RA.

Information sources: PubMed, Embase, and Cochrane Library databases.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 21 January 2022 and was last updated on 21 January 2022 (registration number INPLASY202210109).

INTRODUCTION

Review question / Objective: The role of telemedicine has been highlighted by researchers in many fields as a potential

advantage for improving quality of life, increasing patient adherence, and alleviating patient concerns. Telemedicine is patient-acceptable with high satisfaction rates in patients with rheumatoid arthritis

(RA). However, there is a lack of consistent results among important indicators regarding RA, such as patient pain assessment and health-related quality of life. Thus, we plan to perform a systematic review and meta-analysis to assess the effect of telemedicine on patients with RA.

Condition being studied: In patients with RA, patient-reported outcomes corresponded with clinical activity scores in distinguishing poor treatment responses. Therefore, telemedicine interventions, such as direct access strategies and telehealth interventions, provide acceptable alternatives to conventional pre-scheduled outpatient follow-ups with rheumatologists for patients with RA and health care systems. It has been shown that teleconsultation in RA is feasible with a high satisfaction rate and that it prevents the discontinuation of medical follow-up for nearly three-quarters of patients. However, there is a lack of consistent results in the Health Assessment Questionnaire (HAQ), patient pain assessment, and health-related quality of life. Thus, we plan to perform a systematic review and meta-analysis to assess the effect of telemedicine on patients with RA.

METHODS

Search strategy: We will search PubMed, Embase, and Cochrane Library databases from their initiation to February 1, 2022. We will use a combination of free-form and medical subject headings (MeSH) terms related to RA and telemedicine for the literature search and restrict the language in the systematic database search to English.

Participant or population: This review will include studies that involve adults with a diagnosis of RA (defined by the 1987 American College of Rheumatology or 2010 ACR/EULAR classification criteria for RA).

Intervention: Based on the available studies we will classify telemedicine interventions according to 1) consultation through remote technology, 2) enhanced monitoring through remote technology, and 3) self-

management aided by remote technology. The clinical trials evaluated these three interventions will be included.

Comparator: Based on the available studies we will classify telemedicine interventions according to 1) consultation through remote technology, 2) enhanced monitoring through remote technology, and 3) self-management aided by remote technology. The clinical trials evaluated these three interventions will be included.

Study designs to be included: Randomized Controlled Trials (RCTs) published in English only will be included by us. Quasi-randomized trials or other types of studies reported in conference literature, dissertations, and clerks without available data for analysis will be excluded.

Eligibility criteria: Only RCTs about telemedicine for rheumatoid arthritis will be included, with language restrictions in English. Case report, experience report, and laboratory studies will not be included.

Information sources: PubMed, Embase, and Cochrane Library databases.

Main outcome(s): The primary outcome was the Disease Activity Score (DAS28 score) and the Health Survey Short Form (SF-36).

Additional outcome(s): The secondary outcomes were the Health Assessment Questionnaire (HAQ) and the pain (VAS)/mm score.

Quality assessment / Risk of bias analysis: Cochrane Collaborations "risk of bias" tool will be used to fairly review the risk of bias identified in this study.

Strategy of data synthesis: The data were analysed by STATA 16 software.

Subgroup analysis: We will conduct subgroup analyses based on the interventions to explore the impact on outcomes and heterogeneity.

Sensitivity analysis: Sensitivity check will be conducted to ensure the robustness and exclude studies with poor quality or high risk of bias or unclear methodological data.

Language: English.

Country(ies) involved: China.

Keywords: Telemedicine; Rheumatoid Arthritis; meta-analysis; systematic review.

Contributions of each author:

Author 1 - Bo Yuan.

Author 2 - Wei Cao.

Author 3 - Xieyu Zhang.

Author 4 - Yue Yang.

Author 5 - Jiahe Zhao.