

Abstract

Introduction: Diabetic retinopathy is a complication of diabetes caused by changes in blood vessels of retina and it is the leading cause of blindness among adults between the ages 20 and 74 years. Individuals with diabetes would benefit from timely retinal screening examinations, which helps to reduce the incidence of blindness because early detection means that effective treatments. Tele-ophthalmology is actually the integration of medical information and technology using digital medical and communication. It is one of most common and necessary methods for prevention and timely detection of eye diseases in different countries of the world. Diabetic retinopathy screening is the important aspect of treatment in all over the world.

Methods: This study was a health technology assessment. To evaluate the safety and efficacy of tele-ophthalmology, a systematic review were done. For this purpose, databases including Scopus, Cochrane and PubMed were reviewed. The period of research in this study is from 1996 to 2019. Finally, after reviewing the studies with inclusion and exclusion criteria and reviewing the quality of articles, eligible articles were included in the study and the results of the 7 screened studies were reported. To conduct economic evaluation, cost-effectiveness method was used by Markov model by the

health system perspective. The comparator technology in this study was considered, the patient was examined by an ophthalmologist. In order to evaluating the organizational and ethical aspects of technology in Iran, qualitative study was conducted by using surveys. The checklists were adapted from surveys in the HTA Core model 3.0 book, using the Biochemist and James Childers ethical framework in the book "The Laws of Biomedical Bioethics" and the Patients' Rights Charter.

Findings: The results showed that the tele-ophthalmology technology had high safety and efficacy in preventing the progression of diabetic retinopathy. Using this technology from a health system perspective is cost effective and also considering ethical and organizational issues in Iran, increase access to recommended diabetic eye care can help to detect new cases of retinopathy and early treatment in early stages.



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Title

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