



Title Screening for Diabetic Retinopathy in Quebec

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Reference 2008-06. ISBN 978-2-550-54567-5.
www.aetmis.gouv.qc.ca/site/en_publications_2008.phtml

Aim

To assess the advisability of screening for diabetic retinopathy and the feasibility of a screening program in Quebec.

Conclusions and results

Diabetic retinopathy (DR) is the most severe eye complication caused by diabetes and affects almost all people with this condition. DR is the main cause of blindness in the working population of industrialized countries. Although pan-retinal photocoagulation and focal retinal photocoagulation are effective and supported by scientific evidence, their adverse effects mean that it is crucial to limit them strictly to the cases that would benefit from them. Scientific evidence and experiences from systematic screening programs elsewhere support the use of digital cameras for DR screening. The non-mydratic option tends to offer a better cost-effectiveness ratio. With respect to the cost effectiveness of a DR screening program, economic analyses have shown that the shift from opportunistic screening to systematic screening is warranted. Randomized control trials on the effectiveness of DR screening programs were not found. However, observational studies on existing screening programs (Iceland, Sweden, United Kingdom) revealed a reduced incidence of blindness from diabetic retinopathy. Pilot projects launched in different regions of United States and Canada are not easily transferable to the Quebec situation, but provide significant information on potential difficulties linked to DR screening. Hence, AETMIS concludes that it is advisable and feasible to introduce a diabetic retinopathy screening program in Quebec.

Recommendations

AETMIS recommends the gradual introduction of a province-wide systematic DR screening program using non-mydratic retinal cameras for people with diabetes aged 12 years and older in Quebec. Some key elements must be defined before realistic scenarios can be established and costs estimated. These elements include mainly organizational issues.

Methods

A systematic literature review was undertaken (January 1997 - October 2008). Various strategies were used to search 6 electronic databases, without language restriction. The studies were selected responding to predetermined inclusion and exclusion criteria, and quality assessment was carried out. Contextual analysis methods (semi-structured interviews with key informants and analysis of their abstracts), study of Quebec data, and recommendations from programs in place elsewhere were used.

Further research/reviews required

Randomized clinical trials are needed on the effectiveness of a screening program for DR.