

9. Journal name: *Journal of Telemedicine and Telecare*, 2005; 11:163-166.

Emerging trends in ocular telemedicine: the diabetic retinopathy model.

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Diabetes mellitus is a leading cause of vision loss in industrialized countries. Diabetic retinopathy has features which make it ideal for disease management by telemedicine. The American Telemedicine Association (ATA) has recently established consensus recommendations for ocular telemedicine for diabetic retinopathy, in cooperation with the US National Institute of Standards and Technology. The guiding principle is that it would be inappropriate to use telemedicine to provide anything less than the accepted standard of clinical care. The ATA practice recommendations delineate performance standards for the clinical, technical and administrative elements of ocular telemedicine for diabetic retinopathy. Four clinical categories of assessment were identified. Category 4 validation, for example, indicates that a system matches or exceeds the ability of current photographs to identify lesions of diabetic retinopathy. To create the practice recommendations, workshops were held to address each of the three components: (1) clinical, (2) technical, and (3) operational and business. Ocular telemedicine programmes will need to demonstrate sustainability and cost-effectiveness, and respect a patient's right to privacy. Nevertheless, ocular telemedicine seems poised to become an integral part of eye health care, as long as programmes meet or exceed present clinical standards of care, and patient and provider expectations are clearly defined.

PMID: 15969790 [PubMed - indexed for MEDLINE]