Telemedicine versus face to face patient care: effects on professional practice and health care outcomes

Currell Rosemary, Urquhart Christine, Wainwright Paul, Lewis Ruth

Authors' objectives

Background: Telemedicine is the use of telecommunications technology for medical diagnosis and patient care. From its beginnings telemedicine has been used in a variety of health care fields, although widespread interest among healthcare providers has only now become apparent with the development of more sophisticated technology. Objectives: To assess the effects of telemedicine as an alternative to face-to-face patient care. Search methods: We searched the Effective Practice and Organisation of Care Group's specialised register, The Cochrane Library, MEDLINE (1966-August 1999), EMBASE (to 1996), CINAHL (to August 1999), Inspec (to August 1996), Healthstar (1983-1996), OCLC, Sigle (to 1999), Assia, SCI (1981-1997), SSCI (1981-1997), DHSS-Data. We handsearched the Journal of Telemedicine and Telecare (1995-1999), Telemedicine Journal (1995-1999) and reference lists of articles. We also handsearched conference proceedings and contacted experts in countries identified as having an interest in telemedicine. Selection criteria: Randomised trials, controlled before and after studies and interrupted time series comparing telemedicine with face-to-face patient care. The participants were qualified health professionals and patients receiving care through telemedicine. Data collection and analysis: Two reviewers independently assessed trial quality and extracted data. Main results: Seven trials involving more than 800 people were included. One trial was concerned with telemedicine in the emergency department, one with video-consultations between primary health care and the hospital outpatients department, and the remainder were concerned with the provision of home care or patient self-monitoring of chronic disease. The studies appeared to be well conducted, although patient numbers were small in all but one. Although none of the studies showed any detrimental effects from the interventions, neither did they show unequivocal benefits and the findings did not constitute evidence of the safety of telemedicine. None of the studies included formal economic analysis. All the technological aspects of the interventions appear to have been reliable, and to have been well accepted by patients. Authors' conclusions: Establishing systems for patient care using telecommunications technologies is feasible, but there is little evidence of clinical benefits. The studies provided variable and inconclusive results for other outcomes such as psychological measures, and no analysable data about the cost effectiveness of telemedicine systems. The review demonstrates the need for further research and the fact that it is feasible to carry out randomised trials of telemedicine applications. Policy makers should be cautious about recommending increased use and investment in unevaluated technologies.


Bibliographic details


AccessionNumber

10000002098

Date abstract record published

13/07/2012

Record Status

This is an abstract for a Cochrane review