



- Title** **Assessments of Telemedicine Applications – An Update**
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## Aim

To update the systematic review of the telemedicine evaluation literature that was included in the 1999 INAHTA report on assessment of telemedicine. The present review covers studies published since the completion of the earlier report.

## Methods

Systematic literature review based on searches of the MEDLINE, EMBASE, CINAHL, HEALTHSTAR and CRD databases and the Cochrane Library from November 1998 to December 2000.

## Results and Conclusions

- The review identified 38 scientifically credible studies that included comparison with a non-telemedicine alternative and which reported administrative changes, patient outcomes, or results of economic assessment.
- Nine of the studies were considered to be of good quality. Only some of these corresponded to the nine papers that described work based on randomized controlled trials. The quality of most cost and economic analyses was relatively poor.
- Nineteen of the studies concluded that telemedicine had advantages over the alternative approach, 16 also drew attention to some negative aspects or were unclear whether telemedicine had advantages and 3 found that the alternative approach had advantages over telemedicine.
- For several applications, savings and some clinical benefits were obtained through avoiding travel and associated delays. The home care studies showed convincing evidence of benefit, while those on teledermatology indicated that there were cost disadvantages to healthcare providers, but not to patients.
- Twenty-three of the studies appeared to have potential to influence future decisions on the telemedicine application under consideration. However, several of these had methodological limitations.
- The overall findings are similar to those of the review included in the 1999 INAHTA report. Useful data are emerging on some telemedicine applications, but good quality studies are still scarce and generalizability of most assessment findings may be limited.