

ON THE COSTS OF HOME-BASED TELEMEDICINE PROGRAMS: A COMMENT ON MICHAUD ET AL.

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Dear Dr. Babidge:

In a recent review on the costs of home-based telemedicine programs, Michaud et al. (1) have identified twelve cost studies and on this basis concluded that “All selected studies indicate that home telemedicine programs reduce care costs, although detailed cost data were either incomplete or not presented in detail.”

We have made a similar review of nine economic evaluations of telemedicine used for home monitoring in chronic disease management, Kidholm and Kristensen (2), and concluded: “However, in total, home monitoring resulted in increased average costs per patient in six studies and reduced costs in three of the nine studies.”

The two reviews differ with regard to the countries where the studies are carried out and the design of the studies. Whereas Michaud et al. only included studies of telemedicine programs implemented in the United States, our review included studies from Europe, Australia, and Canada. In addition, Michaud et al. included randomized controlled trials, case study design, quasi experimental design, and pilot studies, whereas we only included randomized controlled trials. But the main difference between the two reviews is that our review only included studies reporting the estimated costs per patient, the home-monitoring program costs and the costs per patient related to investment and use of home-monitoring equipment.

Our decision only to include studies that give detailed information about the costs of the telemedicine program and thereby comply with guidelines for health economic evaluation (e.g., Drummond et al.) (3) was based on previous reviews of studies of the costs of telemedicine programs. For example, Mistry (4) who described that most economic evaluations of telemedicine have inadequate details about study design and methodology, including how costs were collected and calculated. Because of these methodological problems, it was

concluded that no further evidence was found that telemedicine interventions were cost-effective.

Similar to Mistry (4), the review by Michaud et al. includes several studies based on a design with low level of evidence, small sample sizes, and studies that do not report the equipment costs. Therefore, Michaud et al. advantageously could have made a less definite conclusion reflecting the uncertainty and the methodological problems in the data in the same way as Mistry (4).

On the other hand, Michaud et al. appropriately request future studies with more detailed information about the costs of telemedicine and point out, that this is needed before wide adaptation of telemedicine takes place. In addition, more recent economic studies are needed because the studies included in the review were published from 2000 to 2010. Thus, the technologies being assessed do not reflect the recent technical developments and the increasing use of patients’ own devices in telemedicine that can be expected to reduce the costs of telemedicine programs. Until more updated and methodologically sound studies have been published, it is important not to be too conclusive in description of the existing evidence on the economics of home monitoring telemedicine programs.

REFERENCES

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