

Telemedicine in a Nursing Home – A Randomized Controlled Trial

Yu KKT, Ho S, Myint J, Wong CK, To K, Ho J, Kong MH, Wong CP

Community Geriatrics Assessment Team of Department of Geriatrics, Ruttonjee and Tang Shiu Kin Hospital

Introduction:

Telemedicine has been studied in various discipline of medicine, including geriatric community medicine, but randomized studies are lacking.

Purpose of the Project:

To determine the effectiveness of telemedicine system on the feasibility, satisfaction, clinical outcomes and possible cost saving among nursing home residents.

Material and Methods:

A prospective randomized controlled trial was conducted in a nine-storeyed nursing home since July 2002. 257 residents were randomized by floor to the telemedicine group (n=106) and conventional group (n=151). The conventional group continued their usual clinical activities (on-site doctor's clinic and ad hoc phone consultations), while the telemedicine group had the activities conducted through real-time videoconferencing. Demographic and clinical outcomes data from July 2002 to Jan 2003 were compared. Feasibility and satisfaction survey as well as cost analysis were conducted.

Results:

Basic demographic data were comparable, except that the telemedicine group had a higher number of medication intake (4.58 vs 3.89; p=0.049). For the clinical outcomes data (per 100 patients), there was insignificant decrease in accident and emergency attendance (32.08 vs 53.64; p=0.388) and emergency admission (28.30 vs 47.68; p=0.280) in the telemedicine group. Total length of hospital stay was also slightly decreased in the telemedicine group (398.11 days vs 466.89 days; p=0.437). Out of the 449 consultations, most (96.44%) were considered feasible by telemedicine. Health professionals, nursing home staffs and patients were generally satisfied with the telemedicine service. There was cost saving of about HKD\$170,000 in the telemedicine group during this 7-months period.

Conclusion:

Telemedicine is feasible in the geriatric community care of nursing home residents with good level of satisfaction. In this study, the clinical outcomes of the telemedicine group are not compromised but further study is necessary.

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