Effects of Real-time Telemedicine Consultations between Hospital-based Nurses and Patients with Severe COPD discharged after Exacerbation Admissions

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Introduction: Hospitalisation with acute exacerbation of chronic obstructive pulmonary disease (AECOPD) causes a major burden for the COPD patients and is a common cause for mortality and hospital (re)admissions worldwide (1).

Objectives: A randomized clinical trial investigating the effects of one week of daily real-time teleconsultation between hospital-based respiratory nurses and patients with severe COPD discharged after AECOPD in addition to conventional treatment compared to the effect of conventional treatment.

Methods: Patients admitted with AECOPD at two different hospitals were recruited at discharge. They were randomly assigned (1:1) to either daily teleconsultation for one week in addition to conventional treatment (TVC group) or to conventional treatment (CT group).

The telemedicine equipment consisted of a briefcase with built-in computer including a web camera, microphone and measurement equipment.

Outcome: Total number of hospital readmissions and hospital days per patient, number of AECOPD hospital readmissions and hospital days per patient calculated 26 weeks after discharge.

Results: A total of 266 patients (mean age 71.5 years, SD 9.5 years) were allocated to either TVC (n=132) or CT (n=134).

No significant prevention effect in relation to hospital readmission and mortality after 26 weeks was noted between the groups.

Conclusion: Addition of one week of teleconsultations was as safe and effective as conventional treatment, but it did not significantly reduce readmissions or affect mortality.