

Home-supported discharge was as effective and safe as standard hospital admission for chronic obstructive pulmonary disease

Skwarska E, Cohen G, Skwarski KM, et al. Randomised controlled trial of supported discharge in patients with exacerbations of chronic obstructive pulmonary disease. *Thorax*. 2000 Nov;55:907-12.

QUESTION

Is home-supported discharge as effective and safe as standard hospital admission in patients presenting to the hospital with an exacerbation of chronic obstructive pulmonary disease (COPD)?

DESIGN

Randomized (2:1 ratio) {allocation concealed*}†, blinded {statisticians}†,* controlled trial with 8-week follow-up.

SETTING

A hospital in Edinburgh, Scotland, United Kingdom.

PATIENTS

184 patients (mean age 69 y, 53% women) who presented to the hospital on a weekday with an exacerbation of COPD. Exclusion criteria were an impaired level of consciousness, acute confusion, acute radiographic changes, arterial pH < 7.35, or a serious medical or social reason. Follow-up was 93%.

INTERVENTION

122 patients were allocated to immediate discharge with home support and were

discharged with an appropriate treatment package (antibiotics; corticosteroids; nebulized bronchodilators; and if necessary, home oxygen). These patients had a nurse home visit the day after discharge and every 2 to 3 days thereafter until recovery, at which time they were discharged from follow-up. 62 patients were allocated to hospital admission with standard care by the respiratory team. All patients were assessed at home 8 weeks after the initial assessment.

MAIN OUTCOME MEASURES

Time to discharge, readmission rate, respiratory function tests, additional care by general practitioners or other caregivers, quality of life, patient satisfaction with care, and estimated costs.

MAIN RESULTS

The median time to discharge from care was 7 days for the home-supported group and 5 days for the admitted group ($P < 0.01$), but the estimated mean total health service cost was £877 per patient for the home-supported group and £1753 per patient for the admitted group. At 8 weeks, the home-supported and admitted groups did not differ for the rate of readmission (25% vs 34%),

respiratory function, attendance by general practitioners and caregivers, or quality of life. Patients in the home-supported group reported good satisfaction with the service.

CONCLUSIONS

Home-supported discharge was as effective and safe as standard hospital admission in some patients referred to the hospital with an exacerbation of chronic obstructive pulmonary disease. Furthermore, home-supported discharge showed good patient satisfaction and was an economical alternative to hospital admission.

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*See Glossary.

†Information provided by author.

COMMENTARY (continued from page 94)

These studies show that hospitals can use respiratory specialist nurses to avoid hospital admissions or shorten hospital stay by managing patients with COPD at home and by providing supplies, such as nebulizers or oxygen, when necessary. The current evidence applies to a carefully selected minority of patients, approximately a quarter of the patients presenting with exacerbations of COPD. An initial assessment in the hospital with chest radiography, blood gas analysis, and social evaluation is needed to select patients who are suitable for a home-care service. The studies did not appear to involve more work for other home services or general practitioners. Further studies are needed to look at alternatives for providing appropriate support to reduce the high readmission rate or emergency department attendance.

These 2 studies should provide sufficient encouragement to many units to start up similar services. The development of such

services requires an initial budget to employ or train suitable respiratory nurses and to acquire an adequate amount of necessary equipment, such as portable oximeters, nebulizers, and oxygen supplies. Equivalent savings from reductions in bed days are more difficult to release because of the fixed costs involved, but this service would help to relax the demand on inpatient beds.

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Reference

1. Gravil JH, Al-Rawas OA, Cotton MM, et al. Home treatment of exacerbations of chronic obstructive pulmonary disease by an acute respiratory assessment service. *Lancet*. 1998;351:1853-5.