

## Editorials

## Assisted discharge for patients with exacerbations of chronic obstructive pulmonary disease: safe and effective

Every year the pressure of acute medical admissions rises and the NHS hits the headlines as admission rates peak in the winter. Many of these admissions are related to COPD, hence the development of interventions such as an acute respiratory assessment service pioneered in Glasgow.<sup>1</sup> However, this kind of service, which takes direct referral from the GP and has its own beds and personnel running alongside a medical assessment unit, can be very expensive to run, and effectiveness may be difficult to assess. If admitted, patients who have experienced intensive rehabilitation may spend less time in hospital.<sup>2</sup>

Two studies in this issue break new ground by looking at patients with COPD once they have been admitted; is early discharge with an appropriate package of care feasible?

Cotton *et al*<sup>3</sup> randomised patients between planned discharge "the next working day" and conventional management by a general physician in an acute hospital. Patients discharged early received domiciliary visits by a suitably trained nurse. A total of 360 admissions with COPD were identified, of whom 151 (41.9%) had no primary contraindication to early discharge. The two groups were well matched with a mean FEV<sub>1</sub> of less than 1 litre. The main outcome criteria were efficacy (length of hospital stay), safety (death within 60 days), and success of treatment of the primary exacerbation (readmission rate within 60 days). No large differences were detected between the groups in terms of death (3.7% at 60 days) or readmission (30%) rates, but patients in the intervention group were able to be discharged 3 days earlier than the control group.

Skwarska *et al*<sup>4</sup> randomised patients between discharge on the day of assessment (which was either the day of admission or the day after admission) and conventional management on a dedicated respiratory ward. As in the study by Cotton *et al*, a suitably trained nurse made domiciliary visits to patients discharged early. This was a large study, running over two winters, and 1006 patients were admitted with COPD during this time. Only 208 (20.7%) were considered suitable for entry into the study. The admitted and discharged groups were well matched (mean FEV<sub>1</sub> 0.74 l). The main outcome criteria were proportion of admissions suitable for assisted discharge, safety, success of treatment, effect on health status, and primary care usage. A basic economic evaluation was also performed. No differences were found in death (6% at 56 days) or readmission (27%) rates, and patients in the intervention group were discharged from hospital 4 days earlier than those in the control group (although the results are not entirely explicit on this point). Early discharge did not transfer work to primary care and was highly acceptable to patients. The authors concluded that their service was cost effective, without suggesting from where resources could be released.

Both studies were well conducted and provide valuable data to drive change. Both look at provision of a service on a weekday only basis, though Cotton *et al* included patients

admitted over the weekend. This will artificially increase bed stay to some extent, as does the tendency for hospitals not to discharge patients over a weekend. The death and readmission rates are comparable to BTS audit data of 14% and 31%, respectively (at 3 months), though the BTS audit includes patients with significant co-morbidity.

Some previous data are available. A few patients with COPD were enrolled in a hospital or home randomised controlled trial in Northamptonshire, UK. The numbers were too small (21 at 3 months) for any difference in outcome to be significant, but there was a clear trend for those patients who stayed in hospital to have a greater decrease in respiratory quality of life scores.<sup>5</sup> However, a subsidiary study showed that "hospital at home" was an expensive option for this small sample of patients, largely because of an increased readmission rate.<sup>6</sup> Other studies of domiciliary intervention during the stable phase of COPD have been disappointing.<sup>7,8</sup>

Should every DGH have a COPD early discharge service? These papers have established that it can be safe, but will not affect readmission rates. The exact mathematics may be disputed but the data from Skwarska *et al* indicate that, taking into account the early readmissions, there could be a notional saving of 443 bed days/year. The data from the study by Cotton *et al* suggest a lower figure of 201 bed days saved per year (likely to be an underestimate in view of some exclusions from the study). It would be instructive to plan out the seasonal distribution of notional savings; by comparing when hospitals were being forced to close or when routine surgery was being cancelled because of a lack of capacity, these notional savings could become real savings to an acute trust.

J KILLEN  
H ELLIS

Department of Medicine,  
Queen Elizabeth Hospital,  
Gateshead NE9 6SX, UK

- 1 Gravil JH, Al-Rawas OA, Cotton MM, *et al*. Home treatment of exacerbations of COPD by an acute respiratory assessment service. *Lancet* 1998;351:1853-5.
- 2 Griffiths TL, Burr ML, Campbell IA, *et al*. Results at 1 year of outpatient multidisciplinary pulmonary rehabilitation: a randomised controlled trial. *Lancet* 2000;355:362-8.
- 3 Cotton MM, Bucknall CE, Dagg KD, *et al*. Early discharge for patients with exacerbations of COPD: a randomised controlled trial. *Thorax* 2000;55:902-6.
- 4 Skwarska E, Cohen G, Skwarski KM, *et al*. A randomised controlled trial of supported discharge in patients with exacerbations of COPD. *Thorax* 2000;55:907-12.
- 5 Shepperd S, Harwood D, Jenkinson C, *et al*. Randomised controlled trial comparing hospital at home care with inpatient hospital care. I: Three month follow up of health outcomes. *BMJ* 1998;316:1786-91.
- 6 Shepperd S, Harwood D, Gray A, *et al*. Randomised controlled trial comparing hospital at home care with inpatient hospital care. II: Cost minimisation analysis. *BMJ* 1998;316:1791-6.
- 7 Littlejohns P, Baveystock CM, Parnell H, *et al*. Randomised controlled trial of the effectiveness of a respiratory health worker in reducing impairment, disability, and handicap due to chronic airflow limitation. *Thorax* 1991;46:559-64.
- 8 Haggerty MC, Stockdale-Wooley R, Nair S. Respi-Care: an innovative home care program for the patient with COPD. *Chest* 1991;100:607-12.