

**Chronic Obstructive Pulmonary Disease: Management of adults with
Chronic Obstructive Pulmonary Disease in Primary and Secondary
Care**

**Management of exacerbations of COPD
Hospital at home and assisted discharge schemes
Index**

Hospital at home

Author	Publication Date	ID
Davies, L., Wilkinson, M., Bonner, S., Calverley, P. M., & Angus, R. M. 2000, "'Hospital at home" versus hospital care in patients with exacerbations of chronic obstructive pulmonary disease: prospective randomised controlled trial", <i>BMJ</i> , vol. 321, pp. 1265-1268.	2000	1059
Fried, T. R., Van Doorn, C., Tinetti, M. E., & Drickamer, M. A. 1998, "Older persons' preferences for site of treatment in acute illness", <i>Journal of General Internal Medicine</i> , vol. 13, no. 8, pp. 522-527.	1998	1126
Fried, T. R., Van Doorn, C., O'Leary, J. R., Tinetti, M. E., & Drickamer, M. A. 2000, "Older persons' preferences for home vs hospital care in the treatment of acute illness", <i>Archives of Internal Medicine</i> , vol. 160, no. 10, pp. 1501-1506.	2000	1127
Gravil, J. H., Al Rawas, O. A., Cotton, M. M., Flanigan, U., Irwin, A., & Stevenson, R. D. 1998, "Home	1998	19

treatment of exacerbations of chronic obstructive pulmonary disease by an acute respiratory assessment service", <i>Lancet</i> , vol. 351, no. 9119, pp. 1853-1855.		
Skwarska, E., Cohen, G., Skwarski, K. M., Lamb, C., Bushell, D., Parker, S., & MacNee, W. 2000, "Randomised controlled trial of supported discharge in patients with exacerbations of chronic obstructive pulmonary disease", <i>Thorax</i> , vol. 55, no. 11, pp. 907-912.	2000	221
Ojoo, J. C., Moon, T., McGlone, S., Martin, K., Gardiner, E. D., Greenstone, M. A., & Morice, A. H. 2002, "Patients' and carers' preferences in two models of care for acute exacerbations of COPD: results of a randomised controlled trial", <i>Thorax</i> , vol. 57, no. 2, pp. 167-169.	2002	1130
Hernandez, C., Casas, A., Escarrabill, J., Alonso, J., Puig-Junoy, J., Farrero, E., Vilagut, G., Collvinent, B., Rodriguez-Roisin, R., & Roca, J. 2003, "Home hospitalisation of exacerbated chronic obstructive pulmonary disease patients", <i>Eur Respir J</i> , vol. 21, no. 1, pp. 58-67.	2003	19475
Early discharge		
Author	Publication Date	ID
Cotton, M. M., Bucknall, C. E., Dagg, K. D., Johnson, M. K., MacGregor, G., Stewart, C., & Stevenson, R. D. 2000, "Early discharge for patients with exacerbations of chronic obstructive pulmonary disease: a	2000	220

randomised controlled trial", <i>Thorax</i> , vol. 55, no. 11, pp. 902-906.		
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Author / Title / Reference / Yr	Davies, L., Wilkinson, M., Bonner, S., Calverley, P. M., & Angus, R. M. 2000, ""Hospital at home" versus hospital care in patients with exacerbations of chronic obstructive pulmonary disease: prospective randomised controlled trial", <i>BMJ</i> , vol. 321, pp. 1265-1268. Ref ID: 1059																				
N=	N=150 Duration=18 months study with three months follow-up Centres=University teaching hospital Geographic site=UK																				
Design	RCT																				
Aim	<ul style="list-style-type: none"> To compare "hospital at home" and hospital care as an inpatient in acute exacerbations of COPD Hypothesised that selected patients currently admitted with exacerbations of COPD could safely be cared for at home with sufficient support. 																				
Operational Definition	Diagnosis of COPD based upon BTS criteria Exacerbation was defined as increased breathlessness and an increase in at least two of the following symptoms for 24 hrs or more; cough frequency or severity, sputum volume or purulence and wheeze.																				
Inclusion / Exclusion Criteria See Q121	<table border="0"> <tr> <td>Inclusion criteria:</td> <td>Exclusion criteria</td> </tr> <tr> <td>FEV1<80% predicted</td> <td>Asthma</td> </tr> <tr> <td>FEV1/FVC ratio <70%</td> <td>Marked use of accessory muscles</td> </tr> <tr> <td>Mini mental state score >7</td> <td>Suspected underlying malignancy</td> </tr> <tr> <td>Pulse <100 bpm</td> <td>Pneumothorax or pneumonia</td> </tr> <tr> <td>Systolic BP >100 mmHg</td> <td>Uncontrolled LVF</td> </tr> <tr> <td>PH >7.35</td> <td>Acute changes on EEG</td> </tr> <tr> <td>pO2>7.3 kPa</td> <td>Requirement for full time nursing care</td> </tr> <tr> <td>pCO2 <8 kPa</td> <td>Requirement for IV therapy</td> </tr> <tr> <td>Total WBC 4-20x10⁹/l</td> <td></td> </tr> </table>	Inclusion criteria:	Exclusion criteria	FEV1<80% predicted	Asthma	FEV1/FVC ratio <70%	Marked use of accessory muscles	Mini mental state score >7	Suspected underlying malignancy	Pulse <100 bpm	Pneumothorax or pneumonia	Systolic BP >100 mmHg	Uncontrolled LVF	PH >7.35	Acute changes on EEG	pO2>7.3 kPa	Requirement for full time nursing care	pCO2 <8 kPa	Requirement for IV therapy	Total WBC 4-20x10 ⁹ /l	
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Total WBC 4-20x10 ⁹ /l																					
Population	COPD exacerbations (asthmatics excluded).																				
Intervention Q120	Home care N=100 Hospital at home run from the accident and emergency department and not involving an overnight hospital stay. The Acute Chest Triage Rapid Intervention Team (ACTRITE) intercepted patients accepted for hospital admission with exacerbations of COPD in the A&E dept. A specialist nurse based in the A&E dept escorted Pts home. Pts GPs were informed of home care. Social support was immediately available if required. Nurses visited the pts mornings and evenings for 3 days and thereafter at the discretion of the nurses. Evening and night cover was provided with the agreement of pre-existing services by district nurses.																				
Comparison	Hospital care N=50																				
Outcome	Number of subsequent admissions to hospital during the first two wks of home care, the number of admissions to hospital in the 3/12 after this period, and changes in FEV1 after the use of bronchodilator. Health status in a subgroup of those randomised. health related quality of life (SGRO) during the first wk of the exacerbation. Fifty of these completed a second																				

	such questionnaire at three months.
Characteristics	Mean age 70yrs, 50:50 male / female, 37% had started a course of high dose oral corticosteroids and 50% had started oral antibiotics within 2 or 3 days of randomisation. No difference was found between these pts and the others for FEV1 after the use of a bronchodilator, duration of hospital or home care, or distribution between the treatment arms.
SIGN Quality Rating	++
Hierarchy of Evidence Grading	1b
Results	<p>FEV1 No significant differences were found in FEV1 after use of a bronchodilator at two wks or three months between the two groups.</p> <p>Readmission 37% home care group and 34% hospital care were readmitted at three months.</p> <p>Mortality No significant differences were found between the two groups at three months.</p> <p>Subgroup analyses of HRQL Data from repeat SGRQ were available in 50/90 pts at three months; 34 received home care and 16 received hospital care At three months there was no difference in the scores either from admission or between the groups.</p>
ID	1059

Author / Title / Reference / Yr	Fried, T. R., Van Doorn, C., Tinetti, M. E., & Drickamer, M. A. 1998, "Older persons' preferences for site of treatment in acute illness", <i>Journal of General Internal Medicine</i> , vol. 13, no. 8, pp. 522-527. Ref ID: 1126
N=	N=29. Geographical site=USA
Design	Qualitative research
Methodology	Grounded theory
Method / Research Tool	Sample size – number of participants interviewed continued until data saturation achieved. In-depth open-ended interviews. Interviews lasted 30-60 minutes and were taped and transcribed.
Data analysis	Constant comparative method was used. Segments of the transcripts were initially coded into discrete themes by each of the investigators independently. A qualitative research software program facilitated assignment of codes to text. Themes and concepts were developed from the qualitative data by two researchers and an inter-rater reliability framework was agreed.
Aim	To elicit how older persons form preferences for site of medical care by examining their perceptions of home and hospital care.
Population	Older persons' hospitalised (1 to 6 months earlier) with congestive heart failure, chronic obstructive pulmonary disease or pneumonia and were receiving home care services
Characteristics	Age range 65 to 89 yrs / 21 (72%) female / 18 (62%) white / 17 (59%) lived alone.

	All participants had been hospitalised with their illness episode and none had been given a choice about treatment site.
Results	<p>Perception of services available at home Encouraged respondents to consider the possibility of a wide variety of home care services; many simply could not imagine receiving the services necessary to meet their needs. Concerns were focused upon the American system of cost of payment, provision of only limited services (which arose from home care as a supportive service rather than as an integral part of their treatment) and inability of the nurse to take any action apart from refer problems to a doctor.</p> <p>Importance of outcome over process of care Preference for site of care depended on the anticipated outcome of the illness episode. The likelihood of surviving the illness was the most important determinant of preference for home or hospital. Home care was seen for some as a low intensity service.</p> <p>Preference for care at home and in the hospital 15 (52%) preferred home care because of positive aspects of the comfort of home e.g. sleep better, confined in hospital, not being surrounded by other sick people, receiving the undivided attention of the nurse during a home visit. For those who preferred the hospital, the sense of safety, closer monitoring, availability of help at night (both emotional and physical support) and less burden placed upon families were cited.</p> <p>Factors influencing perceptions Because perceptions of home and hospital differed researchers sought to understand the factors influencing respondents' perceptions. Four factors were elicited; social support, religiousness, self-reliance and past experience with illness. Previous experiences with illness and its symptoms influenced preference for site of care, <i>"I don't think my kids would know what to do. I might make them nervous.....I couldn't catch my breath, you know, and then you don't want them to leave. You're afraid"</i>.</p>
SIGN Quality Rating	No SIGN Checklist available for qualitative methodologies. Critical Appraisal Skills programme (CASP) checklist for qualitative research used. Equates to "+"
Hierarchy of Evidence Grading	III
ID	1126

Author / Title / Reference / Yr	Fried, T. R., Van Doorn, C., O'Leary, J. R., Tinetti, M. E., & Drickamer, M. A. 2000, "Older persons' preferences for home vs hospital care in the treatment of acute illness", <i>Archives of Internal Medicine</i> , vol. 160, no. 10, pp. 1501-1506. Ref ID: 1127
N=	N=246. Time period July 1997-Jan 1998. Geographic location=USA. Site=2 urban teaching hospitals.
Design	Survey
Method / Research Tool	Participants were interviewed by telephone 2/12 after hospitalisation. Participants were asked to indicate their preference for home or hospital as site of care based upon a scenario (derived from previous qualitative research (ID 1126). The scenario was described as 1) home and hospital provide an equal likelihood of survival 2) the same treatments, such as IV medications, O2, blood tests and XR would be available in the home and in the hospital and 3) a daily nursing visit and several hrs of home health aide assistance would be provided at no cost to the patient. All participants were then asked to choose from a list of the most important reasons underlying their preference. The scenario was then changed according to differing variables and participants were then asked whether this resulted in a change in preference.
Aim	Purpose of the study was to describe preferences for treatment site among older persons with conditions identified as potentially amenable to treatment in both the home and the hospital.
Population	Older persons' with pneumonia, congestive heart failure, and exacerbation of COPD
Characteristics	Mean age 76yrs / gender 57% female / 92% white / 37% live alone / 26% diagnosis of COPD.
Results	If home and hospital offered equivalent outcomes, 46% of the sample preferred treatment at home. Preferences were heavily dependent on the outcome of the illness, physician opinion about the best site of care and the provision of home visits. Higher education, white race, living with a spouse and having 2 or more dependencies in activities of daily living were associated with home care.
SIGN Quality Rating	No SIGN Checklist available for survey. Critical Appraisal Skills programme (CASP) checklist for qualitative research used. Equates to "+" but limited results.
Hierarchy of Evidence Grading	III
ID	1127

Author / Title / Reference / Yr	Gravil, J. H., Al Rawas, O. A., Cotton, M. M., Flanigan, U., Irwin, A., & Stevenson, R. D. 1998, "Home treatment of exacerbations of chronic obstructive pulmonary disease by an acute respiratory assessment service", <i>Lancet</i> , vol. 351, no. 9119, pp. 1853-1855. Ref ID: 19
N=	N=962 pts over 3-5 years (Time period Dec 1993 to June 1997)
Design	Service Evaluation

Aim	Assessed pts with exacerbation of COPD after referral to a hospital respiratory dept by their family physicians.
Operational Definition	Severe exacerbations: Respiratory rate of >25bpm, heart rate of >110bpm, partial pressure of O ₂ <8.0kPa and abnormal CXR.
Population	Pts with exacerbations of COPD. Severe disease with a mean FEV1 of 1.02 L
Service provision Q120 / Q121	Options: 1. Doctor admitted pts to hospital. 2. Doctor sends pt home for treatment with respiratory-nurse supervision <ul style="list-style-type: none"> • Baseline assessment: CXR, oxygen saturation, arterial gas analysis, spirometry and physical assessment. • Decision to admit: Made by degree of disability or frailty, the degree of support in the community (lived alone), severity of exacerbation, mental state, or the presence of a coexisting disorder that required admission. • Severity of the exacerbation: Assessed by clinical signs of respiratory distress, XR and arterial gases. • Suitable pts were allowed home with an individualised package of care. • A respiratory nurse visited each pt daily between 09:00 and 12:00 and assessed progress clinically and with spirometry and O₂ saturation.
Outcome	<ul style="list-style-type: none"> • 145 (15%) pts admitted. 6% of pts with uncomplicated COPD and 6% with additional medical disorders were admitted to hospital at assessment. • 768 (80%) pts treated at home and of these 115 (12% of all pts) required admission during follow-up. None of the referred pts had uncompensated respiratory acidosis. • 49 (5%) of 962 were inappropriate referrals • One pt died at home. • Severity of exacerbations was similar among pts treated at home and those who later required admission. • FEV1 (L) admitted at assessment 1.05 (0.63) / treated at home 1.02 (0.53) • Patient satisfaction questionnaire showed that 80% of pts would be happy to be treated at home and 14% would prefer to be admitted to hospital. • Of pts treated successfully at home, 53% compared with 88% of those admitted at assessment fulfilled at least one inclusion criterion for a severe acute exacerbation. There was little difference in initial severity of exacerbation between those treated successfully at home and those admitted during follow up (development of additional disorders).
Characteristics	Mean age 65yrs (range 27-94) / lived alone 29% / Mean (SD) FEV1 (L) 1.02 (0.5) / Mean (SD) SGRQ score 72 (18.6)
SIGN Quality Rating	Not critically appraised. Service evaluation
Hierarchy of Evidence Grading	Not within hierarchy of evidence Service Evaluation
ID	19

Author / Title / Reference / Yr	Skwarska, E., Cohen, G., Skwarski, K. M., Lamb, C., Bushell, D., Parker, S., & MacNee, W. 2000, "Randomised controlled trial of supported discharge in patients with exacerbations of chronic obstructive pulmonary disease" <i>Thorax</i> vol 55, no 11
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	pp. 907-912. Ref ID: 221
N=	N=184 Duration=18 months Centres=Royal Infirmary Geographic site= Scotland
Design	RCT
Aim	To compare outcomes in those managed at home with support with those admitted to hospital.
Operational Definition	Assessed with respect to 13 indicators of severity of the exacerbation, as per the BTS guidelines
Inclusion / Exclusion Criteria See Q121	Exclusion criteria Impaired consciousness, acute confusion, acute changes on X-ray or an arterial pH of <7.3.
Population	COPD exacerbations
Intervention Q120	Home care N=122 <ul style="list-style-type: none"> All patients were seen initially by the staff in A&E or by the medical registrar on call The Acute Respiratory Assessment Service (ARAS) was available on weekdays from 09:00 to 17:00. Pts presenting overnight (after 17:00 hrs) were assessed the following morning in the admissions unit Pts were visited at home by an ARAS nurse the following day and thereafter at intervals of 2-3 days to monitor the need for treatment. The progress of the pts was assessed in consultation with the two ARAS nurses weekly at a review meeting by the consultant in charge of the trial. Medical advice was available daily from the on call respiratory team. GP was aware of follow up by the ARAS team. Any additional care they had received from GP / social services or informal carers are reported as outcome measures.
Comparison	Hospital care N=62
Outcomes	Follow-up and readmission rates, respiratory function, CRQ, satisfaction with service, additional care, and mean health service cost per pt.
Characteristics	Mean age 69yrs range 39-86 / sex % female 53% / Current smoker 39% Mean resp rate 23 / mean peak exp flow l/min 168 / Mean FEV1 0.74 / Mean O2 saturation 92%
SIGN Quality Rating	++
Hierarchy of Evidence Grading	1b
Results	Follow up and readmission 7% of those supported at home were admitted to hospital for respiratory related problems before they were discharged from home care. For those discharged at the end of the exacerbation there were no significant differences in readmissions at 8 wks between the two groups. Among those discharged at the end of the exacerbation 25% of the home support group and 34% of the hospital admitted group were readmitted before the final assessment at 8wks (non significant difference). The median time to discharge was 7 days for the home group and 5 days for the hospital group (p<0.01). Respiratory Function

	<p>Between discharge and the final assessment at 8wks, measurements of respiratory function did not change significantly except for an increase in O2 saturation of 2.4% in the hospital group.</p> <p>Chronic Respiratory Questionnaire (CRQ) There were no significant differences between the groups when measured at 8wks.</p> <p>Satisfaction with service 69% pts treated at home completed satisfaction questionnaire, 95% of these said that they were “completely satisfied”. No comparison data given for hospital group. 50% GPs replied. 65% felt that there was no increase in demand on their practice with those pts managed at home. 33% reported decreased demands and 2% reported increased demands.</p> <p>Additional support services Home support pts received an average of 3.8 visits at home from the ARAS nurses before being discharged. Attendance by GPs and carers did not differ significantly between the groups during the 8wk follow up period.</p> <p>Mean health service cost per pt £877 for home support group £1753 for pts admitted to hospital. The mean cost of GP care between discharge and final assessment was slightly greater for the hospitalised pts than for the home pts.</p>
ID	221

Author / Title / Reference / Yr	Ojoo, J. C., Moon, T., McGlone, S., Martin, K., Gardiner, E. D., Greenstone, M. A., & Morice, A. H. 2002, "Patients' and carers' preferences in two models of care for acute exacerbations of COPD: results of a randomised controlled trial", <i>Thorax</i> , vol. 57, no. 2, pp. 167-169. Ref ID: 1130
N=	N=60 Duration=9/12 Centres=Medical Chest Unit of a University Hospital Geographic site=UK
Design	RCT
Aim	To ascertain the acceptability to pts and carers of Hospital at Home (HaH) schemes compared to in-patient care.
Operational Definition	FEV1 / FVC ratio of <70%. FEV1 reversibility to salbutamol <15% (obtained on a previous admission or clinic visit). Exacerbation was defined as worsening of symptoms with any combination of increased sputum purulence and / or volume, and worsening dyspnoea.
Population	COPD acute exacerbation
Intervention	Home care N=30
Comparison	Hospital care N=30
Outcome	See factors listed in results section
Characteristics	Average age 70vrs / 50% Men / Mean [SD] admission FEV1 0.85 [0.34] conventional arm. 1.0 [0.38] domiciliary arm / Mean

	[SD] symptoms score on admission (%) 63.6 (17.8) conventional arm, 63.0 (13) domiciliary arm. Mean [SD] total SGRQ score 67.6 [16.3] conventional arm, 67.9 [10.7] domiciliary arm. Excluded if had complications with the exacerbation; acidosis, cor pulmonale, and acute changes on CXR.
SIGN Quality Rating	+
Hierarchy of Evidence Grading	1b
Results	<p>There were no significant differences between the two groups for the following outcomes:</p> <ul style="list-style-type: none"> • Mean improvement in FEV1, mean improvement in FVC, mean improvement in symptom score, mean no of days in care, mean no of readmissions per pt at 3/12, readmission rate at 3/12 and number of deaths at 3/12. <p>Preferences</p> <ul style="list-style-type: none"> • 60% in the conventional arm and 96% in the domiciliary arm would have preferred domiciliary management. • 34 carers completed the questionnaires and respective carer preference figures were 6/14 (43%) and 17/20 (86%) • The pts and carers in the Hospital at Home arm were significantly more likely than those in the conventional arm to prefer domiciliary care (p=0.001 and p=0.01 respectively). <p>Satisfaction</p> <p>There were no significant differences in the satisfaction scores with the care package for either patient or carers. There was no association between preferred site of management and age or sex of pt, treatment with maintenance steroids, home nebuliser or oxygen, frequency of admissions in the preceding yr, symptom score at admission and whether the pt lived alone or had a partner.</p>
NCC CC ID	1130

Author / Title / Reference / Yr	Hernandez, C., Casas, A., Escarrabill, J., Alonso, J., Puig-Junoy, J., Farrero, E., Vilagut, G., Collvinent, B., Rodriguez-Roisin, R., & Roca, J. 2003, "Home hospitalisation of exacerbated chronic obstructive pulmonary disease patients", <i>Eur Respir J</i> , vol. 21, no. 1, pp. 58-67.
N=	N=222, Duration = 8/52, Emergency Room of two tertiary hospitals, location = Spain
Design	RCT
Aim	It was postulated that home hospitalisation with free patient phone access to a specialised nurse should generate a better outcome at lower direct costs than inpatient hospitalisation.
Operational Definition	COPD exacerbation as a major cause of referral to the ER, and absence of any criteria for imperative hospitalisation as stated by the British Thoracic Society (BTS) guidelines
Population	COPD acute exacerbation
Intervention	N=121. The HH intervention had three main objectives: 1) an immediate or early discharge from the hospital was encouraged by the

	<p>specialised team aiming to either avoid or reduce the length of inpatient hospitalisation; 2) a comprehensive therapeutic approach was tailored on an individual basis, according to the needs detected by the specialised team; and 3) patient support by a skilled respiratory nurse either through home visits or free-phone consultation was ensured during the 8-week follow-up period.</p> <p>A maximum of five nurse visits at home were permitted during the 8-week follow-up period, but patient's phone calls to the nurse were not limited in number.</p> <p>Full details of intervention were appended to the study report</p>
Comparison	<p>N=101</p> <p>Patients included in the conventional care group (controls) were evaluated by the attending physician at the ER who decided either on inpatient hospital admission or discharge.</p>
Outcome	<p>Readmission rates, and lengths were recorded over the 8 week follow up period, and number of emergency room visits recorded. HRQL outcomes were assessed as were satisfaction with care.</p> <p>HRQL status during the previous year (St George's Respiratory Questionnaire (SGRQ) and Short-Form 12-item survey (SF-12), both validated scales, were employed. At 8-week follow-up period, the same questionnaires were used. Also forced spirometry, chest radiograph films and arterial blood gases were also obtained.</p>
Characteristics	<p>Average age 70.8yrs / 96.8% Male / Dyspnoea score (VAS) 6.2 [SD] 3.2 / % requiring admission for exacerbations in previous yr 40.7% / pH 7.4 [SD] 0.2 / PaCO₂ 43.2 [SD] 8.2. FEV1 at end of study = 42% % predicted</p>
SIGN Quality Rating	+
Hierarchy of Evidence Grading	1b
Results	<p>Readmission rates The rate of hospital readmissions during this period was ~ 25%, with no differences between groups.</p> <p>ER visits In the control group, however, the rate of relapses requiring new ER admission without subsequent hospital readmissions almost doubled the figure shown by the HH patients (p<0.05) being 0.31 ±0.62 and 0.13±0.43 respectively</p> <p>Mortality No significant difference</p> <p>SGRQ Hospital at home =-6.9, conventional care =-2.4 (p=0.05)</p> <p>Patient satisfaction score Hospital at home =8.0, conventional care =7.5 (p=0.03)</p> <p>Knowledge of care A higher percentage of patients in the HH group had a substantial improvement in knowledge of the disease (HH 58% versus 27% for controls, (p<0.01).</p>
NCC CC ID	Ref ID: 19475

Author / Title / Reference / Yr	Cotton, M. M., Bucknall, C. E., Dagg, K. D., Johnson, M. K., MacGregor, G., Stewart, C., & Stevenson, R. D. 2000, "Early discharge for patients with exacerbations of chronic obstructive pulmonary disease: a randomised controlled trial", <i>Thorax</i> , vol. 55, no. 11, pp. 902-906. Ref ID: 220
N=	N=81 Duration=Study recruitment 14 months follow up 60 days. Centres=Large University Teaching Hospital. Geographic site=Scotland
Design	RCT
Aim	<ul style="list-style-type: none"> • Compare conventional inpatient management of patients with an acute exacerbation of COPD with a policy of early discharge followed by domiciliary respiratory nurse support. • Hypothesised that patients currently treated throughout the course of their illness in hospital could be successfully treated at home after a brief period as inpatients.
Operational Definition	Operational definition of COPD not given.
Inclusion / Exclusion Criteria See Q121	Exclusions: Not resident in Glasgow, homeless, unable to give informed consent, did not have access to a telephone, requiring inpatient management or investigation for medical problems, life threatening respiratory failure defined by an acidosis ($H^+ >45nM$).
Population	COPD exacerbation ("A patient was considered to have an exacerbation of COPD if this formed part of the clinical differential diagnosis of the admitting medical unit")
Intervention Q120	<p>N=41 Early discharge group Pts were sent home on the next working day after recruitment, ideally within three days of admission. Patients were visited by a respiratory nurse on the first morning after discharge and thereafter at intervals determined by the nurse. The respiratory nurse in the early discharge group could adjust treatment at home after discussion with a member of the respiratory medical staff. "Home management followed the practice developed for Acute Respiratory Assessment Service (ARAS) for pts referred by their family physicians with exacerbations of COPD". See ID 19.</p> <p>Patient discharge was not supported by increased use of social services support of rehabilitation services such as physiotherapy. Pre-existing social services support was reinstated if stopped before discharge.</p>
Comparison	N=40 Hospital inpatient care
Outcomes	<ul style="list-style-type: none"> • Rate of readmission and consequent additional number of days spent in hospital during the 60 days following initial admission. • Deaths during the same period.

Characteristics	(SE) Hospital group / Early discharge group Average age: 68yrs 66yrs Women: 60% 54% FEV1 (l) 0.94 (0.06) 0.95 (0.08) FEV1 (% pred) 44 (3) 41 (3) FEV1 / FVC (5) 46 (2) 45 (2)
SIGN Quality Rating	++
Hierarchy of Evidence Grading	1b
Results	<p>On an intention to treat basis, a policy of early discharge reduced in patient stay from a mean of 6.1 (range 1-13) days with conventional management to 3.2 (1-16) days with an early discharge policy.</p> <p>There were no significant differences in the:</p> <ul style="list-style-type: none"> • Number of patients that were readmitted in each group was identical at 30%. • Number of additional days readmitted patients spent in hospital <p>Number of deaths</p>
ID	220