

sleep duration and habitual sleep efficiency; four with subjective sleep quality. Five subjects had some daytime sleepiness (ESS score > 6); four subjects had problems with anxiety and/or depression (HADS). Chronically fragmented sleep patterns were attributed to symptoms (e.g. sputum) and other problems (e.g. noise). Most subjects acknowledged a relationship between good sleep and psychological and physical well being, although few had sought advice on sleep. Some had made lifestyle adjustments. Emergent topics included reduced activity, sleep disturbances, sleep position, not tired, napping, boredom, frustration, medication, and Sleep hygiene. Several suggested a reduced need for sleep due to lack of physical activity and/or tiredness. *Conclusions:* Lack of sleep causes significant concern for many patients with COPD, and some suffer from a lack of professional support. Patient-orientated research can identify needs and direct access to simple interventions.

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#### ABS62: Is well-known COPD, well-treated COPD?

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*Introduction:* Chronic obstructive pulmonary disease (COPD) is an important problem of public health because of its high prevalence, recurrent visits to primary care, morbidity and mortality and its economic impact [1–3]. *Aims and objectives:* To describe COPD patients, analyze their treatment and evaluate its agreement with current guidelines in an urban Primary Care centre (PCC). *Subjects and methods:* The computerized and paper health history from patients included as having COPD in our primary care computer database confirmed by spirometry was reviewed. We recorded age, sex, smoking habit, forced expired volume in one second (FEV<sub>1</sub>), classification according to the "Global Initiative for Chronic Obstructive Lung Disease" (GOLD), treatment (drugs and inhalation systems), anti-smoking counselling (ASC), exacerbations during the year before the review and level of patient care. *Results:* 233 COPD patients, 97% men, middle aged 71.9 (SD10.2), ex-smokers 63%, smokers 36% (ASC30%). GOLD classification: 8,5% at risk, 4% mild, 44,2% moderate, 35,2% severe and 8,2% very severe. 68% patients used regular treatment with bronchodilators (at risk 33%, mild 59%, moderate 78%, severe 80% and very severe 83%,  $p < 0,001$ ), 45,5% with long-acting beta2 agonists (LAB2) (at risk 15%, mild 31%, moderate 43%, severe 72% and very severe 78%,  $p < 0,001$ ), 54% with inhaled corticosteroids (IC) (at risk 19%, mild 38%, moderate 59%, severe 71% and very severe 83%,  $p < 0,001$ ), 36,9% with combination LAB2 + IC (none at risk, mild 2,3%, moderate 37,2%, severe 45,3% and very severe 15,1%,  $p < 0,001$ ), 5,4% with oxygen, 3% with mucolytics, 1% with oral corticosteroids and 1% with pulmonary rehabilitation. Metered dose inhalers (MDI) were used by 60,1%, MDI and spacer 32,2% and dry powder 43,8%. 1–3 exacerbations/year 48% and none 42%. Control in PCC 95,7% (68,2% PCC and 27,5% PCC/pneumologist).

#### Conclusions:

- Obstruction was mild-to-moderate in most of the patients.
- The beginning of treatment and patient control is done mainly by primary care physicians.
- The great majority of patients use some bronchodilator therapy.
- We must improve the use of regular treatment with bronchodilators and inhaled corticosteroids in mild cases and the greater the severity, the better agreement with the treatment.

#### Conflict of interest and funding

None.

#### References

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#### ABS63: Pulmonary rehabilitation in the community is effective, but benefits may be distorted by methods of analysis

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*Introduction:* Pulmonary rehabilitation (PR) programmes are increasingly community based, being run by health professionals who may have limited experience of reporting outcomes. The way patient outcome data is analysed and presented can distort the benefits of PR. PR programme reports are increasingly used to justify investment. It is important that they are accurate. *Aims:* To assess the benefits of community based PR, and compare the impact of two methods of analysis on the magnitude of observed improvements. *Subjects and methods:* COPD patients seen by the Plymouth PR programme: baseline assessment; 7 weekly sessions and follow up.

*Outcome Assessments:* Shuttle walking test distance (SWT), Chronic Respiratory Disease Questionnaire (CRDQ): Breathing Problems Questionnaire (BPQ) at baseline and 7 weeks.

*Analysis of results:* of all patients attending at each stage including those who subsequently dropped out (group means) were compared to means of individual changes from baseline.

*Results:* 183 patients were assessed, 151 completed the programme. Mean FEV<sub>1</sub> at baseline:  $1.05 \pm 0.4$  ( $n = 117$ ).

Mean changes in:

- SWT (metres) Group 62.8 m, individual 51.2 m.
- Total CRDQ: Group 14.1, individual 13.2;
- HADS Anxiety: Group -1.3, individual -1.3
- Depression: Group -0.8, individual -0.6.
- SBPQ: Group -1.1, individual -0.7.

The mean baseline scores in those who dropped out were lower than means for those who completed the programme, for instance mean SWT of completers was 183 m, but drop outs was 124 m ( $p = 0.009$ ).

*Conclusions:* Outcome measures from a once weekly, community PR programme demonstrate changes comparable to those of hospital based programmes. The analysis of outcomes should report mean individual changes rather than mean changes between the group attending at baseline and those completing the programme. The difference reflects that those with severe illness are more likely to drop out. This can lead to improvements in outcome being wrongly attributed to the PR programme.

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