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## 117. Nursing led education and follow-up strategies: impact on readmission, self care and patient experiences

### P1202

#### Preventing readmission of patients with COPD

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**Introduction:** According to a recent report by the British Lung Foundation, 1 in 3 people with a COPD exacerbation in the UK are readmitted within 28 days of discharge.

**Aim:** To reduce readmissions of COPD patients within 30 day subsequent to hospital discharge.

**Method:** From June 2011, we introduced a telephonic follow up service (once a week phone call by outreach nurses for 30 days), thereby offering extended monitoring and advice beyond standard home visits, for patients sent home with early facilitated discharge. Further home visits were arranged and treatment advice was provided when appropriate. Patients were encouraged to contact the outreach team themselves if needed.

**Results:** Over the course of subsequent 6 months, 136 patients were sent home with early facilitated discharge. A total of 353 phone calls were made. 11% (n=15) of patients received further nursing intervention to prevent readmission, of these 66% (n=10) of patients required antibiotics and/or steroids, prescribed by the outreach nurses. Interventions in this group led to 28 additional home visits and 8 telephone consultations. 11% of patients (n=16) were readmitted within 30 days of hospital discharge but only 5% (n=7) of readmissions were due to a respiratory cause. Of the 16 readmissions, 70% (n=11) were admitted out of service hours, with just over 10% (n=2) being within working hours of the outreach team.

**Conclusion:** The telephonic follow up service prevented 15 patients from readmitting with an exacerbation of their COPD. It may be that offering this simple intervention will lead to an improvement in readmission rates for COPD in South Tees. To assess this, we plan to review readmission rates of patients prior to June 2011 and compare them with our current figures.

### P1203

#### Do telephone interventions of patients with COPD prevent readmission?

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**Introduction:** In 2009 at Hilleroed Hospital 22% of patients with COPD were readmitted within 30 days and 32% within 84 days. Literature showed that indicators for readmission were: MRC  $\geq 3$ , comorbidities, physical inactivity, living alone, poor health-related quality of life and the patients' need for social support.

**Aims:** To investigate whether telephone follow-up:

- Reduce number of readmissions
- Increase quality of discharge
- Improve patients' knowledge

The hypothesis tested is that telephone interventions provide greater security for patients with COPD in order to support self-management and reduce number of readmission.

**Methods:** A randomized trial were performed with an intervention group (N=115), who was contacted by a nurse 3 & 30 days after discharge. Additional telephone calls were offered if needed.

Through appreciated inquiry the patients' experience due to the admission was clarified. Dialog and providing knowledge were used to support self-management and coping with exacerbations. After 30 days the patients' answered a questionnaire containing generic questions about health status, managing COPD and an evaluation of the intervention. The control group (N=97) was also contacted on day 30 and answered the same questionnaire except questions about evaluation. SPSS statistics were used to analyze data.

**Results:** The preliminary results indicate that there was no effect on the number of readmissions. The majority of the intervention group felt secure and content knowing that a nurse will provide a follow-up call. The ability to contact health professionals when needed was important.

**Conclusion:** Telephone follow-up did not reduce the number of readmissions for patients with COPD compared to a control group.

### P1204

#### Self-care 3 months after COPD patient education: A qualitative descriptive analysis

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**Introduction:** The literature indicates a conflict between the documented effect of COPD patient education and the patients' own experiences of the benefit in their everyday life.

**Aim:** To explore from the patients' perspective how group patient education influences their self-care three months after attending the program.

**Methods:** In the period 2009-2010, eleven patients diagnosed with COPD completed an 8-week group education program in a Danish community health center. The patients were interviewed 3 months after completion of the program.

**Results:** Patients reported that their knowledge of COPD had increased, that they had acquired tools to handle their symptoms; and that the social aspect of patient education had motivated them to utilize their new habits after finishing the course. The data indicate that patients need a "ripening period" to integrate new habits and competencies into everyday life. As a side effect of the study it appeared that the research interview focused the patients' attention on their newly acquired skills and made them more aware of their enhanced self-care.

**Conclusions:** Patients' self-care may be enhanced through group education, even though the patients are not always able to see the immediate outcome. Some patients may require professional help to implement their newly acquired knowledge and skills in everyday life. A planned dialogue concentrating on self-care in everyday life 3 months after finishing the course may enhance patients' awareness and appraisal of their acquired competencies.

### P1205

#### Proper inhaler's technique closely related to proper instruction

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**Introduction:** Evidence suggests that many patients don't use their meter dose inhalers (MDI) correctly and mostly related to improper instruction.

**Objectives:** It is an observational pre & post-lecture assessment study aims to assess the knowledge and practical competency of the nurses.

**Methodology:** The assessment items including 4 categories, applicable to only MDI and Spacer inhaler device: 1. patient observation, 2. drug explanation to patients, 3 choice of assisting device, 4. instruction on how to use inhalers or spacer, 5. monitoring the effect & side effect and reporting.

Four identical sessions of 1.5-hour lectures including hands-on workshops on inhalers have been held from September to October 2011. Returned demonstration and compulsory audit assessment were required pre and post lectures with 2 months intervals.

**Results:** 54 nurses completed the pre-lecture audit and 87% were registered nurses. 30% had at least 5 years' medical experience but none show full competence in demonstrating all 14 steps for MDI and 12 steps for spacer correctly. The mean steps of MDI & spacer are only 5.6 and 6.6 respectively. A total of 32 nurses had attended the lectures and amongst which 26 nurses had performed the pre-and post-audit assessment. A significant improvement is found in mean steps for MDI (4.4 vs. 10.3) and spacer (5.7 vs. 10.25) The overall post-audit mean steps are 10.09 for MDI and 10.43 for spacer respectively (p<0.001) Both post audit assessment had been shown to achieve significantly improvement.

**Conclusion:** Proper inhaler technique depends on proper instructions. MDI and spacers checklists have been formulated and revised for providing step by step guidance. A regular training workshops and lectures will be held quarterly.

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**P1206****Care-continuity for COPD patients**

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**Introduction:** A multi-disciplinary integrated COPD programme has commenced since 2011 to reduce unplanned readmission and provide post-discharge care. Respiratory-nurse acts as a case-manager for disease management and provision of continuity care in nurse-led COPD clinic.

**Objectives:** A prospective study is conducted from January to December 2011 aimed to review the subsequent outcomes in the programme.

**Methodology:** COPD Clinical Pathway is being adopted for in-patient recruitment including suspected patients with clinical features of COPD. We stressed on inhaler and spacer technique, appropriateness of the inhaler's prescription, and early diagnosis detection before discharge.

Proper referral will be coordinated for early rehabilitation, home-visit care and advanced specialty care. All recruited cases were scheduled for nurse-clinic visit and subsequent follow-up. The wide range of advanced specialized nursing care are including symptoms assessment, spirometry monitoring, self care plan education, optimizing inhaler's using skill and making referral.

**Results:** 355 in-patients, predominantly male (87.6%), had been recruited and 26.5% are referred to nurse clinic. 20.8% are chronic smokers and over 70% has successfully quit smoking. However 80% were knowledge deficit regarding COPD. 87.3% demonstrated failed inhalers and spacer technique but a significant improvement is found after continuous education. 53.8% vs. 28.8% ( $p=0.001$ ). Overall, 92.3% express satisfaction and will continue follow-up in the clinic.

**Conclusion:** Respiratory nursing care plays a vital role in optimizing therapy and self-home plans management. The long term effectiveness and particularly unplanned readmission rates needs to be evaluated in prospective controlled trials.

**P1207****Saving your G –ass!!!**

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A national home oxygen service contract review is being undertaken in NHS Scotland with the implementation of a domiciliary oxygen service best practice/guidance Statement. The Respiratory nursing team in NHS Dumfries and Galloway have undertaken a regional review of all patients using any modality of home oxygen. Since March 2011 - 300 patient clinic reviews have been conducted regarding home oxygen use in the nurse led clinics.

**Findings:** Prescription of oxygen is often conducted without establishing that people meet the criteria for this. There is a perception that oxygen is a treatment for breathlessness without assessing for hypoxaemia. Inappropriate prescribing is arising both in primary and secondary care settings. The costs of inappropriate oxygen prescribing are significant.

**Outcomes:** 50 oxygen concentrators installed for those who met the criteria for LTOT resulting in a saving of £30,000 in previous oxygen cylinder prescribing costs. 30 patients identified who met the criteria for the more efficient Homefill oxygen system with predicted annual savings costs of £47,000. 20 patients were identified who would benefit from an oxygen conserving device adding further efficiency savings. Oxygen was withdrawn from 12 users who were not hypoxaemic with only two being problematic.

**Conclusions:** Better technology/equipment that meets service user's needs is becoming available regionally and nationally. National Guidance/best practice local adoption and implementation are central to better prescribing practices and service improvement. A successful educational, communication and implementation strategy are central to delivering this new service locally. Significant efficiency savings have already been identified in our organisation as a result of this review.

**P1208****An examination of psycho-social factors among adult patients with asthma**

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**Introduction:** Nursing staff provide support for patients with asthma to facilitate effective self-management, which, in turn, will contribute to achieving the ultimate goal of asthma care: improving the Quality of life (QoL) of the patients. However, psycho-social factors, in particular, personality traits, have a significant impact on the delivery and effectiveness of self-management support, and are considered as a factor that impairs the control of symptoms.

**Objective:** The purpose of this study was to examine personality traits of adult patients with asthma and associated factors.

**Methods:** We conducted a questionnaire survey involving 291 patients with asthma under outpatient treatment at respiratory care facilities in Osaka Prefecture. We quantified and scored personality traits to be said to be easy to feel stress. These scores and associated factors were analyzed statistically.

**Results:** A comparison of those with high and low scores for personality trait items showed that the high group engaged in self-management activities mostly in a passive manner, with significantly low scores for stress-coping items. An analysis of the QoL using the Asthma Health Questionnaire-33 Japan (AHQ-33J) showed that those with high scores for emotional experiences, aggravating factors, and the restriction of social activity, as well as those with high overall scores had a significantly impaired QoL.

**Conclusions:** The findings suggest that personality traits exert an influence on patients' self-management behavior and QoL. Due consideration should be given to the contributing factor when providing self-management support.

**P1209****Difficulties experienced by the asthmatic patients in southern Turkey**

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Chronic diseases like asthma have a great impact on the everyday life of patients. The purpose of this descriptive study was to determine the difficulties experienced by the asthmatic patients in Southern Turkey. The sample was composed of 105 asthma patients who had been receiving medical therapy in Akdeniz University Hospital. Data were collected through a demographic data form and the questionnaire about the asthma patients' physical, psychological, social, economic and treatment-related difficulties. The asthma patients in the sample averaged 55.68 years of age (SD 12.29 years, range 18–85) and included most patients who were female (61.9%), married (77.1%), housewife (47.6%) and had completed primary education (40%). Difficulties experienced by the asthmatic patients physically were dyspnea (85.7%), wheezing (82.9%), tiredness (82.9%), cough (76.2%), psychologically were sadness (85.7%), anxiety (64.8%), anger (59.0%), panic (45.7%), socially were do not enter to the closed/crowded places (65.7%), do not go to see to their relatives/friends, economically were loss of income (36.2%), inability to pay for expensive drug charges (30.5%), inability to pay the hospital fees (14.2%), inability to pay fees for the treatment (12.4%), treatment-related difficulties were not having an adequate knowledge about the asthma attack (48.5%), not receiving an adequate information about the treatment (32.3%), not being aware of the consequences of the treatment (23.8%). The information gathered from this study led us to reevaluate the healthcare services for asthmatic patients to improve physical, psychological, and social aspects of the nursing care as a whole.

**P1210****Exploration and development of practice with non invasive ventilation (NIV) to patients with chronic obstructive pulmonary disease (COPD) in exacerbation based on the patients, their relatives and healthcare professionals perspectives on treatment**

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**Background:** Assessment of life expectancy and end stage COPD is difficult and often discussed in the clinical setting with regards to the ordination "Not-to-intubate" and "Continuation of respiratory assistance/NIV" as life sustaining treatment. There is little knowledge of how the patients experience NIV, and health care professionals express a need for developing new clinical strategies which draws on patient's perspectives.

**Aim:** To provide insight into how patients with COPD experience treatment with NIV. To develop new clinical strategies for treatment with NIV based on patients, relatives, and health care professionals perspectives.

**Method:** The project is based on critical psychological practice research. A group of co-researchers convenes 10 times over the course of 12 months including the principal researcher and interdisciplinary clinicians from the Department of Respiratory Medicine. The group describes and analyzes practice of NIV treatment in the department. Clinicians contribute with experience based issues, and the researcher contributes with issues based on a combination of fieldwork and semi-structured interviews with patients and their relatives.

**Results:** At present 11 patients who have been hospitalized and treated with NIV in 2011 and 3 of their relatives have been interviewed. Patient interviews revealed that all 11 patients expected and wanted to be treated with NIV if necessary in the future even though 2 patients described fear during treatment and 10 experienced more or less discomfort with the treatment.

**P1211****Functional status measures related to quality of life in patients with lung cancer**

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**Purpose:** The Purpose of this study was to compare use of the PFSS-11 (Pulmonary Functional Status Scale-11 item) and QOL for 24 patients with lung cancer in a telemonitoring RCT. Psychometric analysis supported the validity and reliability of the PFSS-11 (Chen et al., Res Nurs Health, 2010;33:477-85). It includes items measuring difficulty with daily life, important to Quality of Life (QOL).

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**Sample:** Age  $62.8 \pm 11.3$  yrs; 62% married; 29% living alone; 16.7% Medicaid-welfare; 45% low income; 45.8% stage IV lung cancer; 79% with previous hospitalizations; 46.7% had COPD comorbidity.

**Methodology and findings:** Measures were completed in hospital (T1), 48 hours after discharge (T2) and 2 weeks after discharge (T3). Relationships between functional status and QOL measures were examined at T3. As shown in Figure 1-Table, there was a significant correlation ( $\rho=0.728, p<.01$ ) with the PFSS-11 score and the World Health Organization 5-item QOL scale (WHO-5), but not with the EuroQOL Visual Analog Scale (EQ VAS).

Correlations				
Relationship of PFSS-11 to WHO-5 and EuroQoL Supported by NIH/NCI (1R15CA150999-01) *		Average score of the PFSS-11 at T3	Total score of the WHO-5 at T3	European QOL VAS scale 3
Spearman's rho	Average score of the PFSS-11	Correlation Coefficient	1.000	.728**
		Sig. (2-tailed)		.002
		N	15	15
	Total score of the WHO-5	Correlation Coefficient	.728**	1.000
		Sig. (2-tailed)	.002	
		N	15	15
European QOL VAS scale 3		Correlation Coefficient	.207	.363
		Sig. (2-tailed)	.458	.183
		N	15	15

\*\* . Correlation is significant at the 0.01 level (2-tailed).

However, the EQ VAS attained significance ( $\rho=0.883, p<.01$ ) when the analysis was limited to the telemonitoring intervention group.

**Discussion/Conclusions:** It is feasible to use condition specific (PFSS-11) and generic (WHO-5/EQ VAS) questionnaires with lungCA patients; both generic measures correlated with a tested measure of functional status in telemonitored but not control group. Further study will identify best outcome predictors.

## P1212

### Over-diagnosis of COPD in UK primary care

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**Background:** Mis-diagnosis of COPD was reported to be common in Australia primary care practice. We conducted a study to evaluate the frequency of this problem in United Kingdom primary care.

**Objectives:** To determine the prevalence and correlates of mis-diagnosis of COPD and associated prescribing in UK primary care.

**Methods:** The records of COPD patients registered with 47 General Practices in London were searched electronically to identify patients with a  $\geq 15$  pack year of smoking history and age group of  $\geq 40$ .

Spirometry was performed on those who were consented in the Trial of Vitamin D supplementation study, and the characteristics of those who met ATS/ERS spirometric criteria for COPD (FEV1/FVC ratio  $< 70\%$ ) were compared with those who did not. Normal spirometry was defined as predicted FEV1  $\geq 80\%$ , predicted FVC  $\geq 80\%$  and FEV1/FVC ratio  $> 70\%$ . The prescription among patients who did not meet these criteria was assessed.

**Results:** A total of 264 patients were screened, of whom 232 (87.9%) were confirmed to have COPD by spirometric criteria and 32 (12.1%) were not. 10/32 had evidence of restrictive lung disease and 22/32 had normal spirometry. 6/32 patients wrongly diagnosed with COPD were prescribed respiratory medication: 11/32 were prescribed tiotropium, 13/32 were prescribed a combination inhaler (LABA & ICS); 5/32 were prescribed inhaled corticosteroids, 2/32 were prescribed Xanthine, 21/32 were prescribed inhaled short acting bronchodilator.

**Conclusions:** Misdiagnosis of COPD is common in UK primary care and it is associated with a significant degree of inappropriate prescribed respiratory medication. Tackling this problem has the potential to prevent needless adverse effects of non-indicated therapy, and to save costs of inappropriate prescribing.