

## Poster sessions

**Abstract P154 Table 1** Characteristics and readmission details of patients who were reviewed by the COPD specialist nurse and completed the discharge bundle

|  | Discharge Bundle<br>(N=103) | No Discharge Bundle<br>(N=53) |
|--|-----------------------------|-------------------------------|
| Area (Surrey/Hants/Berks%)             | 59/31/10                    | 53/30/17                      |
| Age in years (mean, SD)                | 75 (10)                     | 76 (10)                       |
| Sex (male/female%)                     | 45/55                       | 49/51                         |
| >1 admission in previous year (%)      | 27                          | 28                            |
| Length of stay in days (median, range) | 5 (1–71)                    | 4 (1–26)                      |
| Short (0/1 day) length of stay (%)     | 18                          | 17                            |
| 30-day readmission (%)                 | 17.5                        | 34.0*                         |
| 3-month readmission (%)                | 36.9                        | 52.8**                        |
| Days to readmission (mean, SD)         | 33 (25)                     | 28 (10)                       |
| Readmissions/patient (mean, SD)        | 0.55 (0.95)                 | 0.68 (0.83)                   |
| Hospital days/patient (mean, SD)       | 9 (10)                      | 9 (8)                         |

\* P = 0.027; \*\* P = 0.062

**Discussion** Two-thirds of patients completed a discharge bundle during the Trust's busiest quarter for COPD admission. Patients completing the discharge bundle had a significantly lower rate of 30-day readmission.

**P155 COMPLIANCE WITH GUIDELINES FOR THE MANAGEMENT OF THEOPHYLLINE IN PATIENTS WITH ACUTE EXACERBATIONS OF COPD**

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**Introduction** Theophylline therapy has a role in COPD patients who fail to respond adequately to inhaled bronchodilators and show symptomatic benefit from a trial of the drug. Treatment is complicated by drug interactions and its narrow therapeutic range (10–20 mg/L). High serum levels increase the risk of toxicity, demonstrating numerous symptoms such as nausea, vomiting, headaches, dyspepsia, insomnia and behavioural disturbances. Serious adverse effects such as cardiac arrhythmias and epileptic seizures tend to occur at serum levels above this reference range. NICE guidelines for COPD state that a theophylline level should be measured on admission in patients admitted for acute exacerbation of COPD (AE-COPD).<sup>1</sup> The aim of this study was to audit compliance with these guidelines.

**Methods** Patients with a diagnosis of AE-COPD were retrospectively analysed over a 6-month period (June–December 2013) at a university hospital. Those who were prescribed theophylline within 24 h of admission were included in the study. Further information was gathered including theophylline level, date of request, and subsequent dose adjustment. Paper and computerised medical and prescribing records were reviewed using a set pro-forma.

**Results** Of a total of 54 patients in the study, 23 patients (43%) had theophylline levels checked during their hospital admission. Only 5 (9%) patients had theophylline levels within 24 h of admission, with the mean number of days from admission to assessment being 4.69 (SD+ 5.29). Of those patients, 13 patients (56.5%) had a level within subtherapeutic range (<10 mg/L), and 8 patients (61%) receiving subsequent dose adjustment. There were no patients found to have a theophylline level above therapeutic range (>20 mg/L).

**Conclusion** Improvement is needed in compliance with guidelines for the theophylline monitoring in patients with AE-COPD,

as more than half of patients did not have levels checked during their hospital admission. Furthermore, dose adjustments were made in only 2 of 3 patients. Changes can be implemented through education to junior doctors, implementation of electronic prescribing alerts, and adding this to our MDT COPD bundle checklist. Further prospective audit cycle will be performed to assess improvements.

**REFERENCE**

1 NICE Guidelines [CG101]2010

**P156 CAN SPECIALIST NURSES PREDICT WHICH PATIENTS WILL READMIT FOLLOWING DELIVERY OF A COPD CARE BUNDLE?**

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**Introduction** Adequate follow up is a key element of COPD care bundles (CB). COPD nurse specialists responsible for completing follow up consultations may be able to utilise clinical judgment and measures of health status to predict which patients are at greater risk of readmission.

**Objective** We explored whether COPD nurse specialists working in the REspiratory Discharge Service (REDS), who delivered the CB, could predict whether patients would readmit within 15 days post discharge. We also explored levels of health and psychological status for those patients who the REDS team thought were and were not at risk of readmission.

**Methods** This was a retrospective audit of patients who received a COPD discharge CB from April 2013 to March 2014. Readmission likelihood was recorded by the REDS team after completion of a 2 day post-discharge phone consultation. Patients also completed the COPD Assessment Test (CAT), MRC breathlessness scale and the Hospital Anxiety and Depression Scale (HADS). Mean between-group differences for the 'will admit' and 'will not admit' groups were analysed using independent t-tests.

**Results** Readmission risk was recorded for 1003 patients who received the CB prior to discharge. A total of 100 patients of these 1003 readmitted (readmission rate of 9.7%). The REDS team correctly predicted that 39 of these 100 patients would be readmitted. There were statistically significant between-group differences for MRC, CAT and HADS scores (see table): Patients placed in the 'will readmit' group had significantly worse CAT, HADS anxiety and depression scores compared those placed in the will not readmit group.

**Conclusions** COPD nurse specialists were unable to correctly predict the majority of readmissions. Patients deemed at risk of readmission had worse levels of psychological and health status than those who were not thought to be at risk of readmission.

**Abstract P156 Table 1**

|                 | REDS<br>" Will readmit" | REDS<br>"Will not readmit" | p value |
|-----------------|-------------------------|----------------------------|---------|
| MRC score       | 4.28 (0.68)             | 3.75 (0.90)                | <0.0001 |
| CAT score       | 25.25 (6.97)            | 22.91 (7.55)               | 0.012   |
| HADS anxiety    | 7.97 (4.95)             | 5.86 (4.23)                | 0.001   |
| HADS depression | 7.94 (4.14)             | 5.27 (3.40)                | <0.0001 |