Understanding the burden of chronic respiratory diseases: what decision makers need to know

1677 Spirometric screening and survey of knowledge on COPD and smoking in Spanish political representatives: The ConSePOC study
Joaquín Barboza, María del Mar Pando, Jordi Casafont, María del Carmen Cordero, Jordi Hierro, Jordi Pons, Jordi Pujol
Background: COPD is a common chronic condition in adulthood that has many systemic effects apart pulmonary impairment. While severe COPD has substantial economic consequences, little is known about resource use and costs in early stages.

Methods: Data from the population-based KORA F4 and KORA Age study (Southern Germany) were used to calculate excess costs of early stages of COPD. Diagnosis and staging of COPD for 2252 participants aged 41 to 89 was based on pre-bronchodilator spirometry according to GOLD standards. Resource use with regard to physician visits, hospital stays, and drug consumption was compared between participants with COPD stage I, stage II+, (stage II or higher), and subjects with normal lung function. Costs per year were calculated from utilization by applying national unit costs. To control for confounders such as age, sex and education, two-part generalized regression analyses were used to account for the skewed distribution of costs and the high proportion of subjects with any costs.

Results: Prevalence of COPD stage I was 12%, and 5% for stage II+. Resource use in non-COPD patients was almost double (98% vs. 95%), and additionally increased in COPD patients between stage I-IV.

Conclusions: The finding that resource use and costs are considerably higher in moderate but not in mild COPD highlights the economic importance of prevention programs and of interventions aiming at early diagnosis and at delaying disease progression.

1680 The impact of a respiratory in-reach service into the emergency assessment unit (EAU) on treatment, length of stay, and re-admission rates
Femilla Johnstone, Lee By about 50% - (to 2008 £) in stage IV.

Background: Respiratory illness is the second commonest reason for admission to hospital in the UK. Specialist input leads to better outcomes and reduced length of stay. Approximately half of respiratory patients, at New Cross Hospital, Wolverhampton, are not reviewed by a specialist during their admission.

Aims: The aim of this study was to assess whether addition of specialist respiratory input into the EAU, would optimise patient management, and thus reduce length of stay and re-admission rates.

Methods: During the weekday working hours, we piloted a twice daily respiratory in-reach ward round in the EAU. We audited management against current BTS guidance, altering treatment where necessary. We compared length of stay and re-admission rates during the pilot month to that of the preceding month. We collected data on whether patients would have been appropriate for referral to a “hot clinic”, to assess the need and demand for this service in the Wolverhampton City PCT.

Results: 73.1% of patients had management altered, according to BTS guidance. 53.7% of patients had undergoing respiratory disease on admission, and of these, only 50% were optimally treated according to guidance. Re-admission rates decreased by 13.8% and length of stay decreased by 1.38 days. 25% of patients could have been seen in a “hot clinic”, preventing a hospital admission.

Conclusion: There is a role for the addition of a respiratory specialist ward round in the EAU of New Cross Hospital, to optimise management of patients with respiratory illness, and to reduce patient length of stay and re-admission rates.

1681 The economic burden of COPD in a Danish municipality
Nils Malkbæk1, Jens Pagh Malkbæk1, Michael Nyhus Andreasen2, 3. 3. Respiratory Medicine, Roskilde Hospital, Roskilde, Denmark; 4. Financial Accounts Statistics, Danmarks Nationalbank, Copenhagen, Denmark; 5. Country & Bank Risk, Eksport Kredit Fondet (EKF), Copenhagen, Denmark

The economic burden of chronic diseases are a great challenge to our future welfare. The purpose of this study was to create a qualified measurement of the expenses to COPD in a Danish Municipality and determine the division of these between the Municipality and the Government.

From the National Patient Register patients with COPD, Diabetes and Cardiovascular diseases living in the Municipality of Helsingør (61,295 inhabitants) were
Cost-effectiveness of tiotropium versus salmeterol: A trial-based analysis followed by a model-based extrapolation

Martine Hoogendoorn1, Maiwenn Al1, J-Matthias Graf von der Schulenburg2, David Bowles3, Brigitta Monz4, Hendrik Schmidt4, Juliane Lunghershausen5, Maureen Rutten-van Molken1, Institute for Medical Technology Assessment (iMTA), Erasmus University Rotterdam, Rotterdam, Netherlands; 2School of Economics and Management, Leibniz University Hanover, Hanover, Germany; 3Faculty of Health Sciences, University of Bielefeld, Bielefeld, Germany; 4Boehringer Ingelheim, Boehringer Ingelheim Pharma GmbH & Co KG, Ingelheim, Germany

Background: The 1-year POET trial compared tiotropium to salmeterol regarding the effect on COPD exacerbations. Data from that trial informed this cost-effectiveness analysis (CEA).

Aim: Performing a 1-year trial-based CEA of tiotropium versus salmeterol, followed by a 5-year model-based CEA, from the perspective of the German Social Health Insurance in 2010.

Methods: The within-trial CEA included 7250 patients that had resource utilization recorded (COPD-related drug use and exacerbation-related healthcare use). The trial-based analysis was followed by a model-based analysis to synthesize the POET results with evidence from earlier studies, extrapolate results to 5-years, include costs of COPD maintenance treatment, and adapt to the severity distribution of COPD in the German population. Main endpoints were difference in costs, number of exacerbations, and quality-adjusted life-years (QALYs; model only).

Results: One-year costs were €11089 and €963 per patient treated with tiotropium and salmeterol, respectively, a difference of €126 Euro (95% uncertainty interval (UI): 55-195). The number of exacerbations avoided due to tiotropium was 0.064 (95% UI: 0.010-0.118). Tiotropium reduced exacerbation-related costs by €87 (95% UI: 19-157). The incremental cost-effectiveness ratio (ICER) was €1961/exacerbation avoided. In the model-based analyses, the ICERs for a 1-year time horizon were €1690 and €9926 for the endpoints exacerbation avoided and QALY, respectively. Following the extension to 5 years, the latter ICER changed to €3488.

Conclusion: Tiotropium reduced exacerbation-related costs, generating an incremental cost per QALY ratio that is considered cost-effective.

Clinical and pharmacy-economical reasonability of the choice of fixed combination of fluticasone/salmeterol in the curing of bronchial asthma in the country with limited financing of the public health

Dmitry Ruzanov1, Elena Davydovskaya2, Tatiana Baranovskaya2. 1Pulmonology & TR Department, Gomel State Medical University, Gomel, Belarus; 2Belarusian Academy of Post-Graduate Medical Education, Minsk, Belarus

Aim: To estimate the real practice of prescription of preparations in curing BA, to analyze clinical and pharma-economical efficiency of conversion to the fixed combination of SALM/FP in curing BA.

Method: The real practice of curing 266 patients with separated using of different preparations of basic therapy and short-rated bronchodilators was retrospectively analyzed during the year (1st period) and the following year of their using of SALM/FP (2nd period).

Results: It was managed to attain control (ACT) of 15.5% of patients in the real practice (1st period). System glucocorticoids were ambulatorially prescribed to 41 patient. On the average each patient used 15.6 inhaler SABA. The cost of treatment (ambulance, hospitalization, medicines, visits of the doctor, social payment) came to 1405 EUR per year. Controlled BA (at the end of the observation year) was recorded among 74.3% of patients during the 2nd period. The prescriptions of auxiliary medicines were cut by 6.4 times, the frequency of ambulance by 16.8 times, the duration of hospitalization by 11.7 times. On the average each patient used 0.78 of inhaler SABA. The cost of treatment came to 892 EUR per year. Typical errors of treatment have been analysed.

Conclusion: The real clinical practice of curing BA in RB often differs from the recommendations of GINA 2009 and leads to the low level of control of BA (among 15.5%). The conversion to using fixed combination of SALM/FP enables to increase the percentage of patients with controlled asthma to 74.3% and cut the cost of treatment by 3.6 times.