213. 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

Joan B. Soriano[1], Francisco García-Rio[2], Marc Miravitlles[3], Myriam Calle-Rubio[4], Albert Jovell[5], Esteve Fernandez[6], Jose Miguel Rodríguez Gonzalez-Moro[7], Mª Carmen Montero[8], Mª Angeles Planchuelo[9], Jordi Casafont[10], Juan Ruiz-Manzano[11], Julio Ancochea[12]. *[1]Epidemiologia e Investigacion Clinica, Fundacion Caubet-CIMERA Illes Balears, Bunyola, Spain; [2]Servicio de Neumologia, Hospital la Paz, Madrid, Spain; [3]Servicio de Neumologia, IDIBAPS Hospital Clinic, Barcelona, Spain; [4]Coordinadora del Area EPOC, SEPAR, Madrid, Spain; [5]Presidente, Foro Español de Pacientes, Barcelona, Spain; [6]Epidemiologia, Institut Català d'Oncologia, Barcelona, Spain; [7]Presidente, NeumoMadrid, Madrid, Spain; [8]Presidenta, SOGAPAR, A Coruña, Spain; [9]Presidenta, CNPT, Madrid, Spain; [10]Departamento Médico, Novartis S.A., Barcelona, Spain; [11]Presidente, SEPAR, Barcelona, Spain; [12]Servicio de Neumologia, Hospital la Princesa, Madrid, Spain*

The Strategy on COPD of the National Health System in Spain identified as one priority to raise the disease profile within the political agenda. The ConSePOC study is surveying members of the Spanish Parliament (Congress and Senate) and a number of Autonomous regions, and it aims to determine knowledge and attitudes on COPD and smoking in political representatives. Participants respond to a brief survey and conduct pre- and post-BD spirometry, and co-oximetry. As of February 2011, ConSePOC was conducted in the Spanish Senate, the Assembly of Madrid, and the Parliament of Galicia. With slight variations in participation rate (up to 63%), and considering the different age and sex structure of each Parliament, the Spanish politicians surveyed (n=197) are to be considered heavy smokers, as at least two thirds are current or ex-smokers, they had a significant smoking exposure (mean of 40 pack-years in the Senate) and a mean of exhaled CO higher than 3 ppm. According to the GOLD screening questionnaire, between 22% and 35% of surveyed members were at risk of developing COPD, and in fact 8.6% (95% CI 3.8 to 16.2) of Senators had COPD (post-BD $FEV_1/FVC < 0.70$), of which only 50% were previously diagnosed. Finally, regarding our politicians' knowledge about COPD, smoking is not known to be the main cause of COPD by 40 to 54%; 49 to 61% do not know the meaning of the acronym COPD; and it is unknown that there is a National Strategy for COPD by 54 up to 70%. We conclude that, similar to the general population, the knowledge of this sample of Spanish political representatives on COPD and smoking is poor, and at least one of every 4 is at risk of developing COPD.

1678

Improving and redesigning chronic obstructive pulmonary disease services: A systematic improvement approach

Phil Duncan[1], Catherine Thompson[1], Catherine Blackaby[1], Zoe Lord[1], Ore Okosi[1], Hannah Wall[1], Alex Porter[1], Kevin Holton[2], Anne Moger[2], Matt Kearney[2], Robert Winter[2], Sue L. Hill[2]. *[1]NHS Lung Improvement Programme, NHS Improvement, Leicester, United Kingdom; [2]Respiratory Programme, Department of Health, London, United Kingdom*

Background: The Lung Improvement Programme supports the implementation of the national COPD strategy and enables delivery of effective clinical practice through process improvement and redesign. Focussed on quality, productivity and innovation the work supports a practical approach to sustainable improvements across the whole care pathway.
Objectives: To develop redesigned pathways, new service models and transferable principles for COPD services in England to improve the patient experience and outcomes.
Methods: 50 improvement projects focussed on different steps of the pathway: diagnosis, acute care, chronic disease management, home oxygen services and end of life care. Through a national programme of peer support and application of service improvement tools, each project used data to form objective measures of change; diagnostic tools were used to understand the variation in provision and testing approaches to develop and refine news ways of working.
Results: Using 3 principles: administrative review, prescription optimisation and assessment and review, 7 home oxygen projects have demonstrated a total annualised cost efficiency saving of £590k. Other emerging principles that underpin effective care models are early accurate diagnosis, medicines optimisation, effective self management, managing high impact users, structured patient reviews, integrated care and using data to effect change.
Conclusion: There is variation in the delivery of services for COPD patients due to process duplication and system waste. A systematic improvement approach provides opportunities for significant productivity gains and at the same time reduces variation and costs, and improves quality and outcomes.

1679

The effect of early stages of COPD on resource use and health-care costs

Petra Menn[1], Joachim Heinrich[2], Rudolf Huber[3], Rudolf Jörres[4], John Jürgen[1], Stefan Karrasch[4,5], Annette Peters[6], Holger Schulz[2,5], Rolf Holle[1]. *[1]Institute of Health Economics and Health Care Management, Helmholtz Zentrum Muenchen, Neuherberg, Germany; [2]Institute of Epidemiology I, Helmholtz Zentrum Muenchen, Neuherberg, Germany; [3]Department of Medicine, Division of Respiratory Medicine, Innenstadt, LMU, Muenchen, Germany; [4]Institute and Outpatient Clinic for Occupational, Social and Environmental Medicine, LMU, Muenchen, Germany; [5]Comprehensive Pneumology Center, Institute of Lung Biology and Disease, Helmholtz Zentrum Muenchen, Neuherberg, Germany; [6]Institute of Epidemiology II, Helmholtz Zentrum Muenchen, Neuherberg, Germany*

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 without any costs.
Results: Prevalence of COPD stage I was 12%, and 5% for stage II+. Resource use in all categories was significantly higher in COPD patients than in control subjects. These differences remained present after adjusting for covariates in physician visits and medication, but not in hospital days. Compared to non-COPD participants, adjusted costs per year were only slightly higher in stage I (1875 € compared to 1850 €), but increased by about 50% (to 2898 €) in stage II+.
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

Fenella Johnstone, Lee Dowson. *Department of Respiratory Medicine, The Royal Wolverhampton Hospitals NHS Trust, Wolverhampton, West Midlands, United Kingdom*

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 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 respiratory "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 underlying respiratory disease on admission, and of these, only 50% were optimally treated according to guidance. Re-admission rates decreased by 13.4% 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

Niels Maltbæk[1], Jens Pagh Maltbæk[2], Michael Nyhus Andreasen[3]. *[1]Respiratory Medicine, Roskilde Hospital, Roskilde, Denmark; [2]Financial Accounts Statistics, Danmarks Nationalbank, Copenhagen, Denmark; [3]Country & Bank Risk, Eksport Kredit Fondet (EKF), Copenhagen, Denmark*

The economic burden of chronic diseases are a great challenge to our future wellfare.
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 Helsingoer (61.295 inhabitants) were

identified (9.086 persons), as well as a control group matched for gender and sex (1.013 persons). The civil registration numbers have been linked to expenditure held within the Municipality of Helsingoer. The included expenses are Dansk Ambulant Grupperings System (DAGS, ambulatory visits), Diagnose relaterede grupper (DRG, hospitalizations), Sygesikringsudgifter (SSR, health insurance), Retirement home, Rent subsidy, Health visitor, Home help, Transfer income, different kinds of Aid, Supplementary fees. Subcohorts having more than one of the three examined Lifestile Diseases, fx COPD patients with comorbidities, were dealt with in a Shapley- distribution and a risk adjusted - distribution.
Subtracting the cost of the control group the additional consumption within one year per person with COPD were 11.678 EUR, with Diabetes 8.136 EUR and Cardiovascular diseases 6.017 EUR (2010 figures). The Government share of the expenditures was 50,6% and the Municipality share was 49,6%.
The economic burden of COPD will be discussed in relation to the Municipality and the total public finances in Denmark, and the economic incitaments for prevention will be discussed in relation to the relative expenditures.
This study was approved by The Danish Data Protecting Agency and The National Board of Health in Denmark.

1682

Cost-effectiveness of tiotropium versus salmeterol: A trial-based analysis followed by a model-based extrapolation

Martine Hoogendoorn[1], Maiwenn Al[1], J.-Matthias Graf von der Schulenburg[2], David Bowles[3], Brigitta Monz[4], Hendrik Schmidt[4], Juliane Lungershausen[4], Maureen Rutten-van Molken[1]. *[1]Institute for Medical Technology Assessment (iMTA), Erasmus University Rotterdam, Rotterdam, Netherlands; [2]School of Economics and Management, Leibniz University Hanover, Hanover, Germany; [3]Faculty of Health Sciences, University of Bielefeld, Bielefeld, Germany; [4]Boehringer 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 € 1089 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.

1683

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 Ruzanov[1], Elena Davidovskaya[2], Tatyana Baranovskaya[2]. *[1]Pulmonology & TB Department, Gomel State Medical University, Gomel, Belarus; [2]Belarusian 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 broncholitics 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 prescripted 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 1,6 times.