93. Effectiveness of therapeutic interventions in primary care

P740

Effectiveness of fixed ICS/LABA combinations in COPD – A population based register linkage study

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Background: Fixed ICS/LABA combinations (FC), budesonide/formoterol (B/F) and fluticasone/salmeterol (F/S), reduce the number of exacerbations in chronic obstructive pulmonary disease (COPD). Comparisons between the two combinations are sparse.
Objectives: To investigate clinical use and relative effectiveness of B/F and F/S in patients with COPD (NCT01146392).
Methods: Medical records' data from primary care patients ≥18 years was linked to Swedish hospital, drug, and cause of death register data for 1999 – 2009. Index date was first FC prescription after COPD diagnosis. Exacerbation defined as hospitalisations, emergency room visits, prescription of oral steroids, or antibiotics for COPD. Propensity score matching was done at index date; exacerbations by Poisson regression.
Results: The total sample covered 9,893 patients (7,155 B/F, 2,738 F/S; mean age 66.7 *vs* 67.6 years). Prior to B/F or F/S therapy, average number of prescriptions/year of oral steroids was 0.90 *vs* 0.91, antibiotics 1.02 *vs* 0.95, inhaled steroids 1.23 *vs* 0.93. Matching gave two equivalent populations (2,734 patients/group) with either B/F or F/S; covering 18,786 patient years. Mean prescribed daily steroid dose 562 mg budesonide *vs* 786 µg fluticasone.
Compared with F/S, B/F was associated with a reduced risk of exacerbations/patient/year rate by 26.6% (0.80 vs 1.09); hospitalizations due to COPD by 29%; emergency room visits by 20%; oral steroid prescriptions by 24%; and antibiotics by 50% (all $p<0.001$).
Conclusion: In this observational register study, COPD patients treated with budesonide/formoterol experienced fewer moderate to severe exacerbations than patients treated with fluticasone/salmeterol.
Study sponsor: AstraZeneca.

P741

Co-dispensing of inhaled corticosteroids and antibiotics

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Background: Regular use of inhaled corticosteroids (ICS) is recommended for management of asthma and moderate/severe COPD. However, in Australia, most people who receive any ICS-containing medication have it dispensed only once in a year. We tested the hypothesis that ICS are commonly prescribed for respiratory infections in patients without chronic airways disease.
Methods: Data for concessional patients dispensed any respiratory medications during 2008 were obtained from the national Pharmaceutical Benefits Scheme. Individuals dispensed ICS only once in a year, and no other respiratory medications (defined as "one-off ICS"), were assumed to be unlikely to have asthma or COPD, and co-dispensing with oral antibiotics suggested the ICS were prescribed for symptoms of a respiratory infection. We calculated the proportion of people prescribed one-off ICS who were co-dispensed oral antibiotics.
Results: In 2008, 43.6% of the 115,763 patients who were dispensed one-off ICS were co-dispensed oral antibiotics. Co-dispensing was seasonal, peaking in winter. In adults, the co-dispensing phenomenon was most commonly observed for moderate/high dose ICS/LABA, while lower doses of ICS alone were co-dispensed among children. In this cohort, the cost to government of one-off ICS, when co-dispensed with oral antibiotics, was $2.7 million/year.
Conclusions: Many people who receive one-off ICS prescriptions do not appear to have airways disease. As indicated by co-prescribing of antibiotics, many people may be inappropriately prescribed ICS for management of respiratory infections. Interventions are required to improve the quality of prescribing of ICS and management of respiratory infections in clinical practice.

P742

Effects of roflumilast in highly symptomatic COPD patients

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Background: GOLD currently recommends making treatment decisions based on a combined assessment of current symptoms and future risk. The modified MRC (mMRC) dyspnoea scale (grade 0–4) is recommended to assess the level of current symptoms, but data on the efficacy of different treatments in subgroups based on symptom-grading are lacking. Roflumilast (ROF) is a PDE4 inhibitor approved for maintenance treatment of severe COPD associated with chronic bronchitis, in adult patients with a history of frequent exacerbations. GOLD recommends ROF as an option for patients with mMRC grade ≥2, severe lung function impairment and/or frequent exacerbations (Group D).
Aims: To determine the effects of ROF on exacerbations and lung function when added to tiotropium (TIO) in patients with baseline mMRC grade ≥2.
Methods: Study M2-128 included symptomatic patients with moderate-to-severe lung function impairment. ROF 500µg or placebo (PBO) was added to TIO for 24 weeks. A post-hoc subgroup analysis of patients with mMRC grade ≥2 at baseline was performed.
Results: This subgroup included 395 patients (ROF n=208, PBO n=187). ROF reduced the mean rate of moderate/severe exacerbations/patient/year by 45.5% (annualized exacerbation rate ROF 0.22, PBO 0.40; rate ratio 0.55, [95% CI 0.31, 0.96], p=0.034) vs PBO. The mean between-treatment difference in pre-bronchodilator FEV_1 was 79mL ([95% CI 38, 119], p=0.0002), and in post-bronchodilator FEV_1 78mL ([95% CI 38, 118], p=0.0002).
Conclusions: ROF reduces moderate/severe exacerbations when added to TIO in COPD patients with moderate-to-severe lung function impairment and mMRC grade ≥2. These results support the GOLD recommendation for combined assessment of current symptoms and future risk.

P743

Do general practitioners use effective communication for discussing patients' adherence with asthma medications?

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Introduction: Use of empathic communication techniques such as Motivational Interviewing (MI) can improve patients' motivation to adhere to medication.
Aim: To investigate general practitioners' (GPs) attitudes to and use of MI.
Methods: Fifty-three Sydney-based GPs (mean age 51, mean yrs. practicing 22, 55% male) entering a study to improve asthma control completed baseline questionnaires about attitudes to MI principles, usefulness, frequency of use and confidence in using MI techniques with asthma patients. Chi-square was used to test categorical differences.
Results: 72% of GPs felt confident in motivating patients to adhere and 94% of GPs agreed it is their role to do so. When discussing adherence, only 53% of GPs commonly (often/always) asked patients to nominate their most important asthma problem. 23% rarely (never/hardly ever) asked for patients' interest in information; patients were more commonly (sometimes/often/always) asked about this by male than female GPs (90% vs. 63% p=0.01). Only 55% of GPs agreed they should respect a patient's choice to use medication differently than prescribed. 72% thought confronting patients with negative consequences was useful to improve adherence and more younger GPs rated this as useful (moderately-extremely) than older GPs (79% vs. 64% p=0.02). GPs in disadvantaged districts rated stressing the importance of medication for disease control more useful (very-extremely) than other GPs (96% vs. 67% p=0.04).
Conclusion: GPs report confidence in motivating patients to take asthma medications, but sub-optimally use effective communication skills. GP education on MI may promote patients' adherence in primary care.

P744

Primary asthma prevention amongst children – A cost-effectiveness analysis in a decision-analytic framework

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Background: Primary (prenatally-started) asthma prevention may be unifaceted or multifaceted when one or more allergen-avoidance measures are used, respectively.

Presently, no study has directly compared these two categories of prevention to usual care (UC) in a trial or economic evaluation.
Aim: To model the cost-effectiveness of prenatally-started unifaceted (UF) and multifaceted asthma (MF) primary prevention programmes with UC in a decision-analytic framework.
Methods: A decision-tree model was developed to compare (from a health-care perspective) two UFs and three MFs programmes to UC (unstructured allergen-avoidance advice in the Netherlands). Analyses had a time horizon of 10 years. Costs and effects for each option were evaluated through incremental cost-effectiveness ratios (ICERs).
Results: UC and an MF were found to dominate the other options. UC turned out to be less effective but also less costly compared to the MF. To avoid one asthma case the costs will be €8,250 when choosing the MF over UC. Most of the uncertainty in the results was attributable to the cost estimates for low-risk children.
Conclusion: Although there is no point of reference for the amount society would be willing to pay to avoid a case of asthma, the threshold used for a QALY roughly ranges between € 20,000 and € 80,000. As a case of asthma prevented will certainly equal at least one QALY gained, this study gives support to the feasibility of multifaceted programmes as viable option to replace usual care in the primary prevention of asthma amongst children.

P745
Management of COPD in a primary care in Bahia, northeast of Brazil
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Introduction: Deficiencies in management of COPD is responsible for the disease exacerbations increased numbers.
Objective: To evaluate the current pharmacological treatment of the COPD in a primary health care center and to compare as recommended by GOLD 2010 guidelines.
Methods: A prospective cross-sectional survey was performed with COPD out-patients. The patients were recruited as a sequential sample from September 2010 until August 2011, in the primary center of Bahia State Health Department.
Results: In total, the sample was 363 outpatients (245 male, aged from 65.3±11.4 yrs) with moderate to very severe disease status (FEV_1 40.6±14.4% pred). Of these, 263 (72.4%) patients were using any drug to treatment of COPD. The prescriptions according to GOLD stages are documented in the table below. Under-prescribing with bronchodilators long acting agents, particularly long-acting anticholinergic were recommended in 76% of the cases and 16.8% were using. Inhaled steroids were over-prescribed (recommended in 55%; taken by 77%). The overall analysis showed that only 98 (37.2%) patients were under treatment according with GOLD guidelines.

Table. Drug prescriptions stratified according GOLD stages and divided for drug classes

	Stage II (n=61)	Stage III (n=130)	Stage IV (n=72)	All (n=263)
Drug prescriptions, %				
Short-acting β2-agonist	39,3	56,9	54,1	52,0
Short-acting anticholinergic	9,8	16,9	12,5	14,0
Long-acting β2-agonist	75.4	70.0	63.8	69.5
Inhaled steroid	85.2	77.6	70.8	77.5
Long-acting anticholinergic	11.4	12.3	15.2	12.9
Methylxanthine	13.1	9.2	20.8	13.3

Conclusions: Our study has demonstrated that COPD patients in the primary care in Bahia-Brazil did not receive the pharmacological treatment recommended.

P746
Home visits for improving asthma follow-up consultation attendance
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Background: Our Child Asthma Program provides care for around 500 patients. Every 6 months the population under control is reviewed. Since December 2010 non-attendance (missing appointments for more than 3 months) was recorded, 37.2% were non-attenders. Regular review is a marker of quality care and relates to better asthma control. Non-attendance is a frequent and concerning problem.
Aim: Improve attendance to asthma follow-up consultations and learn about the causes of non-attendance.
Methods: We implemented a home visit strategy. Every month the non-attenders were identified and a home visit was planned. Completed visits considered a survey, asthma control assessment and a medical appointment. We measured at 6 and 12 months the non-attenders and if the home visit lead to attendance or not.
Results: 147 home visits were done. 67 were completed, with a 65.7% of success (patient attends to appointment). 80 home visits failed and only 16.3% of those patients had spontaneous appointments. At 6 months 17% of patients were non-attenders, and 24% at 12 months. In one year the nonattendance rate was reduced in 35.5%.
Conclusions: Improving attendance is feasible. Looking for non-attenders is an important issue for managing asthmatic children. Causes of non-attendance are diverse and had to be explored deeper. Feeling well despite of uncontrolled asthma and difficult to access appointments are worrisome causes. Home visits also provide the opportunity to reinforce prescriptions in patient's natural environment.

P747
Quality of life in patients with COPD three years after a multidisciplinary program of pulmonary rehabilitation in primary care
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Background: COPD is an irreversible widespread disease which increases dramatically. According to previous research the quality of life in (QoL) patients with COPD is impaired but can be improved by pulmonary rehabilitation.
Aim: The aim of this study was to evaluate if a six week nurse-led multidisciplinary program for pulmonary rehabilitation in primary care had effect on quality of life in patients with COPD in a three-year period.
Method: Quasi experimental design was used to evaluate the program. The intervention group consisted of 40 patients who had participated in the program. The control group consisted of 24 patients who received traditional care. QoL was measured at baseline, after one year and after three years using Clinical COPD Questionnaire (CCQ). Statistical analysis of differences within the groups over the three years was performed by means of Friedmans test. Mann-Whitney U test was used to analyze differences between the groups.
Results: There was no statistically significant difference between the groups at baseline. There was no statistically significant difference in improvement between the groups during a three year perspective for CCQ total. Neither was there any statistically significant difference within the control group. During a three year perspective there was a statistically significant difference of improvement within the intervention group for CCQ total (p=0,037) and CCQ functional state (p=0,026).
Conclusion: The rehabilitation program had an improving effect on QoL in patients with COPD within the intervention-group during a three year perspective.

P748
Omalizumab improves asthma in long term therapy
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Introduction: X-TEND, a multi-center, non-interventional study on omalizumab (Xolair®), is a long-term follow-up examination on patients who participated in prior non-interventional omalizumab studies X-CLUSIVE and X-PERTISE.
Study objectives have been (i) examination of drug utilisation over several years, (ii) evaluation of changes in the course of disease, quality of life (QoL) and allergen sensitivity, (iii) assessment of long-term efficacy and tolerability of omalizumab therapy in real life.
Methods: Following data were collected under daily routine specialist care conditions:
- Mini AQLQ
- Number of asthma exacerbations in the past 12 months
- FEV_1
- Frequency of application, dosage, therapy interruptions and discontinuation
- Tolerability assessment based on analysis of adverse events

Results: Data from 106 patients were analyzed. Mean observation period of omalizumab treatment was 5.0±0.54 years. At the visit of X-TEND, 50% were still on omalizumab. Mean treatment duration was 1253±618 days (= 3.4 years). Mean FEV_1 improved from 1.9±0.7 L to 2.3±0.99 L ($p<0.001$). The median number of severe asthma exacerbations during the last 12 months was 0 per patient vs. 3 as assessed prior to initiation of omalizumab therapy. QoL scores improved in Mini AQLQ from 3.0±0.79 (at the beginning of X-PERTISE) to 4.9±1.52 ($p<0.001$) (at the visit of X-TEND). In patients still on treatment with omalizumab mean QoL was 5.4±1.28, whereas patients who discontinued reported 4.4±1.67 (p=0.037).
Conclusion: In this real-life observation in patients who were approximately 1253 days on omalizumab treatment, we observed an improvement in asthma exacerbations, quality of life and FEV_1.

P749

Is a consultant supported community respiratory service an alternative to hospital based specialist care? – Experience of a local service improvement project

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Introduction: Better integration of primary and secondary care services and shifting the balance of care remain a major challenge with only few practical examples in respiratory care.
Aim: The aim of a local service improvement project is to gain insight into an example of specialist supported, integrated respiratory care closer to the patient's home. The objectives are to provide more flexible access, more patient centred care and develop general practitioners as partners in care.
Method: Regular consultant respiratory clinics supported by a general practitioner with a specialist interest were set up in a local surgery. An interactive triage system, E communication, meetings with primary care colleagues and consultant access to primary care patient data and radiology were implemented. Service user satisfaction, general practitioner satisfaction and number of patients seen by the general practitioner with a specialist interest were recorded for a period of 18 months.
Results: 77 out of 116 service users completed the questionaire and were all satisfied with the new service and felt well supported to manage their condition. 76 out of 77 found it easy to get a suitable appointment. All 7 general practitioners were highly satisfied. 73 of the 116 respiratory patients were seen by the general practitioner with a specialist interest.
Conclusion: Our consultant supported community respiratory service project demonstrates a model of integrated and flexible care in partnership closer to the service user's home which could serve as a possible alternative to hospital centred specialist care.

P750

The evaluation of a tele-monitoring model (Teleheath) as an aid in the case management of patients with COPD

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Introduction: One of the many challenges for health care systems is to reduce the impact of chronic diseases like COPD on health care resources. Distant monitoring systems are increasingly being used for this purpose
Methods: Potential COPD patients were identified through their Case Managers (CMs). Those who met the inclusion and exclusion criteria were invited to participate. Those consented received a telemonitoring device (Telehealth) with instructions and education and were remotely monitored by CMs as part of case management process.
Data on hospital admissions and Health Care Utilisation (HCU) was collected for 12 months before and after initiation of Telehealth. SGRQ and HAD questionnaires were completed before recruitment and 12 months after Telehealth.
Results: Total of 16 patients were included in the analysis. Following the introduction of Telehealth, Hospital admissions halved from 20 to 10 with reduction in the number of bed-days from 134 to 96. Total cost of admissions had subsequently dropped by £20,000 (€ 23,400).
HCU data showed a drop in the number of home visits to patients (50 to 30) but a small increase in the number of telephone consultations (68-76).
SGRQ scores for QoL showed average of 3.3 points improvement which is below the clinicaly significance threshold. HAD data is presented in table1.

HAD data

	Baseline (n=16)		After 1 year (n=15)	
	Borderline	Abnormal	Borderline	Abnormal
Anxiety	5	2	5	4
Depression	7	3	6	3

Conclusions: Telehealth appears to reduce admissions to hospital and some aspects of HCU in primary care. There is a need for more trials looking into the difficulties encountered during the implementation and evaluation of such complex technology.

P751

Assessing asthmatic patients' satisfaction with inhalation devices

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Introduction: Patients' satisfaction with their asthma medication devices is usually decided by using properly designed questionnaires. These questionnaires are to be used to evaluate patients' opinion, which is considered important for the selection of a device.
Objectives: The aim of this study was to reliably estimate the ease of use and the satisfaction of asthmatic patients with different marketed dry powder inhalers (DPIs). Feeling of satisfaction with inhalers (FSI-10) questionnaire was selected as the appropriate measuring tool.
Methods: A four week, open, non-interventional, multicenter, parallel study, was performed. 560 asthmatic patients (355 women), aged 19 to 97 years, participated in three groups using different DPIs (Elpenhaler®, Turbuhaler® and Diskus®). Demographics of the groups were comparable. Patients had already achieved mastery of their inhalers, were receiving their asthma treatments exclusively via the inhaled route and agreed to complete the questionnaire in the second visit. They were recruited in 79 private medical offices and hospital centers all over Greece.
Results: 523 participants completed the study and the questionnaire. Although consistent and satisfactory results were obtained with all DPIs tested, certain statistically significant differences in the ratings between the devices were observed (Elpenhaler® was rated first in 7 out of 10 questions, having also the highest mean total score). No significant differences in scores from patients of different ages were observed in any of the tested devices.
Conclusions: Certain statistically significant differences were found in ratings between the tested DPIs. Devices were similarly acceptable to adult patients of different ages.

P752

Effects of the grippe vaccination, smoking cessation, and short acting beta agonist in COPD subjects

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Objective: To compare the efficacy of the seasonal grippe vaccination, smoking cessation and use of salbutamol in COPD patients.
Material and methods: We performed a cross-sectional study including 147 patients with confirmed COPD according GOLD criteria. We evaluate the number of exacerbations and the number of hospitalisations. All were immunize against seasonal influenza, ex-tobacco users, and receive salbutamol on regular basis. An equal number of patients were evaluate like controls. They were also COPD patients, but didn't received grippe vaccination, active smokers and didn't use salbutamol according doctors recommendation. Evaluation period was 12 months.
Results: In the examined subjects our results demonstrated 29,9% of exacerbations and 8,8% hospitalizations e.g. 41 versus 12 subjects. In the controls our article confirmed 74,5% exacerbations and 28,5 hospitalisations or 102 and 39 subjects respectively. The number of COPD exacerbations/hospitalisations were significantly higher ($P < 0.05$) in not immunized, smokers and patients who denied to receive regular therapy.
Conclusion: Our results confirm that grippe vaccination, smoking cessation and regular therapy use, significantly decrease the number of exacerbations and hospitalisations in COPD patients.

P753

Factors affecting attitude towards pneumococcal and influenza vaccination in patients admitting to a pulmonary diseases outpatient clinic

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Patient knowledge and attitude towards influenza and pneumococcal vaccines may affect administration rates. Our aim was to assess factors affecting attitudes. A questionnairre was applied to 1058 patients (514 female 544 male) between October 2011-January 2012. Ratio of patients with a vaccination indication was 73,2% (n=775).Ratio of influenza-vaccinated (IV) patients (n:222,%21) or pneumococcal-vaccinated (PV) patients (n:61,%5,8) were determined. Of all patients, 64,5% (n=682) defined influenza and 68% (n=719) defined pneumococcal vaccine beneficial.Vaccination ratio upon physician advice was 82,4% for influenza and 83.6% for pneumococcus. More IV patients considered vaccine protective (p=0.001), decreases hospitalization rate (p=0.002), decreases pneumonia and death (p=0.02), pneumococcal vaccine is beneficial, and they were informed by the physician (p=0.001). IV patients had more cardiopulmonary disease and a vaccination rate against pneumococcus (p=0.001). Influenza-nonvaccinated patients were unaware of the necessity of the vaccine (p=]0.001). More PV patients considered the vaccine beneficial (p=0.001) and were more frequently informed by physician (p= 0.039). Pneumococcus-nonvaccinated patients were unaware of its necessity (p=0.001).PV patients had higher incidence of cardiopulmonary diseases. Our study shows that vaccination rates in vaccine-indicated patients were low. Vaccinated patients were more frequently informed by physician. The thought of patients that vaccination is beneficial and decreases the rate of severe conditions was distinctive in being vaccinated. The nonvaccinated patients were unaware of the vaccine's necessity.

P754

Enhanced care review for people with COPD in primary care addressing quality, cost-effectiveness and productivity

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An enhanced care review, delivered by nurses working for a social enterpirise within Primary Care and supported by a Respiratory Physician has proved to be a cost effective way of improving the quality of life with patients with COPD.
The aim of the project was to improve the quality of care on a number of parameters such as accurate diagnosis, treatment of excacerbations, self management plans, referral to preventative services. This was delivered through a nurse led service supported by a respiratory consultant in primary care to reduce hospital admissiona and outpatients referrals.
The 12 month pilot project was delivered to 23 GP practices within an urban, deprived setting in the North of England. Specilaist Respiratory nurses and practice nurses delivered the service within GP practices following education and training identifying patients at risk of excacerbations or hospital admissions and post exacerbation assessment and prevention using specialist computer software which also provided a data colection template- data was collected through GP practice readcod searches together with admission data from the Primary Care Trust.
Hospital admissions were reduced amounting to savings of £90,000 in comparison to other parts of the borough. Medicines management savings amounted to £40,000 were achieved through treatment optimisation.
Prevalence of COPD was increased by 12.3% and there was a 56% increase in pts being diagnosed between the ages of 35-50. There was a 63% increase in referral to pulmonary rehab and 20% increase in patients coded now as ex-smokers. There was a 58% increase in patients being given a self managemnt plan.

P755

Management of community acquired pneumoia (CAP): Knowledge, attitude and current practice of general practitioners (GPs) in urban areas of Pakistan

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Background: CAP is a major burden with high prevalence and significant mortality and morbidity.Current evidences suggest that treatment of low risk patients in community is safe and reduce health costs by minimizing unnecessary hospital admissions and GPs can play an important role in primary care.
Objective: Our aim was to assess, at a community level, GPs knowledge about CAP and their assessment and prescription pattern.
Methodology: A multicentre cross sectional survey was done in 10 cities of Pakistan from November 2011 to January 2012. A total of 110 GPs were recruited,with minimum of 3 years experience, and were not engaged with University teaching or research.Convenient sampling was done and data was collected on structured questionnaire.
Results: 71% of GPs reported to work in high prevalence areas for respiratory ailments. Diagnosis of CAP was relied on physical examination in less than 5% of cases.
58% of GPs used PSI and 38% CURB 65 for assessment of severity but it was alarming to note that only 58% intend to treat severe pneumonia with IV antibiotics and there was reluctance for referral to hospital.
The majority (70%) of GPs claimed awareness of recent guidelines of CAP but the antibiotic class most prevalently used was oral macrolide (54%) in mild, oral quinolones (40%) in moderate and combinations of non antipseudomonal cephalosporin+Macrolide (55%) in severe cases.
Conclusion: The major problems encountered were late referral of patients to hospital, poor knowledge of recent guidelines and prescription of inadequate regimens that in turn can lead to high mortality and morbidity and emergence of resistant bacteria as cause of CAP.

P756

Practice patterns in the management of acute asthma and COPD in Turkey

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Introduction: The recognition and management of the asthma and COPD exacerbations is a cornerstone in the achievement of optimum control of these diseases.
Aims and objectives: The "ONDINE Study" aimed to evaluate practice patterns in the management of acute asthma and COPD in Turkey.
Methods: Patients with asthma or COPD were included in this national, multicenter, cross-sectional, non-interventional study. Patient demographics, control level, exacerbation severity and the exacerbation management of asthma and COPD were evaluated.
Results: A total of 596 patients included in the study having the diagnosis of asthma [n=301; mean (standard deviation; SD) age: 45 (13) years; 74% were females] or COPD [n=295; mean (SD) age: 62 (11) years; 86% males]. Disease control was evident in 38% of COPD patients while in 51% of asthma patients while severe COPD (31%) and intermittent asthma (51%) were the most common forms of disease severity. Hospital admission due to an acute exacerbation within the last 12 months was identified in 75% of asthma and 78% of COPD patients. Emergency and intensive care unit hospitalization rates were 40% and 1% in asthma patients and 53% and 2% in COPD patients, respectively. The most commonly performed tests in asthma and COPD patients were chest XR (98% and 99%) and spirometry (98% and 99%). Long-acting beta-agonist and inhaled corticosteroid combination was the most common continuous prophylactic treatment (69%) in asthma and (71%) in COPD.
Conclusions: The study revealed that acute asthma exacerbations were managed better than COPD exacerbations and higher control rates were obtained in both diseases as exacerbation were managed more appropriate with respect to recommendations in the guidelines.

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Beliefs and attitudes of health care workers on influenza and pneumococcal vaccine

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It is recommended to vaccinate health care workers against influenza and streptococcus pneumoniae if at risk group. This study is done to determine the vaccination rates and attitudes on vaccines of health care workers. A total of 192 health care workers (100 female, 92 males) consisting of 55 nurses, 42 health officers, 21 paramedics, 19 medical secretaries, 52 auxiliary staff, and 3 domestic health care givers were questioned between October 2011-January 2012. One-hundred and fifty-five (80.7%) health care workers were nonvaccinated against influenza. The reasons of this were fear of side effects (% 30,2 (n:29), doubt on efficacy (%27,1 (26), unawaraness of the vaccine (%23,5 (n:23), doubt on safety (%19,8 (n:19), and lack of adequate data %16,8 (n:16). Sixty-eight (48.6%) of influenza-nonvaccinated workers recommended patients vaccination whereas 23 (69.7%) of vaccinated workers recommended the vaccine. Vaccine recommendation rates of influenza-vaccinated workers were significantly higher. Pneumococcal vaccinatation recommendation rates were similar in influenza-vaccinated or nonvaccinated workers. Six (3.4%) health care workers were vaccinated against streptoccocus pneumoniae. Vaccine recommendation rates for pneumococcal vaccine were significantly higher in vaccinated than nonvaccinated workers (66% and 48%, respectively). The reasons for nonvaccination were fear of side effects (% 28,9 (n:33), doubt on efficacy (%25,4 (n:29), unawareness of the vaccine (%23,1 (n:27), doubt on safety (%20,2 (n:23), and lack of adequate data (%16,8 (n:19).
As a conclusion, health care workers have a low rate of vaccination and recommendation of vaccination against influenza and streptococcus pneumoniae.

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Assessment of satisfaction with inhalation devices in COPD patients

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Introduction: The choice of drug delivery system is one of the most important factors for COPD management. Health care professionals, taking also in mind the opinion of their patients, consider that ease of use and patient satisfaction for an inhaler are the key elements for selecting such a device.
Objectives: The aim of this non-interventional study was the reliable measure of the ease of use and patient satisfaction with different dry powder inhalers (DPIs). Feeling of satisfaction with inhalers (FSI-10) questionnaire was used as measuring tool.
Methods: A four week, open, parallel study was performed. 561 COPD patients (133 women), aged 66±10 years, participated in three groups using different DPIs (Diskus®, Elpenhaler® and Turbuhaler®). The basic demographic characteristics of the groups were comparable. Patients had achieved mastery of their inhalers, were regularly receiving their treatments exclusively via the inhaled route and agreed to complete the questionnaire in the second visit. They were recruited in 79 private and hospital centers all over Greece.
Results: 517 subjects completed the study and the questionnaire. 79 suffered from mild, 243 from moderate, 148 from severe and 32 from very severe COPD. Although acceptance of all DPIs tested was reasonable, statistically significant differences in the ratings were detected. It was also noted that patients suffering with severe COPD tend to express higher feeling of satisfaction with their devices than those with moderate or mild disease.
Conclusions: Statistically significant differences were found in the scores among the tested devices. Patients in advanced stages of the disease generally express higher level of satisfaction with their devices.

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The development and implementation of a written personal asthma action plan (PAAP) for adults and children across North Staffordshire

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Members of The Staffordshire North Respiratory Alliance (SNRA)supported by a local asthma charity undertook a project to develop a written personal asthma action plan (PAAP)for adults and children.Existing plans were outdated and local practice nurses identified a need for asthma training.

Literature suggests that following a PAAP can reduce emergency visits to hospital and the GP.It is acknowledged that having a PAAP attracts appropriate treatment of exacerbations,encourages patients to take responsibility for managing their condition, increases confidence and improves quality of life (BTS 2011). Wiener-Ogilvie, S et al, (Prim Care Resp J.16(6)2007:369-377) revealed only 23% of patients with asthma have a PAAP despite national recommendations.Our pilot involved 6 GP practices and patient focus groups to develop and evaluate a PAAP.

Patient feedback from pilot

	Y	N
Were instructions easy to follow	49	0
When to seek an appointment with GP	49	0
What to do if symptoms worsening	49	0
What to do in an emergency	49	0

Total number of patients = 49.

Partnership working has enabled us to provide structured educational sessions to health care professionals across primary and secondary care.Currently 90 GP practices are using the PAAP's in North Staffordshire.Encouragingly practice nurses are more confident in managing asthma.Within secondary care PAAP's are given to asthma patients attending A & E,wards and respiratory clinics.One year after the launch feedback from patients and health care professionals is extremely positive.Future plans include evaluating the impact of the PAAP on A & E attendances,GP visits and quality of life.