A sample size of 2000 patients (400 patients/location) provided an accurate national representation of the opinions of asthma patients. Questions probed respondents’ views on topics such as patient-reported levels of asthma control, frequency and duration of exacerbations in the past year, and current and recent use of asthma medications. Participants in both surveys had a diagnosis of asthma, had taken asthma medication, or had an asthma attack within 12 months of the survey.

**Results:** Results from the LA AIM will be available November 2011. A total of 2184 adults or parents of children with asthma took part in AIRLA by phone or face-to-face interviews.1 In AIRLA, 54.0% of respondents reported their disease as well- or completely controlled. However, only 2.4% met all guideline criteria for asthma control. Further, 6% of AIRLA respondents reported their asthma as severe; however, when guideline criteria were applied, 21% had severe asthma.

**Conclusions:** The responses in LA AIM shed light on whether there have been meaningful changes since the 2003 AIRLA survey in patient perception of their asthma control and that control as defined by guideline criteria. Because asthma morbidity is largely preventable, additional education is required to teach patients that by more closely following asthma management strategies outlined by current guidelines, more patients can achieve adequate asthma control.

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### 332 Project for Prevention & Control of Asthma and Allergic Diseases in Korea

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**Background:** The prevalence rate of allergic disease, one of chronic diseases, has been recently increased due to changes of life style and numerous environmental factors. In May 2007, the Ministry of Health and Welfare of Korea established the comprehensive countermeasures to prevent and control asthma and allergic disease in Korea and has pushed ahead with this project related associations and academic experts together.

**Methods:** To improve the quality of life, reduce social and economic burden through getting over allergic diseases, the evidence based healthcare policy should be established about prevention and control of allergic diseases: 1) Campaign & education 2) Proper treatment & control 3) Construction of environment friendly living 4) Construction of investigation, monitoring and alert systems 5) Support the disadvantaged patients.

**Results:** This project has moved ahead according to each 5 major program; 1) Establish and provide guideline for prevention & control, promote prevention & control measures by cooperating with the private sector, operate an education & information center for asthma and allergic disease. 2) Provide & educate standard treatment guidelines, program development for a patient’s self-treatment & control, 3) Create asthma and allergic disease friendly school, improve the living environment to control the trigger of asthma and allergic disease, 4) Establish an surveillance and monitoring system for asthma and allergic disease, study on asthma & allergic diseases; cohort study, develop and forecast an asthma index, 5) Support the patients of the disadvantaged with treatment, improve the living environment of the disadvantaged patients.

**Conclusions:** We expect that evidence based healthcare policy about prevention and control of allergic diseases would improve the quality of life by reduction inducing factor for allergic diseases, and minimize the recurrence and aggravation by realization of the proper treatment and control the trigger for asthma and allergic diseases.

### 333 Asthma in the CIS-region: The Prevalence and Peculiarities of the Course

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**Background:** In this study there has been analyzed the data from epidemiological studies on the prevalence and peculiarities of the course of bronchial asthma (BA) among the adult (Ad), children (Ch) and teenagers (Tg) in the CIS-region (CIS-R) over the past 5 to 10 years.

**Methods:** There has been used the results of studies of ISAAC, Statistical Reports (SR) of the Republic Ministries of Health and Medical facilities; the literature data.

**Results:** It has been established that BA is dominated in the structure of allergic diseases (ADs) of the CIS-R. BA, on average, suffer from 7 to 48.3% Ad and from 4 to 31% Ch. The highest incidence of BA among the population, especially Ad is observed in Armenia, Belarus, Moldova, Ukraine, Kyrgyzstan, Russia, Tajikistan. The actual incidence among Ch and Tg was 21 to 40%, for the Ad-23 to 48%. In this case, the diagnosis of BA was recorded by the SR in only 2.3% of children (Tg-3.2%, Ch-1.5%), and Ad-less than 1%. In the structure of the severity of BA among Ch and Tg, and Ad are dominated by mild forms of the disease (60 to 90% and 35 to 55% respectively) as mild intermittent or mild persistent BA, which in most cases are not diagnosed and do not receive adequate, timely assessment. The share of severe and moderate BA according to the age accounted for between 2 and 48%. The structure of BA recorded by statistical morbidity, dominated the moderate or severe forms of BA.

**Conclusions:** Thus, an analysis of existing data revealed that the mild forms of BA were dominated. The true incidence is much higher, as the uptake to the doctor takes place only in cases of the disease formed, earlier symptoms often go unnoticed. Often BA has been diagnosed at later stages with severe disease and complications. Unified account of the early features of ADs in a particular region will not only develop a National Prevention Program of ADs in the CIS-R, identify the main ways of their implementation, but also will allow to plan Allergic service in each region, important element of which is education and training of primary care physicians to identify early symptoms of ADs.

### 334 Asthma in the Elderly: A Mexican Point of View

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**Background:** Asthma has been considered as mainly a childhood disease, however, 4 to 8% of the aged population suffer from it. In the National Institute of Respiratory Diseases (Instituto Nacional de Enfermedades Respiratorias, INER) Asthma’s Clinic, in the year 2010, 1056 medical attention appointments were attended for patients of this group of age, representing 12.7% of total medical consults for asthma.In this study we describing the characteristics of elderly patients with asthma of INER’s Asthma Clinic.

**Methods:** Descriptive, transversal, retrospective research. One hundred sixty eight patients with asthma diagnosis were included, 60 years old and more, subjects with other respiratory diagnosis were excluded, as those with tobacco smoking of more than 10 packs, and those with exposure to other types of smoke.

**Results:** 86% of the study group were women average age of 68.7 years old, the Forced Expiratory Volume in the first second (FEV1) average was of 76%. The 8.8% of patients had asthma diagnosed since childhood, and the
rest onset with asthma symptoms at adulthood. Only 32% were submitted to skin prick tests; 4.5% suffered difficult asthma control; 56% of patients had overweight or obesity; 17.8% suffered Diabetes Mellitus type II, 37.5% had Arterial Systemic Hypertension and 3.75% had Ischemic Cardiopathy; 60% of patients had Gastroesophageal reflux symptoms, and 5% presented Obstructive sleep apnea. Most of the patients had a good control in Asthma Control Test (ACT).

Conclusions: Asthma can initiate at any age, the advanced age is not directly associated to certain changes in airway remodeling, or not major disease severity. There’s a high persistence of co-morbidities. This study shows that it’s necessary to study this age group further, a group that is gradually on the increase.

335 Control of Asthma and Its Relationship to Quality of Life in Adolescents
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Background: Asthma in adolescence is an important cause of morbidity, affecting significantly the quality of life. In order to facilitate the management of asthma control and allow a better assessment of quality of life, symptoms can be evaluated with questionnaires that reflect the multifactorial nature of the disease.

Objective: Assessing asthma control and its impact on quality of life in adolescents followed up in specialized ambulatory.

Methods: A cross-sectional study included 120 patients from a center of reference, between 10 and 20 years, with a mean age of 13.8 years and 66% male. Asthma was classified according to the GINA (2009) and 8% of patients had intermittent asthma, 9% mild, 64% moderate and 19% severe persistent asthma. At the time of consultation were applied two questionnaires previously validated in Brazil: Asthma Control Test (ACT) and Pediatric Asthma Quality of Life Questionnaire Adapted (PAQLQ-A). The ACT included 5 items that assess asthma symptoms, use of rescue medication, influence of disease on daily activities and patient perception of control of the disease, giving a maximum score of 25. Patients with a score >18 were considered controlled. The PAQLQ-A is composed of 23 questions, divided into 3 areas: limitation of activities, symptoms and emotional function. The responses are evaluated using a 7-point scale, with higher value indicating the minimum commitment. In this study the data were statistically analyzed by Spearman correlation, with significant value < 0.05.

Results: Comparisons were made between the areas of PAQLQ-A versus results of the ACT. Thus, correlating ACT and the area of symptoms was found an r = 0.7. In the emotional function was found an r = 0.55 and in limitation of activities an r = 0.49. The 3 correlations were statistically significant with P < 0.001.

Conclusions: The use of questionnaires to assess quality of life and evaluation of disease control showed great potential to improve health care in chronic patients. Questionnaires are easy to apply and may allow a broader assessment of disease and better recognition of the patient’s perception regarding their limitations and symptoms.

336 The Leukotriene C4 Synthase (A-444C) Promoter Polymorphism in Venezuelan Individuals with Asthma
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Background: Asthma affects approximately 300 million individuals of all ages and ethnic groups worldwide. Previous studies have reported weak associations between leukotriene C4 synthase (LTC4S) promoter polymorphism with the asthma phenotype, bronchial responsiveness to methacholine, and the severity of asthma regardless of aspirin sensitivity. The aim of the present study was to study the association between leukotriene C4 synthase A-444C promoter polymorphism and susceptibility to asthma.

Methods: Whole blood was collected from 144 ethnically mixed Venezuelan subjects, classified in 2 groups: patients with asthma (n = 90) and healthy individuals (n = 54). The LTC4S A-444C polymorphism was analyzed by PCR-RFLP by using Mspl restriction endonuclease. Frequencies were determined by direct counting and Fisher’s exact test was applied to determine frequency differences between groups.

Results: No difference in the distribution of the frequencies LTC4S (A-444C) variants among control and patients was found. However, although no significant, the genotype AC of LTC4S was increased in control group (20%) compared with asthma patients (12%) (P = 0.09, OR = 0.54, 95% CI, 0.218-1.3583).

Conclusions: These preliminary results suggest that LTC4S polymorphisms are not associated with the development of asthma and further studies are needed to determine the role of genetic factors in this disease.

337 Allergic Disorders Prevented by Helicobacter Pylori Colonization
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Background: Previous studies suggest that an association exists between microbiological colonization and allergic disorders. The derived hygiene hypothesis postulates that the increase in atopic diseases may in part be due to diminished exposure to microorganisms. The study should contribute to clear up whether the association exists focused on chronic microbial colonization/ infection and which type of infection does render the expected protection.

Methods: As part of a 3 times repeated cross-sectional epidemiological study 4925 children in total have been medical checked up. Gastrointestinal and respiratory types of infection where considered: (1) gastrointestinal colonization (Helicobacter pylori detection using in vivo [13C] urea breath test) and (2) respiratory infections (physician-diagnosed lower (bronchitis) and upper (common cold) respiratory tract infections). Physician diagnosed allergic asthma, atopic eczema, rhinitis allergica and allergic symptoms were selected as allergic target variables.

Results: Descriptive: Whereas respiratory infections lead to higher prevalence of the allergic disorders (not infected/infected: asthma 3/10%, eczema 10/24%, hay fever 6/12%) Helicobacter pylori colonization protects against allergies (not infected/infected: asthma 6/33%, eczema 16/7%, hay fever 8/7%). Analytical: The descriptive results could be confirmed using a logistic regression adjusted for relevant confounders (gender, smoking and passive smoking, parental predisposition, pets (like cats), number of older siblings, duration of breastfeeding, socioeconomic status) except and not significant for rhinitis allergica. Related to asthma/eczema/hay fever the adjusted odds ratios (aOR) for Helicobacter pylori colonization were 0.58 (P = 0.05)/0.48 (P < 0.01)/1.07 (P = 0.75). Contrary respiratory tract infection shows an amplifying effect on asthma/eczema/hay fever of aOR 3.75 (P < 0.01)/1.96 (P < 0.01)/2.07 (P < 0.01).