

and then translated into Urdu by using standard translating procedure which consist of 18 questions to evaluate the knowledge and awareness. Convenient sampling technique was used and around 330 questionnaire were distributed among teachers. Descriptive analysis to demonstrate patients' demographics. Knowledge score is calculated as 18 as there are 18 questions with one score for each right answer and total score is divided in two grades with low grade of knowledge (0-9 score) and high grade score (10-18 score). Inferential statistics (Mann-Whitney and Kruskal Wallis test,  $p < 0.05$ ) were used to differentiate or relate the study variables. **RESULTS:** A total of 330 questionnaire were distributed with the response rate of 90%. One hundred ninety nine (64.4%) were from Private schools. Majority of respondents 114 (38.4%) belong to age 25-31 years. One hundred and ninety (64.0%) teachers were female. The graduates were 58 (19.5%). Majority of respondents 191 (64.6%) have experience of 1-5 years in teaching. One hundred and seventy two (57.7%) having good knowledge regarding asthma. It is also noted that knowledge of female teachers is good as compared to male teachers. Gender dominantly affect ( $P < 0.05$ ) the knowledge of the respondents. **CONCLUSIONS:** This study highlights that although majority of school teachers having poor knowledge regarding asthma. It is advised to train and educate the school teachers to recognize the early symptoms of asthma.

#### PRS65

##### TITLE: FACTORS INFLUENCING CONSUMERS' PERCEIVED RISK OF TOBACCO PRODUCTS

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**OBJECTIVES:** The tobacco industry is actively developing modified risk tobacco products (MRTPs) with the potential to reduce tobacco-related mortality and morbidity in the population. The 2012 FDA Draft Guidance on MRTP applications asks applicants to conduct consumer-based research on the perceptions of risk associated to tobacco products. This study reports on how qualitative methods described in the 2009 FDA Guidance on Patient-Reported Outcome Measures can be used with cognitive debriefing interviews (CDI) to understand how consumers interpret the complexities of risk ratings. **METHODS:** Reanalysis of CDI transcripts on a new risk perception measure, the Perceived Risk Instrument (PRI), was used to explore ways that consumers evaluate tobacco product health risk. 48 interviews were conducted in two US cities over four days. 24 individuals completed the PRI as applied to conventional cigarettes (CC) and 24 as applied to MRTPs. Codification and thematic frequency analysis followed commonly accepted standards. **RESULTS:** Thematic saturation occurred on the first day and by the end of the second day all content themes were defined. Daily refinements of the PRI lead to a reduction of the number of concerns expressed over time. The frequency of some risk evaluations for CC and MRTP were similar: For example the general degree of difficulty rating risks (CC, 58% vs. MRTP, 46%); and the need for clear time frames to evaluate risk (CC, 21% vs. MRTP, 29%); while other evaluations differed by product, such as unfamiliarity with product risks (CC, 0% vs. MRTP, 25%). **CONCLUSIONS:** Qualitative methods can be used with CDI data to refine risk perception measures. Understanding the ways consumers evaluate the risk associated with tobacco product use is necessary to create instruments that provide accurate data to inform public health policies. Such considerations also help improve population-based research and evidence-based product assessment.

#### PRS66

##### CONDITIONAL AGREEMENTS FOR INNOVATIVE THERAPIES IN ITALY: THE CASE OF PIRFENIDONE

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**OBJECTIVES:** To present recent experiences about the Italian model for granting initial reimbursability of innovative therapies. This model is based on a Register whose aim is to warrant appropriate prescribing, and on a conditional agreements (risk-sharing) until drug effectiveness/tolerability is confirmed in clinical practice. **METHODS:** As an example of implementation of the Italian method, we report the re-negotiation process of pirfenidone in the treatment of idiopathic pulmonary fibrosis. The first reimbursement authorization (2013) was granted along with a risk-sharing agreement (Success Fee) and pirfenidone inclusion in the AIFA Register. The aim of these tools was to assure from the initial access a proper cost-benefit profile also when evidence from clinical practice was limited. **RESULTS:** The Register warranted pirfenidone appropriate utilization according to clinical trials eligibility criteria. This made it possible to achieve adherence and persistence rates with therapy greater than EU values (80%ITA vs. 72%EU and 73%ITA vs. 50%EU, respectively).<sup>1</sup> When the agreement had to be renegotiated, new clinical data from Phase III randomized trials<sup>2</sup> and clinical practice<sup>3</sup>, supporting pirfenidone value, were submitted in order to reassess the cost-benefit profile. Due to this evidence, AIFA overcame the initial uncertainty about the benefit in clinical practice and agreed to remove the risk-sharing mechanism; the drug, however, is still present in the Register in order to evaluate appropriateness of prescribing patterns. **CONCLUSIONS:** This approach, based on an initial risk-sharing agreement, to minimize effectiveness uncertainties, allows post-marketing reassessment of health technologies, consistent with current health policies. It is expected that in the future there will be an increased utilization of data collected through AIFA Registers for reassessment of innovative therapies.

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#### PRS67

##### TITLE: THE EPIPEN4SCHOOLS® SURVEY: STAFF TRAINING AND USE OF EPINEPHRINE AUTO-INJECTORS FOR THE TREATMENT OF ANAPHYLAXIS IN LARGE US SCHOOL DISTRICTS

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**OBJECTIVES:** The EPIPEN4SCHOOLS® program (Mylan Specialty L.P., Canonsburg, PA) provides epinephrine auto-injectors (EAI) to qualifying schools in the United States. A pilot web-based survey of participating schools described anaphylactic events reported during the 2013-2014 school year. This pilot survey was extended to large school districts (>50 schools per district) to better understand preparedness for anaphylaxis in such settings. **METHODS:** This cross-sectional, web-based pilot survey analyzed anaphylactic events in large districts participating in the EpiPen4Schools program. **RESULTS:** Among 808 responding schools (representing 47 districts), 286 anaphylactic events were reported. Of the 265 anaphylactic events with data on EAI use, 77.4% (n=205) were treated by EAI. A stock EAI from the EpiPen4Schools program was used to treat 60.0% of individuals (96/160) experiencing an event. Of the 702 schools with information on staff training on anaphylaxis, 47.7% (335/702) provided training for the school nurse and select staff; 20.1% (141/702) and 29.2% (205/702) provided training for most staff and all staff, respectively. Most schools (62.3%, 437/702) permitted the school nurse and select staff to administer EAI to treat anaphylaxis; 12.8% (90/702) and 18.9% (133/702) permitted most or all staff, respectively, to administer EAI. **CONCLUSIONS:** Sixty percent of individuals experiencing anaphylaxis were treated with EAI from the EpiPen4Schools program, emphasizing the value of stocking EAI. Notably, most schools permitted only the school nurse and select staff to treat anaphylactic reactions. Thus, students may routinely encounter staff members who cannot provide appropriate care during a life-threatening reaction. Because of the increased healthcare costs and risk of poor outcomes associated with delaying treatment of anaphylactic reactions with epinephrine, there is a continued public health need to remove barriers to EAI access and proper training in schools to recognize and manage anaphylaxis.

#### PRS68

##### TITLE: COPD PERFORMANCE INDICATORS IN AN INTEGRATED CARE PROGRAM AND ITS IMPACT ON HEALTH OUTCOMES: THE RECODE CLUSTER RANDOMIZED TRIAL

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**OBJECTIVES:** Similar to many European countries, performance-based financial incentives are introduced in the Netherlands to facilitate the implementation of integrated care programs. The aim of these programs is to enhance patients' health by improving quality of care. Performance indicators are used to measure quality of care and reward healthcare providers. However, the real benefit to patients remains largely uncertain. This study investigate (I) if implementation of an integrated care program improves performance indicators and (II) the impact performance indicators on health outcomes. **METHODS:** This is a sub-study of the RECODE cluster randomised controlled trial, the largest clinical trial of an integrated care program for Chronic Obstructive Pulmonary Disease (COPD) patients in primary care to date. From 38 Dutch GPs, we collected three-year prospective data on performance indicators (mostly process indicators) and health outcomes (smoking status, level of physical activity, health-related quality-of-life (HRQoL)) of 913 COPD patients. Multilevel repeated measurement models were used to assess the impact of integrated care on performance indicators and the impact of performance indicators on health outcomes. **RESULTS:** COPD performance indicators improved over time and these improvements were higher in the integrated care group than in the usual care group, indicating improved quality of care. Four indicators (whether BMI was measured, whether physical activity was checked, whether functional status was monitored, whether a spirometry test was done) were associated with an immediate improvement (i.e. in the same year) in disease-specific HRQoL as measured with the SGRQ. The latter indicator plus 'inhalation technique checked' also had a delayed impact on HRQoL (i.e. improved HRQoL in the year after the indicator was registered). The indicators related to smoking did not affect health outcomes. **CONCLUSIONS:** The integrated care program did improve performance indicators of the quality of care and some of these indicators were predictive of improved HRQoL.

#### PRS69

##### TITLE: PREVALENCE OF SWITCHING FROM BRAND TO GENERIC ASTHMA MEDICATIONS

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**OBJECTIVES:** The expiration of patents for brand asthma medications and ongoing pressure on the healthcare budget resulted in a growing market for generic medications. Switching of inhaled drugs implicates change of inhalation device. Few data are available on the prevalence of switching from brand to generic asthma drugs. The objective of this study was to investigate the use of brand and generic asthma drugs and the prevalence of switching between brand and generic asthma drugs in patients with asthma in the Netherlands. **METHODS:** From the Dutch PHARMO Database Network, all dispensed asthma drugs with generic availability in 2003-2012 of asthma patients aged >5 years were extracted. The prevalence of dispensing was calculated as percentage of users per calendar year per asthma drug and all asthma drugs combined. Switching was defined as mixed use: generic after brand dispensing or vice versa. **RESULTS:** The cohort included 31,295 pediatric and 54,324 adult users with in total 380,510 dispenses over 2003-2012. All drugs combined, the proportion of children using only brand drugs decreased from 73% in 2003 to 54% in 2012, while only generics increased from 8% to 17% and mixed (both brand+generic) from 19% to 29%. Similarly, the proportion of adults with only brand dispenses decreased from