

the "change from baseline" of the IPSS score ( $p=0.1464$ ). The same applies to the analyses at 3 and 6 months where the  $p$ -values were 0.1156 and 0.1723 respectively. Concerning the 2 dimensions of SF12 score, we observe an improvement but there is no statistical difference between the 2 treatment groups (physical dimension,  $p=0.6954$  and 0.9878 at 6 weeks and 6 months respectively; mental dimension,  $p=0.5139$  and 0.9044 at 6 weeks and 6 months respectively). **CONCLUSIONS:** We observed an improvement in the IPSS and SF12 scores from 6 weeks. This improvement was not significantly different between the 2 treatment groups. Under actual conditions of use, the various medical treatments gave similar improvements.

#### PIH13

##### GENERALISING THE OUTPUT OF ROTAVIRUS VACCINATION IMPACT STUDIES: WHAT CAN WE LEARN?

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**OBJECTIVES:** Impact studies evaluate the benefit of vaccination on specific outcome measures in real live conditions. Those studies collect raw data that do not allow for making general assessments because sometimes the numbers are too low. Modelling techniques can fine-tune the raw data into more harmonised (= parametric) data presentation. But what do we learn after this transformation? **METHODS:** We collected data over 5 years on hospitalisation due to rotavirus infection in children < 5 years old before (2y) and after (3y) the introduction of vaccination in 9 Belgian hospitals. We split the annual data by age-group of 2 to 3 months when < 1-year-old and by year thereafter over the period of the epidemic spread. We harmonised the data using Riskview software in Excel<sup>®</sup>. The hypotheses tested are that the age-groups most vulnerable to the disease have the largest epidemic spread (highest number of weeks/y of cases reported) and that the less vulnerable age-groups have their spread during the peak weeks of the most vulnerable ones. The latter should indicate a way of disease transmission between age-groups that could be confirmed with vaccination. **RESULTS:** Pre-vaccination data analysis indicates the widest spread of the disease in the age-group of 9 to 11 months (39 wks/52) and the smallest ones in the very young (33 wks/52) and the oldest ones (8 wks/52). The data confirms the spread of the disease in the less vulnerable ones (younger and older ones) occurring during the peak moment of the season of the most vulnerable ones. Post-vaccination analysis shows the same pattern of dependency between the age-groups. **CONCLUSIONS:** Preferential spread of the disease starting from the 9 to 11 months old age-group to younger and older ones can be deduced from the data analysis. This could give an explanation for the annual self-limiting spread of rotavirus disease.

#### PIH14

##### RATES AND PREDICTORS OF CHLAMYDIA RE-SCREENING AMONG PRIVATELY INSURED PATIENTS WITH CHLAMYDIA IN 2007- 2009

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**OBJECTIVES:** Repeat chlamydial infections are known to cause tubal scarring, ectopic pregnancy and infertility. CDC has recommended rescreening 3 months after a diagnosis of Chlamydia. The objective was to examine the rate and predictors of retesting within 3-6 months among patients (15-50 years) diagnosed with Chlamydia in privately insured population. **METHODS:** A commercial insurance database was used to extract patients with Chlamydia (ICD-9-CM codes: 99.5X, 78.88, 79.88, 79.98, 99.41) in year 2007-2009. The date of first Chlamydia diagnosis was used as the index date. Patients were required to have private health insurance  $\geq$  6 months before and after the index date. We also defined the re-screening service for Chlamydia by using the CPT codes: 87270, 87320, 87110, 87491, 87492, and 87801 within 3-6 months after the index date. Logistic regression model was used to identify factors affecting the likelihood of Chlamydia retesting. **RESULTS:** Among 2585 persons diagnosed with Chlamydia, the distribution across age group was 59.8% (15-25 years), 31.2% (26-40 years), and 9.0% (41-50). The majority were women (74.2%). Only 9.8% (252/2585) patients were rescreened within 3-6 months. The rate of re-screening in 2007, 2008 and 2009 was 9.1%, 10.3%, and 9.2%, respectively. The rescreened individuals were more likely to be: women but not pregnant (OR=2.36, 95% CI: 1.59-3.50), pregnant women (OR=3.01, 95% CI: 1.76-5.13), compared to men; and age 15-25 years old (OR=2.65, 95% CI=1.33-5.30), compared to the age group 40-50 years. The insurance type, region or index year were not significantly associated with retesting. **CONCLUSIONS:** Low re-screening rates persisted among persons diagnosed with Chlamydia in the private sector. Since insurance type and region show no impact on retesting, low rates may relate to system-wide problems. To improve rescreening rate, policy makers should urgently consider policy options including rescreening of all Chlamydia cases for effective control of the disease.

#### PIH15

##### ESTIMATING HERPES ZOSTER DISEASE BURDEN IN GERMANY

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**OBJECTIVES:** Herpes zoster (HZ), which is caused by reactivation of the varicella-zoster-virus (VZV), and its main complication postherpetic neuralgia (PHN) are not notifiable in Germany. HZ disease burden data are needed to i) estimate the economic impact of the disease ii) monitor the impact of routine childhood varicella vaccination on HZ-epidemiology, and iii) guide decision-making related to the development of a possible HZ-vaccination recommendation. **METHODS:** We assessed annual HZ-incidence for 2007/2008 for all ages in person-years (PY). For HZ-outpatient incidence we utilized the Association of Statutory Health Insurance

Physicians (ASHIP) database containing nationwide routine accounting data. Annual number of HZ-associated deaths and HZ-inpatients were identified by using the Federal Health Monitoring System (FHM). PHN-incidence and loss of quality-adjusted life years (QALYs) were modelled by multiplying upper and lower limit estimates for proportion of HZ-cases developing PHN and HZ-related QALY-loss with number of identified HZ-outpatients. **RESULTS:** We identified an annual average of 480,927 HZ-outpatient cases, resulting in a HZ-incidence of 5.9/1,000 PY. Of these, 63.5% were 50 years and over. On average, 16,964 HZ-associated inpatients (84%  $\geq$ 50 years) and 71 deaths (all  $\geq$ 50 years) were reported annually. HZ-outpatient incidence increased by age from 2.71/1,000 PY in people 0-14 years to 13.18/1,000 PY in people aged 90+. In terms of outpatient (6.94 vs. 4.81/1,000 PY) and inpatient (0.24 vs. 0.17/1,000 PY) HZ-incidence and mortality (0.13 vs. 0.04/100,000 PY) females were significantly more affected. We estimated that PHN-incidence ranged between 0.18 and 1.33/1,000 PY and that HZ-outpatients lost between 4,807 and 27,179 QALYs annually. **CONCLUSIONS:** HZ poses a considerable burden on the health care system in Germany, especially in the elderly. A health economic model for Germany will be developed, and follow-up assessments of epidemiological and economic HZ-related disease burden will be performed to monitor the impact of VZV-vaccinations in Germany.

#### PIH16

##### ANALYZING THE ADVERSE DRUG REACTIONS OF GERIATRIC POPULATION AT A REGIONAL ACADEMIC HOSPITAL OF SOUTHERN TAIWAN

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**OBJECTIVES:** The aging of the Taiwan population is one of the major public health issues we face now. The physical difference between young and elderly is significant and may induce many drug-related problems. Once geriatrics suffered from adverse drug reactions, they may need for intensive care and increased the financial burden. Consequently, medication safety is one of the critical issues for elderly. Analyzing the adverse drug reactions in geriatric patients and announce to health-care related professionals to prevent the incidences. **METHODS:** The data was claimed from Reporting System of Adverse Drug Reaction of a regional teaching hospital from Jan 2010 to Dec 2010. **RESULTS:** Four hundred forty cases were extracted from computer-assisted system. Of 228 geriatrics (51.82%) was enrolled with mean age 77.03  $\pm$  0.74 years old, including 116 female and 112 male. The reason to cause adverse drug reaction is Type 1 (58.26%), undesired pharmacology reaction, and others were Type 2 (41.74%). The most strategies to management adverse effects were to cease medicine and give another relievable drug (29.82%), only cease medicine (28.51%) and varied to alternative medicine (21.93%). Analyzing the severity of event, 55.26% is moderate (needing therapy or inducing to admit hospital). **CONCLUSIONS:** Over half events happened on elderly and make patients need more advance therapy, and undesired pharmacology effects, which are preventable, are the most reasons. For this reason, health care related professionals should pay more attention and monitor closely to enhance medication safety when a drug was prescribed to elderly.

#### Individual's Health - Cost Studies

#### PIH17

##### BURDEN OF ILLNESS IN PATIENTS WITH NEURAL TUBE DEFECTS IN GERMANY

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**OBJECTIVES:** To describe the burden of illness associated with neural tube defects (NTDs) in Germany from a payer perspective. **METHODS:** Retrospective data of patients with Spina Bifida (SB) and Encephalocele were analyzed using 2006-2009 German health insurance fund data (Techniker Krankenkasse). Patients were identified using ICD10 codes, data assessed included outpatient and inpatient care, rehabilitation, remedies and medical aids, and use of pharmacotherapy. The analysis was stratified by age group to provide a lifetime burden estimate and was compared to standardized health care expenditures from the German Risk Compensation Scheme (RSA) to obtain an indicator of incremental burden due to NTD. **RESULTS:** Overall, 4,173 patients were identified, 47.2% of whom were male and 95% had SB. 19.6% and 17.5% patients had an additional diagnosis of depression and incontinence respectively. Costs of patients with SB and Encephalocele were substantially higher than general population in all age strata. The difference was highest for patients  $\leq$ 10 years old (€10,775 vs. €2,360 for  $\leq$ 1 year olds, €8,398 vs. €833 for 2-5, and €10,686 vs. €863 for 6-10) and smallest for 41-50 (€2,596 vs. €1,101) and 71+ group (€5,256 vs. €4,389). Inpatient care contributed 78% of total cost for patients 0-1, whereas remedies and medical aids accounted for 60% of total cost for patients 2-5 and 6-10. Among sub-groups, costs of patients with Spina Bifida and Hydrocephalus were highest, especially in the first 10 years of life. **CONCLUSIONS:** The burden of NTD in Germany is substantial and continues throughout the patient life in terms of the level of health care expenditures and relative to overall population. Efforts should be devoted to improving prevention of NTDs and providing appropriate support for patients, parents, and caregivers, especially in early years.

#### PIH18

##### ROTAVIRUS GASTROENTERITIS IN VULNERABLE CHILDREN: A UK CASE CONTROL STUDY

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**BACKGROUND:** Seasonal epidemics with rotavirus gastroenteritis (RVGE) and respiratory syncytial virus (RSV) represent a significant burden on paediatric clinical