medication therapy for diabetes increased from 11.8 to 17.6 million, but the percent-

cipitation pattern for diabetes dropped from 90.5% to 87.5% (p<0.001). The mean number of physician’s office visits for treating
diabetes increased from 45.9 million in 2002 to 55.9 million in 2010, while the
mean number of visits per patient treated declined from 4.7 to 3.9 during the same
period. Among the patients used prediabetes medications, the proportion of
those using both insulin and oral anti-diabetic medications increased from 14.9%
in 2002 to 18.4% in 2010. For specific classes of oral anti-diabetic medications, the
percentage using biguanides increased from 40.1% to 60.5%, in the contrast, use of
sulfonylureas and thiazolidinediones dropped from 50.1% to 36.1% and 20.7% to
12.8% respectively. The annual expenditures per user for medications for treating
diabetes increased from $889 in 2002 to $1026 in 2010. Increasing use of newer
insulin and thiazolidinediones was the main driver of recent medication
expenditures ($10.5 billion in 2002 to $18.1 billion in 2007). CONCLUSIONS:
Increasing costly medication therapy for diabetes is being applied to an increasing
population. However, the percentage of patients achieving optimal medication
therapy treatment slightly dropped. This suggests that much more attention should
be directed in reducing the gap between treatment need and use as well as evaluation
of more costly medication therapy for diabetes.

INFECTION - Clinical Outcomes Studies

PIN1

ANAPHLAXIS ADVERSE EVENTS WITH 3RD GENERATION CEPHALOSPORINS:
DISPROPORTIONALITY ANALYSIS OF THE UNITED STATES FOOD AND DRUG
ADMINISTRATION ADVERSE EVENT REPORTING SYSTEM (FAERS)

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OBJECTIVES: Anaphylaxis is a serious allergic reaction that has been reported as a
rare adverse drug reaction (ADR) in cephalosporin antibiotics, predominantly cef-
taxime, causing several deaths. We aimed to evaluate reports of anaphylaxis with 3rd
generation cephalosporins (ATC code:J01DA) and report a disproportionality
of spontaneous adverse event reports. METHODS: Our case-control study identified
anaphylaxis (cases) or other adverse events (controls) in FAERS from January 2004 to
September 2012 for 3rd generation cephalosporin antibiotics. Reporting odds ratio
(OR), reporting rate (RR), and reporting rate ratio (RRR) were calculated to estimate risk for
each 3rd generation cephalosporin. Only primary suspected drugs and initial status
of reports were studied. RESULTS: Of 935 eligible ADR reports for 3rd generation
cephalosporins, 278 (3%) anaphylaxis ADRs were reported, with 100 (36%) deaths, 68
(25%) hospitalizations, and 52 (19%) life-threatening events. Ceftriaxone was the
most commonly reported cephalosporin exposure among anaphylaxis cases (n=189,
67.9%). Of the anaphylaxis cases associated with cefotaxime, death was reported in 43%,
50% in ceftriaxone, and 27% in cefuroxime. ADRs and initial status of reporting events
were the only on-treatment variables independently (and inversely) related to non-
SVR. CONCLUSIONS: Low platelets were an important negative predictor, suggest-
ing that treatment may be more effective if initiated before the onset of advanced liver
disease and thrombocytopenia (NIDA031095, NDIKD00317, Janssen).

PIN4

THE IMPACT OF PNEUMOCOCCAL CONJUGATE VACCINES (PCV) IMMUNIZATION PROGRAM ON INVASIVE PNEUMOCOCCAL DISEASE IN
TAIWAN, TAIWAN

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OBJECTIVES: OBJECTIVE: To evaluate the impact of the PCV immunization program
in Taiwan, which launched in 2007, on the incidence of pneumococcal IPD in Taiwan.
METHODS: The incidence of IPD cases, 84 cases (55.3%) were caused by serotype 19A. Most events occurred in
children aged 2-5. PCV7 was provided initially and switched to PCV13 in 2012.
In 2012, there is no research on the effectiveness of PCVs in Taiwan. This study evalu-
ated the real-world impact of PCVs on invasive pneumococcal disease (IPD) in NTIC,
the largest population city in Taiwan. METHODS: Data were derived from National Immunization Survey, Behavioral Risk Factor Surveillance System (BRFSS), and Vaccine Re-
ports; secondary sources: National Health Interview Survey reports, National

OBJECTIVE: To identify factors associated with failure of telaprevir- and boceprevir-
based HCV triple therapy

OBJECTIVES: To identify factors associated with failure of telaprevir- and boceprevir-
based HCV triple therapy at a tertiary referral center in New York. METHODS: Records of 223 patients with genotype 1 HCV mono-infection who initiated triple therapy with peg-INF/RBV plus telaprevir or boceprevir between 5/2011 and 3/2012 were reviewed. Data were analyzed on an intention-to-treat basis by multivari-
able regression analysis using step-down regression tree models. RESULTS: Overall, 172 patients were on telaprevir and 51 were on boceprevir. Median age was 57 years, 35% were female, 18% were black, 44% had F3-F4 fibrosis (Fib-4 > 2.5) and 55% were naive to treatment, 53% had genotype 1a, and 5% of those tested had IL28B CC genotype. Overall, 48% completed the expected course of therapy. Treatment failure (58% of patients) was associated with insufficient viral suppression or breakthrough (30%), adverse events (14%), relapse (12%), and loss to follow up (7%). Age increased the risk of failure (5.92; 95% CI: 2.4-14.96), whereas
patterning among patients with newly-diagnosed Lyme disease (LD). Some published
guidelines (doxycycline [73%], amoxicillin [22%), cefuroxime [4%]), with

OBJECTIVES: To identify factors associated with failure of telaprevir- and boceprevir-
based HCV triple therapy

US

Objective: To assess the association of telaprevir- or boceprevir-based HCV
therapy with peg-IFN/RBV plus telaprevir or boceprevir between 5/2011 and 3/2012 were reviewed.
Data were analyzed on an intention-to-treat basis by multivari-

OBJECTIVES: To identify factors associated with failure of telaprevir- and boceprevir-
based HCV triple therapy

Rice S, Hyland KB, Boffito M, Vlahov D, Sorensen P, Palomares B, Wynn T

OBJECTIVES: To identify factors associated with failure of telaprevir- and boceprevir-
based HCV triple therapy

Rice S, Hyland KB, Boffito M, Vlahov D, Sorensen P, Palomares B, Wynn T
and deaths, respectively, may have been QV-preventable. CONCLUSIONS: The seasonal variability of influenza B lineage circulation, and the level of vaccine match determine the extent of the benefit of QV use. However, on average, under reasonable assumptions of vaccine effectiveness, a substantial number of hospitalizations and deaths could have been prevented by using QV during the study period in the United States. Funding: GlaxoSmithKline Biologies SA

PIN6 ASSOCIATION BETWEEN INTERFERON USE AND REDUCED METABOLIC AND VASCULAR COMPLICATIONS AMONG PATIENTS WITH HEPATITIS C

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OBJECTIVES: We determined the association between interferon treatment for chronic hepatitis C (HCV) and the presence and severity of metabolic and vascular complications in a high risk Medicaid population. METHODS: This was a historical prospective cohort study using administrative claims data of Maryland Medicaid recipients (2006-2009) infected with hepatitis C. We used the validated Diabetes Complications Severity Index (DCSI) as proxy for the presence and severity of metabolic and vascular complications among the exposed. RESULTS: We stratified patients by sex and race and found a protective effect of interferon treatment in both males (OR: 0.89) and females (OR: 0.83). The average DCSI score was significantly lower in interferon-treated patients (0.55) compared to non-interferon treated patients (1.05). CONCLUSIONS: Interferon treatment may decrease the risk and severity of metabolic and vascular complications among HCV patients.

PIN7 EVALUATION LONG-TERM EFFECTS OF TREATMENT AND RESPONSE ON HEALTH RELATED QUALITY OF LIFE AMONG PATIENTS WITH CHRONIC HEPATITIS C

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OBJECTIVES: Hepatitis C decreases health related quality of life (HRQoL) which is further diminished by dual antiviral therapy. HRQoL improves after successful treatment. This trial explores the course of and factors associated with HRQoL in patients given individualized or standard treatment based on early treatment response. To study the relationship between HRQoL and mode of acquisition, treatment and treatment outcome in patients with chronic hepatitis C. METHODS: The Short Form SF-36 Health Survey was administered for evaluation health-related quality of life. Consecutive unselected Kazakhstan patients with chronic hepatitis C (HCV genotype 1) were placed on the Short Form SF-36 questionnaire, during and a treatment with pegylated interferon and ribavirin during, before and after combination therapy. RESULTS: At baseline, HRQoL was reduced in all SF-36 subscales in our patients compared with the general Kazakh population by age, participating center, severity of liver disease and income levels. Scores of all SF-36 subscales correlated strongly (P < 0.05). Self-reported HRQoL (scores at follow-up minus baseline), only the dimension general health increased. In this dimension, patients with a relapse or sustained response did not differ from responders. Men and women differed in the dimension bodily pain. Treatment schedule did not influence the course of HRQoL. CONCLUSIONS: Kazakh patients with chronic hepatitis C have a marked reduction in their HRQoL as compared to the general population. Main determinants of HRQoL were severity of liver disease, age, gender, participating center and response to treatment. Our results do not exclude a more profound negative impact of individualized treatment compared to standard, possibly caused by higher doses and extended treatment duration in the individualized group. Antiviral therapy might have a more intense and more prolonged negative impact on females. Early dropouts from therapy have significantly lower HRQoL scores at baseline than adherent patients, and sustained viral responders improve their HRQoL significantly more than non-responders.

PIN8 THE RISE OF HOSPITALIZATIONS DUE TO STAPHYLOCOCCUS AUREUS SKIN AND SOFT TISSUE INFECTIONS (SSTIS) AMONG UNITED STATES CHILDREN FROM 2001 TO 2010

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OBJECTIVES: Estimating the burden of Staphylococcus aureus infections among U.S. children and determining appropriate prevention and treatment strategies. The objectives of this study were to characterize national estimates of S. aureus SSTis in pediatric patients from 2001 to 2010 and assess trends in hospital length of stay (LOS). METHODS: This was a retrospective analysis of the U.S. National Hospital Discharge Surveys from 2001 to 2010. Cases were identified in hospital discharges for SSTis nationwide from 2001 to 2010. The rate of hospitalization for SSTis increased 60%, from 491/10,000 in 2001 to 784/10,000 in 2010. S. aureus SSTis increased over the study period from 6/1,000 in 2001 and peaked at 37/1,000 in 2005. This was mostly attributable to the dramatic increase in MRSA SSTis, from 1.3 cases per 10,000 in 2001 to 31.4 cases per 10,000 in 2010. Additionally, MSSA SSTis nearly tripled throughout the study period (4 per 10,000 in 2001 to 12 per 10,000 in 2010). The median (interquartile range) hospital LOS for S. aureus SSTis significantly decreased from 3 (2-5) days in 2001 to 2 (1-3) days in 2010 (P < 0.001). CONCLUSIONS: The incidence of MSSA and MRSA SSTi hospitalizations among U.S. children has dramatically increased from 2001 to 2010.

PIN9 GRAM- ACUTE BACTERIAL SKIN AND SKIN STRUCTURE INFECTIONS (ABSSSIs): RECENT TRENDS IN UNITED STATES HOSPITAL DISCHARGES

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OBJECTIVES: To characterize types of hospitals and patients contributing to the prevalence of ABSSSI hospital admissions and describe recent admission trends in the US. METHODS: We conducted a retrospective database analysis of adult (≥18 years) hospital admissions with a principal ICD-9 diagnosis of ABSSSI: 681 XX, 682, XX, 686 XX, 953.8, 958.9, 958.5 or 035 using the US Healthcare Cost and Utilization Project National Inpatient Sample (HCUP NIS), representing > 1,000 hospitals with > 8 million patient stays annually from 2005-2011. Description and characterization was performed. HCUF specified weights were used for national estimates. RESULTS: From 2005-2011, there were 4,891,187 adult ABSSSI hospital admissions (2% of all HCUP NIS admissions), with admissions increasing 17.3% across this timeframe (P < 0.001). ABSSSI patients were primarily male (50.8%), white (60.3%), mean age 55.7 years (±18.6 yrs), Medicare (40.7%), and discharged to home (53.8%). Patients were admitted to hospitals with greater severity (6.4% APR-DRG I vs. 56.4% APR-DRG III). Comorbidities included diabetes without complications (25.2%), COPD (17.2%), and CHF (10.3%) and increased over time (P < 0.001). Hospitals were in urban areas (85.4%), in the South (39.0%), of large bed size (~325 beds by region, 59%), public status (71%), and with national teaching status (55%). Majority of admissions were other cellulitis and abscesses (682 XX, 73.5%) and post-operative wound infection (998 XX, 21.5%). Post-traumatic (958.3, n=13,952) and post-operative wound infection (998 XX, n=1,048,916) infection incurred the greatest mean length of stay (7.2 ± 6.7 days, respectively vs 4.7 days average across ABSSSI codes). Mortality was 0.5% overall and was highest among post-operative wound infection patients (1.1%). CONCLUSIONS: More ABSSSI patients enter the US hospital system each year with a greater proportion of comorbidities. As the population continues to age, settings for treating ABSSSI patients may lessen the burden on the hospital system and reduce potential risks associated with a hospital stay.

PIN10 RECENT TRENDS IN INCIDENCE OF INFANT PERTUSSIS IN THE UNITED STATES

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OBJECTIVES: Infants are at greatest risk for severe pertussis (~50% of infant cases requiring hospitalization) and pertussis is the most commonly documented cyclic pattern of peaks and nadirs for overall pertussis incidence. This study evaluated the greatest mean length of stay (7.2 vs 6.7 days, respectively vs 4.7 days average across ABSSSI codes). Mortality was 0.5% overall and was highest among post-operative wound infection patients (1.1%). CONCLUSIONS: More ABSSSI patients enter the US hospital system each year with a greater proportion of comorbidities. As the population continues to age, settings for treating ABSSSI patients may lessen the burden on the hospital system and reduce potential risks associated with a hospital stay.

PIN11 ASSESSING LYMDEE DISEASE PREVALENCE IN THE UNITED STATES MEDICAID POPULATION

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OBJECTIVES: To examine the geographic, age, gender and racial variability in the prevalent population of Lyme disease using US Medicaid data. METHODS: Patients with Lyme disease were identified using International Classification of