

and deaths, respectively, may have been QIV-preventable. **CONCLUSIONS:** The seasonal variability of influenza B lineage circulation and the level of vaccine match determine the extent of the benefit of QIV use. However, on average, under reasonable assumptions of vaccine effectiveness, a substantial number of hospitalizations and deaths could have been prevented by using QIV during the study period in the United States. Funding: GlaxoSmithKline Biologicals 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 over time 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. The endpoint of the study was the change in DCSI score during three years of follow-up. At baseline, interferon-treated patients were matched 1:10 to non-treated patients for DCSI count, cirrhosis, end stage liver disease, race, and anti-diabetic therapy. We modeled the association between interferon use and the risk of the presence and increased severity of vascular and metabolic complications using a zero-inflated Poisson multivariate regression, stratified by White and Black race and adjusted for baseline covariates. **RESULTS:** White persons treated with interferon for 24-48 weeks and longer than 48 weeks had a significantly smaller increase in DCSI score ranging from 53%-75% and 54%-69% over the study follow-up, respectively, compared to untreated persons. There was no significant difference in the change in DCSI scores in Blacks treated for either 24-48 weeks or longer than 48 weeks, though paradoxically Blacks treated for > 48 weeks had a borderline significant 45% higher DCSI score at 30 months of follow-up. In patients with a DCSI count of zero at baseline, both White (OR=0.22, P=0.01) and Black (OR=0.38, P=0.09) patients treated with interferon exhibited a lower risk of developing vascular/metabolic disease at 30 and 36 months of follow-up, respectively. **CONCLUSIONS:** The results suggest that interferon treatment for chronic HCV might decrease metabolic and vascular complications related to diabetes.

#### 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 (HRQL) which is further diminished by dual antiviral therapy. HRQL improves after successful treatment. This trial explores the course of and factors associated with HRQL in patients given individualized or standard treatment based on early treatment response. To study the relationship between HRQL and mode of acquisition, treatment discontinuations 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 Kazakh patients with chronic hepatitis C completed the SF-36 questionnaire before, during and after treatment with pegylated interferon and ribavirin before, during and after combination therapy. **RESULTS:** At baseline, HRQL was reduced in all SF-36 subscales in our patients as compared with the general Kazakh population by age, participating center, severity of liver disease and income. Exploring the course of HRQL (scores at follow up minus baseline), only the dimension general health increased. In this dimension patients with a relapse or sustained response differed from non-responders. Men and women differed in the dimension bodily pain. Treatment schedule did not influence the course of HRQL. **CONCLUSIONS:** Kazakh patients with chronic hepatitis C have a marked reduction in their HRQL as compared to the general population. Main determinants of HRQL 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 HRQL scores at baseline than adherent patients, and sustained viral responders improve their HRQL 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 is important for planning 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. Eligible cases included children < 18 years of age hospitalized with a principal ICD-9-CM diagnosis code for SSTI. *S. aureus*, methicillin-susceptible *S. aureus* (MSSA), and methicillin-resistant *S. aureus* (MRSA) were defined by ICD-9 CM diagnosis codes. Data weights were used to derive national estimates. Annual incidence rates were reported per 10,000 pedi-

atric hospitalizations. Wilcoxon rank sum test was used to determine differences in hospital LOS. **RESULTS:** Overall, these data represent over 4.6 million pediatric 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 6/10,000 in 2001 and peaked at 37/10,000 in 2008. 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 (ABSSSI): RECENT TRENDS IN UNITED STATES HOSPITAL ADMISSIONS

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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, 958.3, 998.5X, or 035 using the US Healthcare Cost and Utilization Project National Inpatient Sample (HCUP NIS), representing over 1,000 hospitals with >8 million hospital stays annually from 2005-2011. Descriptive and bivariate analysis was performed. HCUP 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<0.0001). 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 of moderate severity of illness (43.5% APR-DRG II) with minor risk of mortality (60.4% APR-DRG I). Comorbidities included diabetes without complications (25.2%), COPD (17.2%), and CHF (10.3%) and increased over time (p<0.0001). Hospitals were in urban areas (85.4%), in the South (39.0%), of large bed size (>325 beds by region, 59.1%), private (71.0%), and with non-teaching status (55.3%). Majority of admissions were other cellulitis and abscess (682.XX, 73.5%) and post-operative wound infection (998.5X, 21.5%). Post-traumatic (958.3, n=13,952) and post-operative wound (998.5X, n=1,048,916) infection incurred 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 having comorbidities. As the population continues to age, alternative 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 HOSPITALIZATIONS IN THE UNITED STATES

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**OBJECTIVES:** Infants are at greatest risk for severe pertussis (~50% of infant cases require hospitalization). Recent surveillance indicates a resurgence of overall pertussis incidence in the US, but limited data exist on whether severe infantile cases are also resurging and the extent to which severe pertussis incidence in infants varies by sex and race. We therefore assessed recent US trends in overall and sex- and race-stratified incidence of infant pertussis-related hospitalizations. **METHODS:** Data on pertussis-related hospitalizations (ICD-9-CM discharge codes 033.0, 033.8, 033.9, 484.3) from the 2000-2011 Nationwide Inpatient Sample (NIS) were retrospectively analyzed. Annual pertussis-related hospitalizations per 10,000 infants aged <12 months was estimated using NIS sampling weights and year-specific population denominators from US census data. **RESULTS:** Incidence of pertussis-related hospitalization was ~6/10,000 infants between 2000 and 2003 before increasing sharply in 2004 (9.0/10,000) and 2005 (13.8/10,000). Thereafter, incidence fell substantially (6.2, 4.1, and 4.2/10,000 in 2006, 2007, and 2008, respectively) before increasing again in 2009 and 2010 (5.9 and 7.8/10,000, respectively). Incidence declined again in 2011 (3.2/10,000). Incidence was similar between males and females, but substantial differences were observed by race. Incidence was highest in Hispanic infants, starting at 8.6/10,000 in 2000, peaking at 24.9/10,000 in 2005, and then falling to 4.3/10,000 in 2008 before another sharp increase to 14.7/10,000 in 2010. Incidence was lowest for white and Asian infants, reaching a 2005 peak of only 5.4 and 5.3/10,000, respectively. **CONCLUSIONS:** Infant pertussis hospitalizations peaked in 2005 before a sharp decline thereafter, possibly due to increased herd immunity conferred by the 2006 launch of universal adolescent Tdap vaccination. Incidence resurged again through 2010 before another decline in 2011, demonstrating for severe cases the documented cyclic pattern of peaks and nadirs for overall pertussis incidence. This analysis also highlights the need for increased focus on minorities in pertussis vaccination programs.

#### PIN11

##### ASSESSING LYME DISEASE PREVALENCE IN THE UNITED STATES MEDICAID POPULATION

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