Abstracts

ASSOCIATIONS BETWEEN PATIENT-REPORTED DIABETES KNOWLEDGE AND HEALTH OUTCOMES, SELF-CARE, AND PREFERENCES FOR POTENTIALLY-BENEFICIAL NEW TREATMENT OPTIONS
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OBJECTIVES: Examine the impact of patient self-reported diabetes knowledge on diabetes self management and outcomes and assess whether diabetes knowledge influences patient preferences for a once weekly (QW) injectable therapy versus daily oral medications. ME1HDQ: A nationally representative random sample of patients with self-reported type-2 diabetes (n = 1516) participated in an on-line survey. Regression analyses were used to explore the relationship between self-reported diabetes knowledge, health outcomes, and preferences for QW therapy.

RESULTS: Mean age of the sample was 57.3 years, 52% were men, and mean duration of diabetes was 9.7 years. Self-rated knowledge of diabetes ranged from “extremely knowledgeable” (9% of patients) to “very knowledgeable” (31%), “knowledgeable” (38%), “some what knowledgeable” (21%) and “not knowledgeable” (1%). Adjusted for demographic factors (age, gender, diabetes duration, education level), higher level of knowledge was associated with self-reported improvement in health since diagnosis, better self-care adherence (beta = 0.18), and better self-care adherence, including dietary (beta = 0.14), exercise (beta = 0.11), medication (beta = 0.12) and blood glucose monitoring recommendations (beta = 0.18) (p < 0.001 for all included variables). When asked to consider potential advantages of a QW injectable medication versus the superior blood glucose control and similar safety could be achieved as compared to a daily oral medication, preference for a QW approach was positively associated with diabetes knowledge (OR 1.18, p < 0.03), after adjustment for demographics and past and present experience with self-injected medications (43%). Assuming same blood glucose control and safety, overall, 54% of patients stated a preference for once weekly versus daily injectable diabetes medication. CONCLUSIONS: Higher levels of self-reported diabetes knowledge are associated with greater improvement in self-reported health, as well as adherence to diabetes self-care behaviors. Patients who report higher levels of diabetes knowledge may be more willing to consider new treatment options, such as a once weekly injectable therapy for diabetes.

INFECTION – Clinical Outcomes Studies

STATISTICAL ANALYSIS OF MONONUCLEOSIS IN ADOLESCENTS
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OBJECTIVES: Mononucleosis is a non-fatal disease that is most widely seen in the adolescent ages of teenagers and toddlers. Mono is caused by the Epstein-Barr virus, a member of the herpes virus family and one of the most common human viruses, affecting as many as 95% of adults between 15 and 40 years of age. When infection with EBV occurs during adolescence or young adulthood, it causes mononucleosis 35% to 50% of the time. Our objective is to use data from the National Inpatient Sample for 2003, conducted by the Agency for Healthcare Research and Quality to explain these and other correlations with respect to mononucleosis. METHODS: Within the sample, there were 2000 observations of patients with mono and 1814 without mono. The SAS statistical analysis software was used to produce table, graphical, and regression analysis to explain data correlations and discrepancies among the diseased population and the non-diseased population or the control group. RESULTS: Demographic variables of gender and race were normally distributed within the disease group. Procedures of injection of antibiotic, venous catheterization, biopsy of bone marrow, tonsillectomy with adenoidectomy, along with diagnosis of disorder of fluid, acute tonsillitis, acute pharyngitis, general symptoms, peritonsillar abscess, and other symptoms involving abdomen and pelvis were seen as predictive variables correlated with having the disease. Because a wide array of procedures were seen in the disease population, the most common procedure classifications were used to perform regression analysis. CONCLUSIONS: Procedure classes of other operations on lung and bronchus, incision, excision, and anastomosis of intestine, along with incision, excision, and occlusion of vessels, and operations on bone marrow and spleen were found to be the best indicators of predicting length of stay and total charges of the diseased group.

FACTORS INFLUENCING PEDIATRIC PATIENTS’ PREFERENCES FOR PNEUMONIA therapeutc
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OBJECTIVES: Pneumonia is a bacterial or viral infection that affects the lungs, and makes it difficult to breathe. This disease can cause hospitalization and sometimes death. It is the purpose of this study to examine a group of pediatric patients with pneumonia and factors such as sex, length of stay, Charlson Index, age and hospital expenses to determine how they are related to the disease. METHODS: Data were
PHARMACOGENOMICS: APPLICABILITY IN ANTIRETROViral THERAPY (ART) IN HIV PATIENTS

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OBJECTIVES: The objective of the study was to explore the applicability of pharmacogenomics in ART (Antiretroviral therapy). METHODS: Pharmacogenomics studies in HIV patients were identified from the database of WHO, PubMed, Clinical trials.gov and relevant grey literature from 2000–2008. Two reviewers independently extracted data. RESULTS: Pharmacogenomics provides a powerful support to investigate variable responses to antiretroviral therapy. To date, few antiretroviral studies have shown a clear genotype-phenotype correlation. However, such correlations have been demonstrated for CPY2B6 and efavirenz disposition, HLA-B*5701 and abacavir hypersensitivity, and UGT1A1 and azatavir hyperbilirubinemia. Clinically significant and confirmed pharmacogenomic relationships were identified for three ART drugs. Out of 405 studies, 6202 studies were identified as relevant to CPY2B6 and efavirenz disposition (2RCTs and 1 meta-analysis), and in 2005 National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases (NIAID) recommended new CHC resistance. Hypersensitivity and UGT1A1 and azatavir hyperbilirubinemia are further increased in the presence of the UGT1A1*T7 allele. CONCLUSIONS: Although the wider applicability of pharmacogenomics, relationships is prevalent and its use in clinical practice is still limited, Pharmacogenomics significantly contribute to improving more adequate therapeutic decisions and to optimise treatment for HIV/AIDS.

A DATA ANALYSIS OF INPATIENTS AFFECTED BY THE HUMAN PAPILLOMAVIRUS

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OBJECTIVES: The human papillomavirus is the most common sexually transmitted disease in the United States. This virus will affect 6.2 million Americans this year. Most cases of HPV are treated by a physician or gynecologist. A cure for HPV has not been found. The virus, however, has the potential to cause cervical cancer in later life. Although HPV is the most common cause of cancer in the United States, it is preventable. The virus is spread through sexual contact. Early diagnosis can prevent 70% of cervical cancers, less than 1% of the cancers in our sample died with HPV. The virus can also be treated, preventing the spread of the virus. METHODS: A data set of over 22,000 pediatric patients from the 2005 National Inpatient Sample was used for analysis with SAS Enterprise Guide to examine different characteristics of HPV. From our sample, we were able to set one way frequencies, pie charts, kernel densities, and logistic and linear regressions to compare and contrast different aspects of HPV. We also examined patient diagnosis and procedure codes. RESULTS: The most prominent age groups affected by HPV are young children and adolescents. This is a concern since there is a direct relationship between age and risk of cervical cancer in later life. Although two types of the virus (16 and 18) are responsible for 70% of cervical cancers, less than 1% of the patients in our sample died with HPV. The virus is not costly to treat or detect with the majority of the patients charged under $3,000 from hospitalization with the virus. The majority of patients with a URI who had HPV. We found many statistically significant relationships between demographics, procedures, and diagnoses, and length of stay or total charges of the patient. CONCLUSIONS: Further research is still needed for doctors to be able to prevent or cure HPV. Viral medications are out on the market targeting young females, but surprisingly, more males have HPV because they are the carriers of this virus. We need to focus more time and money to find a cure for HPV.

EXPLORE CELLULITIS: WHO GETS IT AND HOW SERIOUS IS IT?

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OBJECTIVES: Cellulitis is a skin infection caused by bacteria. In children, cellulitis is most often occurs on the face, legs, arms, or around the area near the anus. It can usually be treated with antibiotics (oral or topical). However, if not treated, the infection can spread and cause far more serious conditions such as meningitis or blood clots in the legs.

METHODS: The statistical software SAS was used to analyze the data supplied by the National Inpatient Sample dataset, which contained 1287 patients with cellulitis and a control group of 1300 without cellulitis. Statistical methods used included one-way frequencies, kernel densities, summary statistics, table analyses, logistic regression, and linear regression. We also examined the most frequent patient diagnosis and procedure codes based on the dataset.

RESULTS: The patients represented by the data are all pediatric. About 63% of patients with cellulitis are male, with about 37% female. The age group with the highest concentration of patients is 0–3 with about 23% of the total. Only 0.08% of the patients with cellulitis actually died. In general, the disease is not fatal. The average