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OBJECTIVES: Lifelong usage of antiretroviral drugs (ARVs) put them among the most therapeutically risky drugs for clinically significant drug interactions (CSDIs). It is, therefore, essential to document the types of antiretroviral (ARV) and non-ARV co-prescribed drugs(CPD) for people living with HIV/AIDS (PLWHA) in order to facilitate the assessment of clinical significance of their interactions. This study aims to document the most commonly prescribed ARV drugs and CPD among PLWHA and to assess the frequency of prescriptions of the first, second and third lines ART regimen. METHODS: All the prescriptions received between January 2009 and June 2014 totaling 22,458 from 500 patients registered in APIN clinic in 2009, were reviewed with a view to documenting the most and the least prescribed CPD and ARV drugs. A proforma form, purposively designed for this study was used for data abstraction RESULTS: Zidovudine/lamivudine/nevirapine (AZT/3TC/NVP) (4996/9302; 53.71%) was the most commonly prescribed ART regimen followed by tenofovir/emtricitabine/efavirenz (TDF/FTC/EFV) (1468/9302; 15.78%) and zidovudine/lamivudine/efavirenz(AZT/3TC/EFV) 683/9302; 7.34%) Abacavir/lamivudine/saquinavir/ritonavir (ABC/3TC (SQV/RTV) (1/9302; 0.01%) was the least prescribed ART regimen. The first line ART regimens (8574/9302; 92.17%) were mostly prescribed, followed by the second line (698/9302; 9.5%). Cotrimoxazole (7546/9302; 81.12%) was the most common non-ARV drug co-prescribed with ART regimen, followed by multivitamin (433/9302; 4.65%) and rifampin (316/9302; 3.40%). CONCLUSIONS: Co-trimoxazole was the most commonly co-prescribed non-ARV drug. Zidovudine/lamivudine/nevirapine was the most commonly ART regimen. Considering the wide range of non-ARV drugs co-prescribed with ART regimens in this study, evaluation of their potential interactions is hereby suggested.

PIN9

PROTON-PUMP INHIBITOR UTILIZATION AMONG PATIENTS WITH HEPATITIS C VIRUS

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OBJECTIVES: This retrospective cohort study estimated the prevalence of Hepatitis C virus (HCV) and utilization of proton-pump inhibitors (PPIs) among Medicaid patients. The PPI-related economic burden among HCV patients was also determined. METHODS: Adult (18-65) patients diagnosed with HCV were identified using National Medicaid fee-for-service claims data from Jan 1 through Dec 31, 2011. HCV prevalence, comorbid GI/GERD, PPI utilization and healthcare costs per-patient-per month (PPPM) were examined. Propensity Score Matching (PSM) was performed to complete an unbiased comparison of healthcare costs among HCV patients (and a subgroup with cirrhosis) with and without PPI use. RESULTS: HCV prevalence was 0.72% (12,267/1,706,399) and the majority (93%) had a gastrointestinal (GI) condition; 36.63% had at least one PPI prescription. Among HCV patients with cirrhosis (0.12%), a liver transplant (0.01%) and end-stage liver disease (0.28%), 52.28%, 55%, and 46.38% were prescribed a PPI. After PSM, a total of 3,362 HCV patients with and without PPI use were evaluated for cost analysis. Inpatient, emergency room, outpatient office, and pharmacy costs PPPM were significantly higher among HCV patients with PPI use compared to those without. The overall mean total costs PPPM ($3,451 vs. $2,708; p<0.001) and GI-related mean total costs PPPM ($768 versus $491; p<0.001) were significantly higher among HCV patients with PPI use, compared to those without. In a subgroup analysis of HCV patients with cirrhosis, similar trends were seen in overall total costs PPPM ($4,060 with PPI vs. $3,386 without; p=0.0457). CONCLUSIONS: When considering the categories of healthcare evaluated, total healthcare costs for HCV patients with PPI use were higher than HCV patients without PPI use, indicating a patient population with greater economic burden on the U.S. healthcare system. Similar results were seen among HCV patients with cirrhosis.

PIN10

VALIDITY AND RELIABILITY OF THE MALAYSIAN VERSION OF PARENT ATTITUDES ABOUT CHILDHOOD VACCINES (PACV) SURVEY

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OBJECTIVES: The number parents in Malaysia that are hesitant about vaccines has grown in recent years. Identifying these parents is important in order to implement the necessary measures to maintain and improve the vaccines intake. The objectives of this study were to translate the Parent Attitudes about Childhood Vaccines (PACV) survey into Bahasa Malaysia, and to assess the reliability and construct a validity of the translated survey. METHODS: The PACV survey was translated into Bahasa Malaysia using a forward-backward translation procedure. A cross-sectional survey was conducted among Malaysian parents who attended public health facilities that provide vaccinations. Cronbach's α and Spearman's rank correlation coefficient were used to determine the internal consistency and test-retest reliability. Construct validity was determined by examining the differences in parents' PACV scores and their children's immunization status by using Kruskal-Wallis test. RESULTS: A total of 148 parents participated in this survey and 109 children immunization records were reviewed. Cronbach's α and Spearman's rank correlation coefficient values for each of the 3 sub-domains of the PACV survey were > 0.7 and of > 0.9 (p < 0.001) respectively. Parents with fully immunized children had significantly lower PACV scores than parents who either refused or partially immunized their children (p < 0.001). CONCLUSIONS: The Malaysian version of the PACV survey is a valid and reliable tool to identify parents with vaccine-hesitancy in Malaysia.

PIN11

THE CHANGING EPIDEMIOLOGY OF CHILDHOOD INFECTIOUS DISEASES IN CANADA

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OBJECTIVES: Pediatric vaccination is one of the cornerstones of public health strategy. Despite their proven effectiveness, a proportion of the population habitually remains unvaccinated; vaccine-preventable infections therefore represent an incremental and avoidable economic burden. The extent of this burden depends on the changing epidemiology of each particular agent. The objective here was to estimate the past and present epidemiologic burden of severe vaccine-preventable illness in Canada. METHODS: Data on children (age<15 years) hospitalized with influenza (and lower respiratory tract infections), measles, mumps, meningitis, rubella, pertussis, or varicella were identified by International Classification of Diseases (ICD) codes for years 2004 to 2014 from the national Discharge Abstract Database. Counts were stratified by province, age, and sex. Data on population size were obtained from Statistics Canada, and used to estimate rates of infectious disease hospitalization per 100,000 population. Data were compared over time, modelled using Poisson regression, and trends compared across provinces. RESULTS: There were 1,845 hospitalizations for infectious diseases among children in 2004/05, increasing to 1,909 hospitalizations in 2014/15. National hospitalization rates per 100,000 children aged <15 years in 2004/05 were: 12.2 (influenza), 0.1 (measles), 8.0 (meningitis), 0.2 (mumps), 4.6 (pertussis), and 7.1 (varicella). Counts of rubella were not reported in 2004. In 2014/15, national rates were 20.1 (influenza), 0.2 (measles), 9.4 (meningitis), 0.3 (mumps), 1.8 (pertussis), 0.02 (rubella) and 1.4 (varicella). Temporal trends observed were consistent when considered according to province. CONCLUSIONS: While severe vaccine-preventable illness among children in Canada occurs infrequently, nonetheless almost 2,000 hospitalizations occur annually for these conditions. While in general rates of severe infections are constant and low, as expected, rates of illnesses prevented by more newly-introduced vaccines (e.g. pertussis and varicella) are declining. Understanding the attributable length of stay and frequency of sequelae will be important to accurately estimate the associated economic burden.

PIN12

DISSEMINATION OF SHV BETA-LACTAMASE GENES AMONGST CLINICAL ACINETOBACTER BAUMANNII ISOLATES

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OBJECTIVES: Acinetobacter baumannii is globally emerging as a dangerous nosocomial pathogen with enormous capacity to acquire antibiotic resistance genes from related and unrelated bacteria. Among the several classes of antibiotics available, beta-lactams are considered the safest, cheapest and most widely used group. However their effectiveness has been reduced by the production of beta-lactamase enzymes by bacteria. SHV are one of the very important types of beta-lactamases that confer resistance to variety of beta-lactam antibiotics. The aim of this study was to check the prevalence of SHV beta-lactamases in A. baumannii isolates. METHODS: A total of 47 multiple drug resistant Acinetobacter baumannii isolates were collected from two tertiary care hospitals in Pakistan during 2013, and were screened by PCR for the presence of SHV beta-lactamases genes. RESULTS: PCR amplification of SHV genes confirmed that forty percent (n=19) of the isolates were positive for SHV genes. CONCLUSIONS: Genes for the SHV beta-lactamases are carried by both the chromosomes and plasmids, and hence clonal dissemination and horizontal gene transfer (HGT) both contribute to this overwhelming prevalence of SHV beta-lactamases in Acinetobacter baumannii isolates. A. baumannii is the most important opportunistic nosocomial pathogen and its immense capacity of acquiring and sharing resistance with other bacteria against modern antibiotics is pushing us into the post-antibiotic era.

PIN13

CLINICAL AND MICROBIOLOGICAL OUTCOMES WITH DAPTOMYCIN IN MEDICAL INTENSIVE CARE UNIT OF A TERTIARY CARE HOSPITAL: EVIDENCE FROM CROSS-SECTIONAL STUDY

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OBJECTIVES: In the last few years, treatment of Gram-positive MDR infections has changed due to better knowledge of the limitations of glycopeptides and the introduction of novel antimicrobials, such as daptomycin. This study was conducted to evaluate clinical and microbiological outcomes with daptomycin in medical intensive care unit (ICU). METHODS: This cross-sectional study was conducted in medical ICU of a tertiary care hospital. Data was captured from medical record department for one year, Jan to Dec 2012. Clinical (survival, death, Leave against medical advice) and microbiological outcomes were observed in patients who received daptomycin. Data was analyzed by using IBM SPSS version 20.0 and presented in terms of average±SEM and percentage. RESULTS: Data was screened for 27 patients and analyzed for 22 patients. Mean age of patients was 56.9±3.1 years. Average hospital and ICU stay was 19.7±4.4 days and 17.8±4.4 days, respectively. Higher number of patients (68%) was with chronic kidney diseases followed by hematological disorders (55%). Duration of ICU stay before start of Daptomycin was 5.45±0.8 days. At the start of drug, 64% patients were with severe sepsis and 32% with septic shock. Most of the patients were falling in type-3 category (82%). Positive cultures were reported in 77.3% patients and most prevalent isolates were Staphylococci (59%) and Enterococci (24%). Antifungals had started in 68.2% patients before start of drug. Dose of daptomycin was 350mg per day and mean duration of prescription was 4.86±0.8 days. Carbapenems were highly (95.4%) prescribed as concomitant medication. Of all, 28% patients were cured clinically and microbiologically and 45% were died. APACHE-IV score for survivors and non-survivors was 63.5±7.8 and 80.2±6.1, respectively . CONCLUSIONS: APACHE score was already higher in case of treatment failures. Higher number of patients was in type-3 category and with higher grade of severity. Daptomycin was able to cure a significant number of patients (28%).