concerns that the two-dose regimen has been described in recent years. However, since AICPs two-dose recommendation in 2007, prevalence of CDI compliance have not been assessed using a population-based approach. OBJECTIVES: This study analyzed data from seasons 2008-2011 to examine two-dose compliance for children aged 19-35 months. This analysis tests for significant demographic and socioeconomic differences in one- and two-dose influenza vaccinations. METHODS: Seasonal influenza vaccinations of children were estimated from the National Immunization Survey (NIS). The analysis results were nationally representative by weighting the study population according to census demographics. Results: Of the 8,906 children aged 19-35 months, 22% received one dose and two doses of influenza vaccine during September 1 through December 31 of the season. For each season, the proportion of children with partial and full influenza vaccinations were calculated. Multivariate regressions modeled the effect of multiple NIS factors (i.e., age, race, gender) on influenza vaccination. RESULTS: For all four seasons, adjusted one-dose influenza vaccination was significantly lower among children 24-35 months compared to children 19-23 months (ranging from 9.4-53.7%, p<0.05). Multivariate regression was conducted between patients who received one or two doses of influenza vaccination was lowest among children living below the poverty level compared to children living above the poverty level (ranging from 9.4-53.7%, p<0.05). CONCLUSIONS: Policies to improve one- and two-dose influenza vaccination rates should target children living below the poverty level and uninsured children. First steps to improve one-dose vaccination rates among infants and children should continue. Further studies are needed to determine the reasons for initiating influenza vaccinations among children less than 24 months of age.

PIN92

UWRUNG UNEQUALLED OF BROAD-SPECTRUM ANTIBIOTICS

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OBJECTIVES: This study aimed to evaluate if high antibiotic consumption is explained by inappropriate prescribing, given current practice guidelines. This is assessed through measuring the proportion of (Upper) Respiratory Tract Infection (URTIs) treated by GPs with Co-amoxiclav, and Urinary Tract Infection (UTI) treated with fluoroquinolones, comparing across population subgroups for differential treatment patterns. METHODs: Data was collected for all Chalitnithi Hospital physicians from 4300 clinical practices during 2011. Rule-based algorithms were used to classify multiple primary care visits into discrete URTI and UTI events and link these with AB prescriptions and dispensing. Infectious events and antibiotic prescription rates were calculated. Differences in distributions across districts and population subgroups were then tested with Chi-square analysis; for prescribing ratios for URTI the ratio for prescribing fluoroquinolones vs. nitrofurantoin (narrow-range AB of choice) were calculated. RESULTS: 6.5 million visits for infectious diagnoses were registered for all 4 million enrollees. Almost 75% of the Co-amoxiclav dispensed was used for treatment of URTI, with 6% of UTI events treated with Co-amoxiclav. Over 75% of fluoroquinolones dispensed were used to treat UTI, with 23% of UTI events treated with fluoroquinolones. Variability between districts in the use of Co-amoxiclav for UTI ranged between 12%-23% in adults and 5%-21% in children. Twenty percent of physicians were co-amoxiclav “prescribers” with high rates of UTI events treated with co-amoxiclav (10%-38%). Treatment of URTI events with Quinolones varied considerably between 19%-52%. The proportion of Quinolones/Nitrofurantoin prescribed ranged between 1.4 (1.3-1.5) to 6.2 (5.6-6.8) in each district. CONCLUSIONS: Rates of utilizing broad-spectrum antibiotics in the community are higher than expected and show wide variability across country districts and between physicians This suggests the need for introducing this as a quality measure and implementing targeted interventions to reduce inappropriate antibiotic use.

PIN94

EVALUATION OF INJECTABLE INFEKTOMYCEIN USE IN A MEDICAL CENTER

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OBJECTIVES: To evaluate efficacy, safety (concerning hypernatremia), and usage of UFO® in a medical center METHODS: A retrospective medical record review was conducted for patients who is treated with UFO® in Wan-fang hospital during 2012/5/1 to 7/8. Patients with cancers were excluded. Patients with suspected or diagnosed infections and more than one dose of UFO® were included. For hypernatremia analysis, only patients with adult serum sodium level and no hypernatremia events prior UFO® use. Microsoft excel and student t-test were utilized for analyzing data and p-values RESULTS: Thirty-eight patients were included and the common infection age (N=13); UTI (N=13); cellulitis (N=9) and sepsis (N=9). The common pathogens are Staphylococci (59%) and Pseudomonas species (21%). Twenty-one percent of cases used UFO® as empirical or first-line therapy. Combination therapies with cephalosporins (26%) or penicillins (24%) were more frequent than monotherapy or cephalosporins. The most commonly used antibiotics are 3cephalosporins (75%). In penicillins combination therapy, the most combined antibiotics is oxacillin (40%). Mean treatment duration of UFO® is 9.4 days. There were 71% cases using common dose of UFO®, 8.1 g/day, and 29% using low dose, 4.6 g/day. In patients with UFO®, 74% had negative outcomes (defined as patient died, hyprenatremia events and changed to other antibiotics) and 26% had positive outcomes (defined as patient discharged, disease improved and no recurrence event). The most patients developed hypernatremia (serum sodium level > 145 mEq/L) after using UFO® for 4-6 days, patients with creatinine clearance above 50 ml/min did not develop hyprenatremia. CONCLUSIONS: The serum sodium level did not increase significantly by using UFO® after starting UFO®. For patients with higher baseline serum sodium level and renal dysfunction, sodium level should be monitored closely while using UFO®. Using UFO® as adjunct for first line or empiric treatments is lack of evidence. Further antibiotic prescribing regulations should be implemented concerning prescribing UFO®.

PIN95

AMANTADILAL DRUGS USE PATTERN IN RETAIL OUTLETS IN ENUGU URBAN SOUTH EAST NIGERIA; IMPLICATION FOR MALARIA TREATMENT POLICY

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OBJECTIVES: Drugs retail outlets constitute a major source of malaria treatment in developing countries requiring regular and accurate information for enhancing strategies for improving the use of Artemisin-based Combination Therapy (ACT’s). This study therefore analyzed and summarized the drugs retail outlets in private retail outlets to assess the current state of compliance to policy. METHODS: A prospective cross-sectional survey of randomly selected drugs retail outlets in Enugu urban South Eastern Nigeria, using pre-structured data sheets to classify multiple primary care visits into discrete URTI and UTI events and link these with AB prescriptions and dispensing. Infectious events and antibiotic prescriptions averaged $3.34 (±$1.90). The AL brand was the most used ACT, at 69.3% (n=666). Self-medication accounted for the highest number of mono-therapy at 82%. CONCLUSIONS: The use of ACTs as predominant antimalarial drugs of choice has become widespread in the retail outlets, with significant contribu-

PIN96

REAL WORLD DRUG UTILIZATION OF HIV THERAPIES IN CANADA

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OBJECTIVES: To describe current utilization of HIV drugs in Canada. METHODS: Longitudinal pharmacy retail data were obtained from most Canadian provinces. Eligible patients received their first HIV drug prescription during the selection period, and consistently filled subsequent prescriptions at the same pharmacy. Selection periods included an early cohort (initiating therapy August 2008 to July 2009) and a late cohort (initiating therapy August 2010 to February 2012). The observation period was 43 months for the early cohort and 12 months for the late cohort. RESULTS: 905 patients in the early cohort and 1,411 patients in the late cohort were analysed. Single-tablet regimens were the initial therapy for 32% of patients (early cohort) and 33% (late cohort). The most commonly used regimen was a backbone + protease inhibitor (PI): 45% of total days on therapy (DOT) for early cohort, 39% for late. Darunavir was increasingly chosen as the initial PI (3% patients for early cohort) and 16% for the late cohort. Treatment of PI, alone or in combination, was completed by 71% (early cohort) and 72% (late cohort). The majority of PI treatments were treatment-naive (71%) in the late cohort, despite funding limitation to treatment-experienced patients in most jurisdictions. After 3 years of follow-up in the early cohort, 45% were still on their first therapy For early-cohort patients who switched to a second therapy, 33% did so within 3 months. Subsequent lines of therapy phased in more gradually in both cohorts. Darunavir and II use increased in later lines of therapy for both cohorts, but particularly for the late cohort. CONCLUSIONS: This research documented changing patterns for HIV drug use in Canada, with increasing use of darunavir and II over time (irrespective of funding restrictions) and frequent early therapy switches suggestive of tolerability issues.

PIN97

PHARMACIST VACCINATION PROGRAMS FOR COMMON INFECTION DISEASES: A SYSTEMATIC REVIEW OF THE LITERATURE ON THIS EMERGING MODEL OF CARE

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OBJECTIVES: US Health Reform is stimulating new models of care, such as pharmaceu-
tical sector, providing low cost future for pharmacists. While pharmacist vaccination holds promise in improv-
ing access to this important preventive modality, evidence on these programs is still emerging. The objective of this research was to conduct a systematic review of pub-
lished evidence on pharmacist immunization programs for two common diseases—
influenza and pneumococcal disease. METHODS: A literature search of PubMed, Cinahl, CINAHL, Pubmed, Medline, OTL, and Ovid databases was conducted. Cost data were extracted from the sources and are not US. RESULTS: 102 articles were identified. Of these, 52 met inclusion criteria: 30 (62.61%) received influenza vaccination. Mean age of the study sample was 75 years (74.64 ± 7.20). Most of the elderly patients administered vaccines is also a concern. More evidence is needed on the outcomes of these programs in terms of improving pharmacist accessibility, vaccination rates and knowledge about the disease, as well as economic data to inform decision mak-
ers on their value in relation to traditional models of care.

PINF9 RACIAL DISPARITIES IN INFLUENZA VACCINATION AMONG ELDERLY: A MULTILEVEL MODELING APPROACH
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OBJECTIVES: Immunization is a cost-effective strategy to reduce the impact of influ-
enza among elderly. The purpose of this study was to examine racial disparities in influenza vaccination in elderly after controlling for individual and higher level factors. METHODS: The 2011 Behavioral Risk Factor Surveillance System (BRFSS) database was used for this study. Study population consisted of individuals aged 65 years or above and those who responded as either yes or no about having received a flu shot last year. RESULTS: The study cohort consisted of 66,165 subjects. Of these, 41,427 (62.61%) received influenza vaccination. Most of the elderly patients receiving influenza vaccination were females (64.09%), Whites (87.99%), and insured (99.86%). Results from multilevel modeling suggested that individuals’ race (odds ratio: 1.28, p-value < 0.0001), and other factors like age, gender, education level, employment status, marital status, health insurance coverage and medical cost were used as level 1 variables. Results showed that elderly, race, age, gender, education level, employment status, marital status, health insurance coverage and medical cost were significantly associated with influenza vaccination in elderly. RESULTS: The study cohort consisted of 66,165 subjects. Of these, 41,427 (62.61%) received influenza vaccination. Mean age of the study sample was 75 years (74.64 ± 7.28). Most of the elderly patients receiving influenza vaccination were females (64.09%), Whites (87.99%), and insured (99.86%). Results from multilevel modeling suggested that individuals’ race (odds ratio: 1.28, p-value < 0.0001), and other factors like age, gender, education level, employment status, marital status, health insurance coverage and medical cost were used as level 1 variables. Results showed that elderly, race, age, gender, education level, employment status, marital status, health insurance coverage and medical cost were significantly associated with influenza vaccination in elderly. However, results showed that elderly, race, age, gender, education level, employment status, marital status, health insurance coverage and medical cost were significantly associated with influenza vaccination in elderly. In addition, controlling for individual and higher level factors, increased the explained variance of influenza vaccination in elderly. CONCLUSIONS: Racial disparities exist in influenza vaccination among elderly even after controlling for individual and higher level factors. Individual level factors are better predictors of influenza vaccination in elderly than the level 2 factors. However, it is not feasible to use multilevel approach when the nature of the data is inherently nested.

PINF9 SEVERITY AND COSTS OF ACUTE BACTERIAL SKIN AND SKIN STRUCTURE INFECTIONS BY TREATMENT SETTING: AN APPLICATION OF THE EORTC CLASSIFICATION TO A REAL-WORLD DATABASE
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OBJECTIVES: Acute bacterial skin and skin structure infections (ABSSSIs) are the second most common indication for antibiotic treatment. Eron et al. developed an algorithm for disease severity and appropriate treatment to optimize patient care and minimize costs. However, this algorithm has yet to be thoroughly vali-
dated in the real-world. The objectives of this study were to investigate the current ABSSSI patient population and compare the direct health care costs associated with inpatient versus outpatient parenteral antimicrobial therapy (OPAT) treatment, by patient severity level, in the US. METHODS: ABSSSI patient characteristics were evaluated using the Premier Hospital Database. Standard data elements in hospital discharge and encounter records and produces categorized by International Classification of Diseases, Ninth Revision were used to classify patients according to the Eron classes 1-IV. Data for this study were extracted from January to December 2011, and included all patients prescribed and discharged with an ABSSSI diagnosis. Classification of Diseases, Ninth Revision were used to classify patients according to the Eron classes 1-IV. Data for this study were extracted from January to December 2011, and included all patients prescribed and discharged with an ABSSSI diagnosis. A principal diagnosis of ABSSSI included for analysis. The percentages of patients categorized as Eron Class I-IV were 73.47%, 20.15%, 4.75% and 1.63% respectively. 20.35% of patients were hospitalized; 9.26%, 43.51%, 71.36% and 85.54% in Class I-IV respectively. The cost associated with inpatient versus OPAT treat-
ment varied substantially by disease severity: mean costs were $5,729 inpatient vs. $388 OPAT for Class I, $7,651 vs. $634 for Class II, $10,339 vs. $852 for Class III, and $16,559 vs. $1,050 for Class IV. The treatment site for inpatient versus OPAT treat-
ment ranged from $6,303 to $7,351 for Class II and 11 after adjustment for baseline characteristics. CONCLUSIONS: Based on this analysis, substantial proportions of patients in Class II and III areas were not hospitalized, possibly reflecting a trend toward treatment of moderate ABSSSI patients in the ambulatory setting. Switching appro-
priate patients from inpatient to OPAT setting could potentially save the health system approximately $6,000-7,000/patient.

PIN100 OUTCOMES AND EXPENDITURES OF CLOSTRIDIUM DIFFICILE INFECTION IN PEDIATRIC SOLID ORGAN TRANSPLANT RECIPIENTS
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OBJECTIVES: To assess outcomes of clostridium difficile infection (CDI) and the associated expenditures of pediatric solid organ transplant (SOT) recipi-
ents. METHODS: Data from the 2003, 2005, 2006, and 2009 Kids’ Inpatient Database (KID) files were used to identify events with SOT- related ICD-9-CM diagnosis codes. The analysis was evaluated using log linked gamma regres-
sions. RESULTS: The total number of pediatric SOT hospital events was 48,286. The overall prevalence of CDI for pediatric SOT hospitalizations was 1.76%. For SOT hospitalizations with CDI, inpatient mortality was 1.63%, the prevalence of hospital LOS greater than 30 days was 1.94% and the mean LOS for a SOT admission with CDI was approximately 2 times that for a SOT admission without CDI: coefficient = 1.93, 95% CI = [1.68, 2.21], p<0.001. The mean costs and the mean costs for a SOT admission with CDI was approximately 2 times that for a SOT admission without CDI: coefficient = 2.01, 95% CI = [1.63, 2.46], p<0.001; costs: coefficient = 1.96, 95% CI = [1.50, 2.58], p<0.001. CONCLUSIONS: CDI diagnoses were not significantly associated with inpatient mortality or transplant failure/rejection for pediatric SOT hospitalizations. But CDI was significantly associated with a higher prevalence of a colectomy, longer hospital LOS, higher charges, and higher costs.

PIN101 METHODOLOGICAL ISSUES ASSOCIATED WITH THE USE OF SOCIAL MEDIA IN OUTCOMES RESEARCH: CASE STUDY OF ADULT VACCINATION
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OBJECTIVES: Social media (SM) is increasingly being used as a data resource in published scientific literature to study disease burden and perceptions of patients and healthcare providers. However, the descriptive and methodological issues in SM research remain unclear. We aimed to explore these issues in the context of adult vaccination. METHODS: We searched the internet using different search engines and social media platforms to identify SM sites with content relevant to adult vaccination. We developed a decision matrix based on weighted characteristics to determine which sites are most useful for in-depth data analysis. Thirty-five SM sites were scored for popularity, amount and type of content relevant to vaccination, data use restric-
tions, and feasibility of accessing the data. RESULTS: SM sites with relevant content included general sites such as Facebook, Twitter, and YouTube; and health-specific sites such as HealthUnlocked, PatientsLikeMe, and SmartPatients. Although sev-
enteen sites facilitated access to site content, only seven sites had public-facing APIs such as application programming interfaces (APIs), nine sites had limitations to the use of public content for non-personal reasons. Two sites did not support the downloading and storing of site content for in-depth analysis and audit, while data from most sites could only be downloaded by logged in users. The selected sites facilitated responses to an initial post, but only a minority had examples of multi-user conversations or discussions about vaccination in adults. The sites with the most potential for in-depth data analysis were Google+, Twitter, YouTube, Yahoo Answers, and Facebook. CONCLUSIONS: Contrary to popular opinion, data that is available for all to browse and disseminate rapidly and globally is not always legally and practically accessible for research. Clustering of the issues around the use of SM for health research is needed to establish best practice guidance for this rich resource.

PIN102 DRUG UTILIZATION REVIEW OF CARBAPENEMES: A SOLUTION TO IRATIONAL USE OF BROAD SPECTRUM ANTIBIOTICS
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OBJECTIVES: Emergence of resistance towards almost all broad spectrum antibiot-
cs is rapidly increasing and one of the main causes is irrational and inappropriate prescription of carbapenemes. Hence the current study was carried out to assess the prescribing pattern of carbapenemes in medical intensive care unit of a private tertiary care hospital. METHODS: A retrospective observational study was car-
died using prescription data and medications categorized into carbapenemes and non-carbapenemes. Only patients having stay of more than 24 hours were included in study. RESULTS: Out of total 138 patients, 127 patients were included in the study as per protocol. Only 1% of the patients was found to be treated with carbapenemes. Most common drug was meropenem (68%). CONCLUSIONS: The main finding in the present study was that prescribing pattern of carbapenemes was alarming. The use of carbapenemes in LMICs is a cause for concern. Better strategies need to be formulated to control the use of these drugs.