

PIN94

PROJECTING CHANGES IN TOTAL DAYS OF THERAPY (DOT) IN PATIENTS HOSPITALIZED FOR ACUTE BACTERIAL SKIN AND SKIN STRUCTURE INFECTION (ABSSSI)

Berger A¹, Kauf², Oster G³¹Evidera, Lexington, MA, USA, ²Cubist Pharmaceuticals, Lexington, MA, USA, ³Policy Analysis Inc. (PAI) and Managing Co-Director, MINERVA Health Economics Network, Brookline, MA, USA

OBJECTIVES: Most patients admitted to hospital for ABSSSI complete antibacterial treatment following discharge. This study examined the potential impact of tedizolid versus linezolid on antibacterial DOT, based on real-world inpatient use of linezolid in patients hospitalized for ABSSSI, and two pivotal phase 3 studies of patients with ABSSSI that demonstrated comparable efficacy and safety between a 6-day course of tedizolid (once daily) and a 10-day course of linezolid (twice daily). **METHODS:** Duration of in-hospital therapy for ABSSSI was based on analyses of an electronic database containing comprehensive clinical records on ~38 million inpatient admissions from >100 contributing general, acute-care US hospitals. All patients aged ≥18 years admitted during 2011 with a principal diagnosis consistent with ABSSSI who received ≤10 inpatient DOT with linezolid were identified. Total DOT for linezolid and tedizolid (i.e., inpatient + outpatient) were assumed to be 10 and 6 days, respectively. Patients receiving <10 days of in-hospital therapy with linezolid were assumed to receive the remainder as outpatients; corresponding values for tedizolid were estimated assuming a 6-day DOT. Patients receiving ≤6 inpatient DOT with linezolid were modeled to receive the same number of inpatient days of tedizolid; patients with >6 days of in-hospital therapy with linezolid were modeled as completing a course of tedizolid in hospital. **RESULTS:** Among the 3,734 ABSSSI patients who met study entry criteria, 153 (4%) received linezolid. Mean inpatient DOT was 3.7 days; consequently, expected duration of outpatient therapy was 6.3 days. Use of tedizolid instead of linezolid was estimated to reduce average inpatient DOT by 0.2 days and outpatient DOT by 3.8 days. **CONCLUSIONS:** Based on real-world use of linezolid for ABSSSI and findings from tedizolid pivotal trials, use of tedizolid in hospitalized patients with ABSSSI may substantially reduce mean total DOT compared with linezolid, primarily on an outpatient basis.

PIN95

THE STUDY OF HEALTHCARE UTILIZATION AMONG HIV-INFECTED POPULATION: AN ANALYSIS OF THE MEDICAL EXPENDITURE PANEL SURVEY

Li Y, Chen H, Essien EJ

University of Houston, Houston, TX, USA

OBJECTIVES: The objective of this study is to examine the decisive factors associated with the use of antiretroviral therapy (ART) among a Human Immunodeficiency Virus (HIV) infected population utilizing Andersen's Behavioral Model. **METHODS:** This study is a retrospective data analysis of individuals infected with HIV in panels 14 to 16 of the Medical Expenditure Panel Survey in years 2009 to 2012. A logistic regression analysis was conducted to evaluate the association between ART usage and the factors nested in Andersen's Behavioral Model, which includes predisposing, enabling and need components. **RESULTS:** For predisposing characteristics, patients taking ART were slightly older (age: 46.14±0.98) than patients not taking ART (age: 43.34±0.91). Being a male and African American was highly associated with the use of ART, as compared to being a female or white (P value: <0.0001; 0.00119). People living in the Northeast were more likely to take ART than individuals living in other regions in the United States (P value: 0.0032). Among enabling components, difficulty in receiving medical care and having non-public insurance coverage were associated with not taking ART (P value: 0.0851; 0.0013). Having private insurance coverage was positively correlated with nonuse of ART (odds ratio: 0.190; 95% CI: 0.047–0.779; P value: 0.00003). However, family income was not associated with the use of ART among the HIV-infected population. With respect to the health status in the need component, using ART was associated with reported improved health status in general, compared with those not using ART; however, the association was not statistically significant. **CONCLUSIONS:** Predisposing and enabling factors were found to be significantly associated with ART usage; however, need factors were not found to be significant. More effort is needed to improve the healthcare utilization inequality among minority populations.

PIN96

ANALYSIS OF PURCHASE OF ANTIBACTERIAL DRUGS WITHIN THE GUARANTEED VOLUME OF FREE MEDICAL AID IN THE REPUBLIC OF KAZAKHSTAN

Pichkhadze G, Satbayeva E, Seitaliyeva A, Duyseanova R

Asfendiyarov Kazakh National Medical University, Almaty, Kazakhstan

OBJECTIVES: Study of drug coverage in the Republic of Kazakhstan as one of the most important components of medical care and an important measure of social support of citizens. **METHODS:** The List of drugs for purchase in 2014 by Single Distributor "SK-Pharmacy" was analyzed. The percentage of antimicrobial drugs for certain groups of antibiotics and synthetic antibacterial agents of different chemical structure was studied. The analysis of drugs from domestic and foreign drug manufacturers was performed. **RESULTS:** Among all antibacterial drugs a big part consisted from antibiotics - 71%, synthetic chemotherapeutic drugs amounted to 29%. Of the total number of antibiotics the proportion of beta-lactam antibiotics amounted to 61,36%, macrolides and azalides - to 15,91%, aminoglycoside - to 6,82%, tetracyclines and glycopeptides to 2,27%, antibiotics from other groups - to 11,36%. Among beta-lactam antibiotics a big part consisted from semisynthetic penicillins with wide spectrum - 29.6%, mainly amoxicillin and its "secured forms". Cephalosporins consisted 51.85% of the total number of antibiotics, and were bought mainly drugs of 3rd generation. Carbapenems amounted to 11.11%, monobactams were not bought. From the group of aminoglycosides following drugs were bought: amikacin, kanamycin, streptomycin, gentamicin. Synthetic antibacterial drugs of different chemical structures were represented mainly by fluoroquinolones (66,67%): moxifloxacin, ofloxacin, norfloxacin, pefloxacin, ciprofloxacin. The half (50%) of procured medicines are products of domestic pharmaceutical companies. The main

importers of antimicrobial medicines are: India (25,8%), Russia (16%), China (9.7%), Ukraine (9.7%), France (6.5%), and manufacturers from other countries consisted - 3.2%. **CONCLUSIONS:** A large part of the drugs purchased within the guaranteed volume of free medical aid in the Republic of Kazakhstan consist from basic beta-lactam antibiotics. In the list were presented the outdated drugs (gentamicin), which is not recommended for use. Predominant drug are drugs from domestic pharmaceutical companies.

PIN97

EVALUATION OF ECONOMIC IMPACT OF TUBERCULOSIS CONTROL IN MALAYSIA USING DYNAMIC TRANSMISSION MODEL

Fun WH¹, Wu DB¹, Cheong YM¹, Mohamad Noordin N², Lee KK¹¹Monash University Malaysia, Subang Jaya, Malaysia, ²National Public Health Laboratory, Sungai Buloh, Malaysia

OBJECTIVES: Despite all the control efforts, Malaysia has yet to effectively reduce the incidence rate of tuberculosis (TB). TB is not only highly contagious but also causing a significant economic burden in the order of USD16 million/year as reported by World Health Organization (WHO) in 2014. This study aimed to evaluate the economic impact of TB control in Malaysia using a dynamic transmission model. **METHODS:** Prior to model building, a disease burden study was performed in the state of Selangor representing 18% of the Malaysian population. Identified patient medical records from public hospitals and clinics were randomly selected for study. All direct costs of TB management were captured for analysis. A dynamic transmission model was built to project future disease and economic burdens over a 10-year period. The study was performed from a government perspective. All costs are expressed as USD median (interquartile range). A 3% discount rate was used for projections. **RESULTS:** A total of 436 successfully treated cases were included in this study. Of these, 195 (44.7%) cases required hospitalisation during treatment period. USD616 (487–763)/patient was used for non-hospitalisation cases compared to USD1,848 (1,164–3,284)/patient for those requiring hospitalisation representing a 3-fold increase. 119 incomplete treatment cases were selected for comparison. USD337 (193–902)/patient was used for these incomplete cases. Our model suggests that the total TB cases will increase by 65% in 10 years' time. Using the baseline TB population in 2011, an estimated total of USD22.9 million (15.5–37.6 million)/year was used for direct medical costs. Based on a local estimated 6.9% incompleteness treatment rate, an extra USD5.3 million (3.5–8.6 million)/year (22.9% increase) would be required by 2021. **CONCLUSIONS:** Our findings are consistent with WHO report. In Malaysia, hospitalisation appears to be the major cost driver for TB patients receiving treatment. Healthcare strategies such as early detection, increased awareness of TB and improved compliance may potentially reduce TB health budget.

PIN98

COST OF ADMINISTRATION OF A SINGLE DOSE OF ROTAVIRUS VACCINE IN CANADA

Noorduyn SG, Thommes EW

GlaxoSmithKline, Mississauga, ON, Canada

OBJECTIVES: Differences in vaccine schedules may result in additional costs beyond the differences due to pricing variation between two products. There are two oral rotavirus vaccines approved for use in Canada; one vaccine is approved as a two-dose schedule while the other is approved as a three-dose schedule. The objective of this study is to explore the cost of administration of a single dose of either rotavirus vaccine in each Canadian province as well as for the country overall. **METHODS:** Two extremes were considered: Every dose administered by a physician either (i) requires a visit solely for that purpose (cost = administration + visit), or (ii) occurs as part of a regular visit (cost = administration only). All costs were derived from the relevant fee for service agreement of each province and territory in Canada. Assumptions included 90% vaccine coverage across each province's 2013 birth cohort and no significant changes since 2007 to the ratio of physicians to public health nurses (PHN) administering vaccines in each province. Delivery by PHN was assumed to incur no cost. **RESULTS:** Scenarios (i) and (ii) above yielded administration costs of \$6.4M and \$600k, respectively, per vaccinated Canadian cohort. Provinces with high percentage of physician delivery accounted for the majority of this cost in both Scenario (i) (NL: \$128.6k, NB: \$279.3k, NS: \$312.1k, QC: \$832.5k, ON: \$3.8M, MB: \$386.3k, BC: \$544.1k) and Scenario (ii) (NB: \$60.4k, NS: \$114.2k, QC: \$258.8k, MB: \$85.1k, BC: \$72.8k). **CONCLUSIONS:** Administration fees can be a costly factor in universal immunization schedules. As such, it is essential to account for the differences in approved administration schedule when evaluating vaccines during the assessment of publically funded program implementation.

PIN99

RESOURCE UTILIZATION AND COSTS ASSOCIATED WITH MULTI-DRUG RESISTANT ACINETOBACTER BAUMANNII: A SYSTEMATIC REVIEW OF THE LITERATURE

Schmier J¹, Hulme-Lowe C¹, Klenk J¹, Sulham K²¹Exponent, Alexandria, VA, USA, ²The Medicines Company, Parsippany, NJ, USA

OBJECTIVES: Infections caused by multi-drug resistant (MDR) Acinetobacter baumannii (AB) are an increasing global problem. Several studies examining outcomes and resource utilization associated with MDRAB have been conducted; however, findings are inconsistent. The purpose of this research was to identify and characterize available research concerning resource utilization associated with MDRAB, assess strengths and weaknesses of the available research and identify future research priorities. **METHODS:** A systematic review of the literature was conducted using MEDLINE and electronically available conference abstracts. Articles were considered relevant if they reported resource utilization or cost information comparing MDRAB patients to controls. Controls could include susceptible AB, other organisms, or uninfected patients. **RESULTS:** Initial searches of the literature returned 204 potential citations for inclusion. Title and abstract review excluded 171 articles, and full-text review excluded 20 additional articles, leaving a total of 13 articles eligible for data abstraction and review. Length of stay (LOS) was reported in nine