OBJECTIVES: To measure costs associated with treatment failure among patients with moderate or complicated CA-MRSA skin infections. METHODS: This was a prospective, observational study in 4 primary care clinics within the South Texas Ambulatory Research Network (STARNet). Health care providers collected clinical data, wound swabs, and 90-day follow-up information. Patients were considered to have moderate or complicated infections if they had a lesion ≥5 cm in diameter, diabetic foot ulcer, abscess, or MRSA at sites of surgery. Patients experiencing treatment failure following occurred within 90 days of their initial visit: 1) change in antibiotic therapy; 2) subsequent need for incision and drainage (I&D); 3) subsequent positive MRSA culture; or 4) hospital admission. The cost analysis was performed from the perspective of the third party insurer/payer. Medical costs were derived using estimates from the Agency for Healthcare Research and Quality. National Average Drug Acquisition Costs, obtained from the Centers for Medicare and Medicaid Services, were used to estimate drug costs. All costs were adjusted to 2011 United States dollars using medical-care inflation. RESULTS: Out of 466 patients with moderate or complicated CA-MRSA skin infections experienced treatment failure (n=1136, 31%). Of the 11 who failed therapy, 91% required a change in antibiotic regimen at an additional mean cost of $4 per person. Eighty percent of patients who required a change in antibiotics received trimethoprim-sulfamethoxazole as initial antibiotic therapy. Patients frequently required the addition of either clindamycin (50%) or doxycycline (30%) to their initial antibiotic regimen. Additional I&D procedures were necessary in 27% of patients at a mean cost of $2130 per person. Finally, 9% of patients required hospitalization at a mean cost of $17,590 per person. The overall mean cost of treatment failure was $2184 per patient. No adverse drug events were reported. CONCLUSIONS: One-third of adult outpatients with moderate or complicated CA-MRSA skin infections will experience treatment failure at a mean cost of $2184 per patient.

PIN19 COST OF PNEUMOCOCCAL DISEASES IN PATIENTS WITH MOTHERS THAN 50 YEARS OLD: A MICRO-COSTING APPROACH
Peniche-Otero G1, Echazan-Aviles G2, Herrera-Rojas J1, Ramirez-Ramirez MA1, Mejicano G1, Gaitan-Suarez RM1
1Centro de Desarrollo de Productos S.A. de C.V., Mexico City, Mexico, 2Instituto Nacional de Salud Publico, Cuernavaca, Morelos, Mexico, 3Fijer S.A. de C.V., Mexico City, Mexico
OBJECTIVES: Streptococcus pneumoniae is one of the most important etiologic agents for upper respiratory tract infections and systemic invasive diseases, with significant rates of morbidity and mortality in the elderly, which represents an economic burden. There are few published studies describing the cost of care for elderly patients with pneumococcal disease in Latin America. The goal of this study is to estimate the direct medical costs of the acute phase of pneumococcal disease, its complications and sequelae in elderly patients in Mexico, regarding the respective of the Social Security Mexican Institute (IMSS). METHODS: Resource use in the treatment of pneumonia, bacteremia, meningitis and acute otitis media (AOM) was extracted from 122 clinic files of patients ≥50 years with confirmed diagnosis of pneumococcal disease, treated at Guadalajara, Monterrey and Mexico City hospitals, using a micro-costing approach (bottom-up strategy). Items included in the analysis were: drugs, laboratory tests, outpatient and inpatient care, rehabilitation, procedures and surgical interventions. Resource use for the treatment of complications and sequelae were derived through a Delphi panel (n=13, infectiousologists, pediatricians and internist physicians, IMSS). Concordance index for the Delphi panel results was estimated. The unit cost of medical resources was extracted from institutional source. RESULTS: The estimated direct cost (2011 US) associated to acute phase of pneumococcal disease was $4,260 per case; the cost of AOM was $3,232, outpatient pneumonia $1,172, inpatient pneumonia $4,718, bacteremia $7,698, meningitis $10,687. Cost of complications (such as systemic, respiratory, cardiac, etc.) was: AOM US$671, outpatient pneumonia US$5,502, inpatient pneumonia US$8,157, bacteremia US$81,060, meningitis US$12,060. The cost of sequelae (such as cardiac, auditive, etc.) were: AOM US$593, outpatient pneumonia US$1,502, inpatient pneumonia US$5,157, bacteremia US$7,698, meningitis US$10,687. CONCLUSIONS: The high institutional costs associated with pneumococcal disease, as well as its complications and sequelae, merit that decision makers maintain and promote prevention policies for this disease in the elderly.

PIN20 COSTS OF PROBABLE BACTERIAL PNEUMONIA IN CHILDREN UNDER 5 YEARS OLD IN COLOMBIA
Alvín N1, Orozco-African o JM2, Patierna-Caicedo A3, Cornwell W4, Jervis-Jáv ile D5, De La Hoz F2
1Universidad de Cartagena, Cartagena, Bolivar, Colombia, 2Universidad Nacional de Colombia, Bogotá D.C., Cundinamarca, Colombia
OBJECTIVES: To estimate the economic cost of bacterial pneumonia in children less than 5 years old in a 130,800-children cohort in Colombia. METHODS: A descriptive study of economic costs was made. A database of 2010 attentions of a Health insurer was analyzed. It has 1,254,000 affiliates (180,800 children under 5 years), resident in 12 Colombian departments. The cases were identified using international classification of diseases version 10 (J189, J180, J159, J159, J188, J158, J851, J18, A409, P361, A408). The types, quantity and frequency of use of health services were measured. Types, quantity and frequency of use of health services were measured. The prices of services were extracted from the Colombian official prices. Median (interquartile range: IQR) of direct cost and average length of stay (LOS) were calculated. The costs were calculated for hospitals by levels of complexity to prices of 2011 and converted to American dollars. RESULTS: A total of 1545 cases of probable bacterial pneumonia were identified in children less than five years old (56.7% in under-2 years). 309 cases (20%) were outpatient. Of inpatients, 15.9% were low level of complexity (LOS: 2.3), 7.8% were middle of complexity (LOS: 5.3) and 3.1% were high level of complexity (LOS: 7.1). 2.9% of patients required Intensive Care Unit (LOS: 18). The median of cost per outpatient case was US$688 (95% CI: 97-147). The median of cost per inpatient case of moderate complexity was US$2564 (95% CI: 156-284), and in high level of complexity was US$4886 (95% CI:135-1064-7) and in ICU US$5,016.5 (95% CI:2,568-6,754). The total cost of cases was US$781,809. CONCLUSIONS: The cases of probable bacterial pneumonia in children under 5 years in Colombia are a serious public health problem. Most cases are in under-2 years and inpatients of hospitals of middle level of complexity.

PIN21 A REVIEW OF ECONOMIC STUDIES OF RUBELLA AND RUBELLA VACCINATION
Babujimana H1, Morgan L2, Levin A3
1University of Washington, Seattle, WA, USA, 2St. Mary’s College of Maryland, St. Inigoes, MD, USA, 3Independent Consultant, Bethesda, MD, USA
OBJECTIVES: To examine the economic evidence base, identify gaps in the evidence, and propose potential areas of future enquiry into the economics of rubella, congenital rubella syndrome (CRS) and rubella vaccination to support the planned global expansion of rubella-containing vaccine (RCV) and the push towards potential rubella elimination and eradication. METHODS: A MEDLINE search was conducted of articles published between 1980 and 2010 on costs of rubella and CRS vaccine and the costs, costs-effectiveness and cost-utility of rubella vaccination. The design and results of studies were reviewed and categorized by the country income level. Gaps in the evidence of the costs of rubella and CRS and cost-effectiveness of rubella vaccination and the potential for rubella eradication were identified. RESULTS: Twenty-five studies were identified. Of the nineteen studies conducted in high-income countries, 14 were cost analyses, 1 was cost-effectiveness analyses and 11 were cost-benefit analyses. Of the five studies conducted in upper-middle income countries, four were cost analyses and one was a cost-benefit study. A single study was conducted in a lower-middle-income country and was a cost-benefit analysis. No studies were conducted in low-income countries. In the review, CRS was estimated to cost between $1,994 and $13,482 per case annually or between $50,000 and $63,990 lifetime in middle-income countries and $98,734 lifetime in high-income countries. The review also found that rubella vaccination programs had favorable cost-effectiveness, cost-utility, or cost-benefit ratios in high-income countries and middle-income countries. CONCLUSIONS: Rubella is a costly and rubella vaccination programs are highly cost-effective. However, in order for research to support the drive towards rubella elimination and eradication, additional low-income countries are required to conduct research. The current cost analyses and cost-effectiveness analyses and 11 were cost-benefit analyses. Of the five studies conducted in upper-middle income countries, four were cost analyses and one was a cost-benefit study. A single study was conducted in a lower-middle-income country and was a cost-benefit analysis. No studies were conducted in low-income countries. In the review, CRS was estimated to cost between $1,994 and $13,482 per case annually or between $50,000 and $63,990 lifetime in middle-income countries and $98,734 lifetime in high-income countries. The review also found that rubella vaccination programs had favorable cost-effectiveness, cost-utility, or cost-benefit ratios in high-income countries and middle-income countries. CONCLUSIONS: Rubella is a costly and rubella vaccination programs are highly cost-effective. However, in order for research to support the drive towards rubella elimination and eradication, additional low-income countries are required to conduct research. The current cost analyses and cost-effectiveness analyses and 11 were cost-benefit analyses.
corded were reviewed from 2007 to 2009 to extract patients with principle diagnosis of ICD codes for cellulitis, abscess postoperative and traumatic wound infections, and other conditions related to ABSSSI. We assessed inpatient utilization in terms of LOS and ICU time, and inpatient costs stratified by initial antibiotic treat- ment. We also assessed the frequency of in-hospital mortality and empiric treat- ment failure. RESULTS: Inpatient treatment of ABSSSI increased by 15.4% from 2005 to 2008. In 2008, 70% of abscesses and cellulitis patients with data available to 65% admitted through the ER. The initial antibiotic treatment was vancomy- cin (49.9%) and clindamycin (15.9%). The average LOS was 5.3 days. The average cost per stay was $800. The most costly departmental charges were room/board ($1000) and pharmacy ($650). 17.2% of patients failed on initial antimicrobials leading to additional days of treatment, resulting in additional LOS of 5 days and $600 per stay. With an approx- imate $750 admissions for ABSSSI in the United States, this extrapolates to a US hospital economic burden of >$86 billion/year.

CONCLUSIONS: The economic burden of hos- pitalization for ABSSSI in the United States is significant. Antibiotic treatments offer a cost-effective possibility of treating a greater proportion of patients currently hospi- talized in an ambulatory or observational setting by avoiding or shortening hospi- tal stays may significantly reduce the cost to the US health care system.

PIN23

COST OF DIAGNOSIS AND PREVENTION OF CONGENITAL CYTOMEGALOVIRUS INFECTION

Eörsi B1, Hetényi G2, Siklósi P3, Benzec3
1Győmszí, Budapest, Hungary, 2Szent István Hospital, Budapest, Hungary, 3University of Pécs, Pécs, Hungary

OBJECTIVES: Congenital cytomegalovirus (CMV) infection during pregnancy is a serious, yet not well recognized health problem. The aim of our study is to assess the annual cost of diagnosis and prevention of congenital cytomegalovirus infec- tion by Cytotect in Hungary. METHODS: We built a model on estimating the costs. Data on deliveries derived from the database of the Hungarian Central Statistical Office. Cost items were calculated according to the standard reimbursement list of the Hungarian National Health Insurance Fund, the only health care financing agency in Hungary. The number of livebirths was 90,335 in 2010 in Hungary. The cost of CMV Ig-test was 2 Euro. Average body weight was 80 kg, the average dosis of Cytotect was 8000 unit or 80 ml per patient with a cost of 8 Euro per ml. CMV-seronegative women (40% of all deliveries) are the high risk group applying 4 tests during pregnancy. Serocconversion rate was 1%. RESULTS: For all pregnant women (N=90335), the total annual cost of diagnosis of congenital cytomegalovirus infec- tion was calculated 180,670 Euro (or 52.4 million Hungarian Forint). For CMV-sero- negative high risk women (N=36134) the total annual cost of diagnosis was as- sessed 289072 Euro (or 86.7 million Hungarian Forint). The cost of prevention of all women with primary infection during pregnancy was 2.89 million Euro (or 86.7 million Hungarian Forint). CONCLUSIONS: Both the diagnosis and prevention of congenital cytomegalovirus (CMV) infection during pregnancy represents a reason- able cost in Hungary. Further study should focus on the effectiveness of preven- tion.

PIN24

COST-BENEFIT ANALYSIS OF HOSPITAL BASED POSTPARTUM VACCINATION WITH COMBINED TETANUS TOXOID, REDUCED DIPHTHERIA TOXOID, AND ACCELLERATED PERTUSSIS VACCINE (Tdap)

Ding Y1, Hay F1, Yeh SH2, Zangwill KM3
1University of Southern California, Los Angeles, CA, USA, 2UCCLA Center for Vaccine Research, Toronto, Canada, 3University of Oxford, Oxford, UK

OBJECTIVES: The use of combined tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine (Tdap) in pregnant and postpartum women provides immunization before 6 months of age, with 1 month added for maximal develop- ment before. Experts recommend vaccination of infants. The study seeks to assess the economic benefits associated with a vaccination program targeting young infants. The model was constructed to calculate the potential cost-benefit of this strategy from the health care system or societal perspective. Probabilities and costs were derived from published literature, Centers for Disease Control and Prevention Data, and expert recommendations. The maternal vaccination protection period for infants was defined as 7 months, as the infants do not receive a full series of pertussis immunization before 6 months of age, with 1 month added for maximal develop- ment of immunity. 10 year vaccine protection for birth mothers was estimated in the model. All cost estimates were inflated to year 2010 US dollars and discounted at a 3% annual discount rate. RESULTS: From a societal perspective, the average costs per vaccinated and unvaccinated mother were estimated at $132.92 and $232.75, respectively. Our model suggests an expected net benefit (ENB) of $99.83 per postpartum vaccinated mother. The overall societal benefits in the cohort of U.S. births mothers ranged from $89.8 – $287.5 million, depending on the vaccine coverage rate. If including direct medical costs only, the ENB was estimated at $27.26 per vaccinated mother, suggesting that this strategy is not cost-saving from a health care system perspective. Annual incidence in birth mothers and Tdap efficacy were derived from the model on the one-way and two-way sensitivity analyses. CONCLUSIONS: Postpartum Tdap vaccination is likely to gen- erate net benefits in the base case from a societal perspective, if the annual inci- dence of pertussis among birth mothers exceeds 140 cases per 100,000.

PIN25

COST-EFFECTIVENESS OF EFAVIRENZ VERSUS RILPILVINIR IN HIV PATIENTS INITIATING FIRST-LINE TREATMENT IN THE UNITED STATES

Banafade M1, Judyta T1, Lenhardt C2, Fan K1, Heiden C3, Correll T4
1Thomson Reuters, Cambridge, MA, USA, 2Bristol-Myers Squibb Company, Plainboro, NJ, USA

BACKGROUND: In US treatment guidelines, efavirenz (EFV) is the preferred non- nucleoside reverse transcriptase inhibitor (NNRTI) for first-line treatment of HIV. In the ECHO and THRIVE trials, EFV with or without NNRTI, rifampin (RIF), both medications had similar rates of virologic suppression at 96-weeks; however, RIF had higher rates of virologic failure and drug resistance and lower rates of discontinuation due to adverse events. OBJECTIVES: To estimate the cost-effect- iveness of the combination of EFV/RIF versus EFV monotherapy for the treatment of initial HIV infection. METHODS: A Markov health model with 14 health states was constructed to estimate 10-year costs and clinical outcomes from a US payer perspective for antiretroviral naive HIV patients initiating EFV or RIF. First-line efficacy data came from 96-week results of the ECHO and THRIVE trials, with data supplemented with sensitivity analyses that varied model inputs by ±25%. RESULTS: In the base case, total costs over 10 years were lower for EFV versus RIF ($214,031 versus $222,090). Life expectancy (84.4 years) and life years without AIDS (84.0 years) were the same and life years in virologic suppression were similar (EFV: 7.87 years, RIF: 7.86 years). EFV was modestly cost-saving versus RIF in terms of incremental cost-effective- ness per life-year gained, per life-year gained in viral suppression, and per life-year gained without AIDS. In sensitivity analyses, EFV remained cost-saving versus RIF more than 90% of the time, demonstrating the robustness of study results. CONCLUSIONS: Over a 10 year time horizon, EFV was predicted to be modestly cost-saving compared with RIF in HIV patients initiating first-line treatment in the US.

PIN26

PHARMACOECONOMIC ANALYSIS OF SEQUENTIAL INTRAVENOUS/PEROURAL EFFEMERON® (H.V.P.O.) THERAPY OF COMMUNITY-ACQUIRED PNEUMONIA (CAP)

Zaitsev A1, Sinopalinovi A2, Tyrins O3, Morozov A3
1The Main Military Clinical Burdenko Hospital, Moscow, Russia, 2Russian Medical Academy of post-graduate education, Moscow, Russia, 3Buyer HealthCare Pharmaceuticals, Inc., Moscow, Russia

OBJECTIVES: To evaluate the comparative cost-effectiveness of sequential i.v./p.o. CAP treatment with moxifloxacin versus amoxicillin/clavulanic acid (AMCLA), cefuroxime axetil/moxifloxacin (CEF + AMCLA) and cefotaxime + macra- todes (CMB) in adult patients. METHODS: Patients were randomized in four groups. MOX group received moxifloxacin 400 mg i.v. once-daily with further switch to p.o. formulation 400 mg daily. AMCLA group received amoxicillin/clavu- lanic acid 1200 mg i.v. once-daily with further switch to p.o. formulation 1000 mg twice daily. CMB group received cefotaxime 1000 mg twice daily. Further switch to amoxicillin/clavulanic acid 1000 mg p.o. twice daily. CMB group received either cefotaxime 1000 mg i.m. 3 times per day as monotherapy or in combination with oral azithromycin or clarithromycin. Efficacy and safety criteria were evaluated according to clinical data, laboratory tests and X-ray examination.

PHARMACOECONOMIC ANALYSIS OF SEQUENTIAL INTRAVENOUS/PERORAL EFFEMERON® (H.V.P.O.) THERAPY OF COMMUNITY-ACQUIRED PNEUMONIA (CAP)

Cure S1, Curtis S2, Bianico F3, Gawart S4, Dearden L5, Fleischmann P6, Oweis M7, Lee S3
1Ophthalmi, Uxbridge, UK, 2Janssen, High Wycombe, UK, 3Janssen, Uxbridge, Greater London, UK, 4Janssen Pharmaceuticals, Beerse, Belgium, 5Janssen-Cilag Germany, 6Novo, Denmark, 7Mepla Values Netherlands, Houten, The Netherlands, 8Janssen Global Services, Companies of Johnson & Johnson, Horsham, PA, USA

OBJECTIVES: Telaprevir is a new direct acting antiviral for the treatment of geno- type 1b chronic hepatitis C virus (HCV) infection. This analysis assessed the cost-effective- ness of TVR/PR therapy compared to PR alone in treatment-naive and previously treated G1 chronic HCV patients. Cost-effectiveness is considered in terms of in- cremental cost per quality-adjusted life-year (QALY) gained from the perspective of the US healthcare system. METHODS: Treatment-naive and treatment-experienced patients matched model treatment options were developed in the ECHO and THRIVE trials, which compared TVR/PR and PR alone respectively are taken from the TVR12/PR and PBO/PR treatment arms in the AD- VANCE trial. SVR rates of 83%, 59% and 29% for TVR/PR and 24%, 15% and 5% for PR alone in prior relapse, prior partial response and prior null response patients, re- spectively are taken from the TVR12/PR and PBO/PR treatment arms in the REALIZE trial. RESULTS: The analysis shows higher costs and improved outcomes associ-