PIN69

OUTPATIENT ANTIBIOTIC USE IN PRIMARY HEALTH CARE IN NIS REGION

Kodela B[1], Velickovic-Radovanovic R[2], Petrovic J[2], Mitic R[2], Aleksic G[1]
[1]Pharmaceutical Institution of Nis, Nis, Serbia; [2]Clinical Centre, Nis, Serbia

OBJECTIVES: Monitoring of antibiotic prescribing promotes rational use of drugs, reduces costs and slows down the development of resistance. The purpose of this study was to evaluate the prescribing of antibiotics in PHC of Niš region, during 2005–2009 and to identify the practice of drug overuse, under-use or inappropriate use. **METHODS:** The data on outpatient use of antibacterials for systemic use was obtained by retrospective study and expressed as the number of defined daily doses per 1000 inhabitants per day (DDD), according to WHO anatomic therapeutic chemical classification and DDD measurement methodology. The City Pharmacy Department provided automatic reports on antibiotics prescribed by physicians for certain diagnoses in the Nis region over the 2005–2009 period. **RESULTS:** In the same period, outpatient antibiotic use in Nis region increased by 9.02% (22.83/ 25.96 DID). The most commonly prescribed drugs were semi-synthetics penicillins (9.67/10.00 DDD) and macrolides (3.05 /4.90 DDD). The greatest increase in antibiotics prescriptions was noted in azithromycin (0.26/0.70 DID, by 164%). Out of the total number of antibiotics, 70.5% prescriptions were made for treatment of URIs. Pharingitis ac. (J02) was the most common indication for prescription of antimicrobial medicines (45.26%). Amoxicillin (33%) and cephalexin (35%) were most commonly prescribed antibiotics for this indication. The total number of antibiotics prescriptions was increased by 14% while the cost was increased by 28% compared to 2005. **CONCLUSIONS:** Outpatient antibiotics use in Niš is high compared to the majority of European countries, which indicates the need for additional educational programs and monitoring of microbiological sensitivity in future. The received results will be the basis for further evaluation of the rationality of use of antibiotics in primary health care.

PIN70

COST EQUITY ANALYSIS OF MALARIA MANAGEMENT: A PILOT STUDY IN THE AFRICAN SETTING

Espinoza MA[1], Griffin S[1], Cookson R[2]
[1]Centre for Health Economics, York, UK; [2]Department of Social Policy and Social Work, York, UK

OBJECTIVES: To study the equity efficiency trade-off between decisions made based on maximization of health benefits averaged for the whole population and decisions made considering the distribution of benefits across socio economic groups of the population. **METHODS:** Cost-equity analysis nested in a CEA where ten different strategies for the management of patients with suspected non-complicated malaria were compared, in the African setting. Access to health clinics, access to treatment and adherence to the treatment were considered to vary between socio economic groups. a further hypothetical therapeutic alternative associated with 100% adherence for all groups was incorporated. Probabilistic sensitivity analysis was performed to reflect the uncertainty around parameter values. Inequality in the distribution of benefits was estimated for each strategy using Concentration Indices (CI). The opportunity cost was estimated comparing the most cost-effective alternative against the most cost-equitable strategy in terms of health benefits forgone to achieve a certain number of equality units. **RESULTS:** The most equitable strategy was also the most efficient for thresholds between US$137 and US$375 per DALY averted. Differences in equity of DALY burden between strategies were small (range CI units: 0.061–0.096) meaning the opportunity cost of choosing the most equitable strategy for threshold values outside of that range were relatively high, e.g. at US$400/DALY averted the opportunity cost was 0.11 DALYs per percentage point reduction in the CI. **CONCLUSIONS:** Equity concerns can be incorporated in the economic evaluation offering an estimation of the trade-off between efficiency and equity. Collection of information about access, adherence, effectiveness and costs according to socioeconomic group is required, but also information on prevalence for appropriate calculation of CI.

PIN71

CLINICAL AND ECONOMIC BURDEN OF PEDIATRIC INFLUENZA IN NINE EUROPEAN COUNTRIES

Rycroft C[1], Leeuwenkamp O[2], Heikkinen T[3], Principi N[4], Herz J[5], Moren S[6], Beard S[7]
[1]RTI Health Solutions, Manchester, UK; [2]Formerly MedImmune Ltd, Cambridge, UK; [3]Turku University Hospital, Turku, Finland; [4]University of Milan, Milan, Italy; [5]AstraZeneca, Zaventem, Belgium; [6]MedImmune, LLC, Gaithersburg, MD, USA; [7]RTI Health Solutions, Sheffield, UK

OBJECTIVES: Seasonal influenza incurs a substantial clinical and economic burden in infants, children, and adolescents. The objectives of this literature review were to assess the reported incidence and complications of virologically-confirmed paediatric influenza, and to evaluate the extent of health care utilization, absenteeism, direct health care costs, and societal costs in nine European countries: the United Kingdom, Germany, Italy, Spain, France, Sweden, the The Netherlands, Finland, and Austria. **METHODS:** A structured literature search (January 1970-March 2009) of PubMed, EMBASE, and the Cochrane Library was conducted. Data on influenza burden in children (aged ≤15 years) were extracted from 43 publications. Of these, 13 articles presented data on virologically-confirmed influenza. Pooled data from these 13 studies are presented. **RESULTS:** Data varied widely between countries. Median incidence of confirmed influenza was 15.4% but ranged from 1.1 to 33.0% (n = 6 studies) in children aged ≤15 years. This wide range in incidence resulted from differences between studies in influenza confirmation methods, age groups, and influenza seasons. Complications due to influenza were frequently reported (e.g., acute otitis media [range 0–40% [n = 7 studies]], pharyngitis [range 31–48% [n = 3 studies]]). In one study, a 3-fold increase in direct medical costs (€189–€206 vs. €59 [2004 costs]) was observed. In another study of children aged ≤1 year, hospitalization was reported to be the main driver of disease-related direct medical costs with hospitalization rates of about 20%. Of children with confirmed influenza, 28–55% used antibiotics (n = 6 studies) and 76–86% required antipyretics or symptomatic treatment (n = 5 studies). Confirmed influenza in children was associated with 3–12 days' absence from school/daycare (n = 5 studies), and 1.3–6.3 days' parental absence from work (n = 6 studies). **CONCLUSIONS:** The clinical and economic burden of virologically-confirmed paediatric influenza in Europe appears to be significant as revealed by incidence and associated morbidity and costs. This study was funded by MedImmune, LLC.

PIN72

BRAZILIAN STD/AIDS PROGRAMME: EXPENDITURE ON ANTIRETROVIRAL DRUGS AND EPIDEMIC INDICATORS DURING THE PERIOD 2004–2008

Aurea AP, Garcia LP, de Magalhaes LCG, dos Santos CF, de Almeida RF
Institute for Applied Economic Research, Brasilia, DF, Brazil

OBJECTIVES: The Brazilian STD/AIDS Programme stands out for ensuring universal and free access to antiretroviral drugs. We estimated the Federal expenditure on antiretroviral drugs of the Brazilian STD/AIDS Programme, during the period 2004–2008, and compared it to epidemic indicators of the Brazilian population. **METHODS:** The expenditure on antiretroviral drugs comes from a data warehouse of the Ministry of Planning, Budget and Management that stores the information concerning any purchase made by the Brazilian Federal Government. The epidemiological indicators of AIDS are derived from the Brazilian STD/AIDS Programme, which combines data from different national information systems. **RESULTS:** The expenditure on antiretroviral drugs rose from US$144.416.113,57 in 2004, to US$333.050.295,64, in 2008. In Brazil, from January 2004 to June 2008, there were 148.852 cases of AIDS reported, which corresponds to an incidence rate of approximately 20 cases per 100 thousand inhabitants. In the period from 2004 to 2007 there were 44.381 deaths due to AIDS in Brazil, representing a crude mortality ratio of about 6 deaths per 100 thousand inhabitants. **CONCLUSIONS:** The use of antiretroviral drugs increases the survival of patients with HIV/AIDS and reduces the mortality rate. Despite the stability of AIDS incidence and mortality coefficients over the analyzed period, the expenditure increased, which can be due to an increase in coverage and range of drugs offered. As the resources are limited, it is important to understand the magnitude of the consumption as well as the mechanisms of purchase in order to improve the supply of antiretroviral drugs.

VA3

FACTORS INFLUENCING THE DECISION TO BE VACCINATED AGAINST H1N1 IN GREECE

Athanasakis K, Zavras D, Kyriopoulos J
National School of Public Health, Athens, Greece

OBJECTIVES: In view of the 2009 emergence of Influenza a (H1N1) and the declaration of a phase 6 pandemic by WHO, Greece established a voluntary vaccination program for the entire country population. The aim of the present study was to investigate factors affecting individuals' decision to participate. **METHODS:** We conducted repeated weekly telephone surveys until a random sample of 12,639 households stratified according to place of residence (geographical area and level of urbanization) was formulated. The interviews were based on a strictly structured questionnaire designed for the purpose of the study. a logistic regression analysis was conducted in order to identify the factors that influence individuals' decision to be vaccinated against H1N1. The Hosmer–Lemeshow criterion was used to check the model's goodness of fit. **RESULTS:** Higher levels of personal education (Odds Ratio: 0.61) and income (OR: 0.42) were associated with a negative decision to participate to the vaccination program. However, when an interaction term between the two variables was used, individuals of both higher education and income were more likely to have participated in the program (OR: 1.26). On the contrary, increased levels of concern/fear for the H1N1 and increased confidence to the personal/family physician, both measured in a 5-point Likert scale, showed a positive relationship. The Hosmer–Lemeshow goodness of fit test statistic was 0.98 suggesting satisfactory fit of the model. **CONCLUSIONS:** In Greece, a country where less than 5% of the total population participated to the voluntary vaccination program against H1N1, socioeconomic status, as expressed through income and education, the role of the family physician and the personal attitude towards H1N1 were important factors for a positive decision. In the case of similar future efforts, these variables should be taken into account, in order to facilitate focused interventions.

PIN73

FACTORS AFFECTING THE DECISION TO RECEIVE VACCINATION FOR INFLUENZA VIRUS H1N1

Zavras D[1], Kyriopoulos J[2]
[1]National School of Public Health, Athens, Attiki, Greece; [2]National School of Public Health, Athens, Greece

OBJECTIVES: The objective of this study was to determine factors affecting the population's decision to get vaccinated against the influenza H1N1 virus. **METHODS:** Data for this study was obtained from a Panhellenic survey, organized by the National School of Public Health of Greece. The sample (n = 12,639) was drawn from strata of various degrees of urbanization and geographical region. The primary outcome of the survey was the intent to get vaccinated for H1N1; logistic regression was used to