

OBJECTIVES: Obtaining access to HIV/AIDS medications can be a challenge for low-income people with HIV who currently cannot obtain Medicaid benefits because they are considered too healthy for assistance but too poor to purchase coverage on their own. We would like to evaluate the current level of access to medication for uninsured individuals living with HIV/AIDS and assess how access to these drugs might change over time. **METHODS:** We limited the scope of our review to the top ten US states with the largest HIV/AIDS populations: New York, California, Florida, Texas, Georgia, New Jersey, Pennsylvania, Illinois, Maryland, and Massachusetts. We then reviewed the current structure of their AIDS Drug Assistance Programs (ADAPs) and evaluated the robustness of the benefit and its respective formulary. Our next step was to then project how this population might benefit from the expansion of Medicaid. **RESULTS:** New York and California have some of the most comprehensive benefits covering 465 and 176 HIV/AIDS-related medications, respectively. Texas, on the other hand, appears to be the most restrictive, covering only 44 medications. Looking forward, some states could see larger increases in the number of uninsured HIV/AIDS patients that now fall under their Medicaid programs. Texas, Virginia, and North Carolina could potentially see upwards of a 35% increase in Medicaid enrollees with HIV/AIDS. **CONCLUSIONS:** Half of the states reviewed have waiting lists for their ADAPs and two of the states have already extended Medicaid benefits to AIDS/HIV patients via a 1115 waiver. To that end, it seems reasonable to conclude that while the expansion of Medicaid will generally be beneficial for the uninsured living with HIV/AIDS, its impact will be felt more so in some states while not as much in others.

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ANTI-MALARIAL DRUGS MANAGEMENT IN PUBLIC AND PRIVATE SECONDARY HEALTH CARE FACILITIES: A COMPARATIVE CROSS SECTIONAL STUDY FROM PAKISTAN

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OBJECTIVES: The study aimed to assess availability and stock outs of antimalarial drugs in public and private secondary health care facilities in two cities of Pakistan; Islamabad (Federal capital) and Rawalpindi (twin city). **METHODS:** A comparative, cross-sectional study was designed to evaluate anti-malarial drugs stock outs in public and private secondary health care facilities in the two cities. The anti-malarial drugs records were collected from the pharmacies located in the health care facilities. Pre-validated tools i.e., WHO facility indicator form and USAID inventory indicator and drug stock outs form were used to collect data regarding availability and stock outs of anti-malarial drugs. After the data collection, data were coded and analyzed by using SPSS version 16. **RESULTS:** The total average number of day's stock out of anti-malarial drugs at public secondary healthcare facilities was 230.3 and 291.9 days in Islamabad and Rawalpindi respectively. While on the other hand total average number of day's stock out of anti-malarial drugs at private secondary health care facilities was 170.2 and 210.4 days in Islamabad and Rawalpindi cities, respectively. A pharmacist was mostly available in all the public health care facilities but in few of the private health care facilities. Moreover a significant difference ($p \leq 0.05$) was noted in anti malarial drug stock outs among different public and private healthcare facilities in the two cities. **CONCLUSIONS:** The findings suggest major stock outs of anti-malarial drugs in both public and private health care facilities; however the situation was more prevalent in the public sector. Essential drug list was not available and being followed. The role of pharmacist comes under question in effective drug management in public health care facilities.

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REHOSPITALIZATION AND COSTS AMONG PATIENTS TREATED WITH LINEZOLID VERSUS VANCOMYCIN FOLLOWING HOSPITALIZATION FOR PNEUMONIA IN THE REAL-WORLD SETTING

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OBJECTIVES: This study compared pneumonia-related rehospitalizations and total medical costs among patients hospitalized for pneumonia and treated with linezolid or vancomycin post-discharge. **METHODS:** Two administrative claims databases were pooled and adults hospitalized for pneumonia and treated with linezolid or vancomycin post-discharge from January 1, 2007 through September 30, 2009 were identified. Two pneumonia populations were studied: 1) "broad group" that included all pneumonia ICD-9 codes; and 2) "narrow group" that included ICD-9 codes consistent with the FDA labeled pneumonia indication. Within 42 days following hospital discharge, pneumonia-related rehospitalizations and total medical costs were compared between linezolid and vancomycin users. Multivariable regression analyses were performed, controlling for index hospitalization length of stay, clinical and demographic factors. **RESULTS:** The "broad group" consisted of 1,468 patients (46% linezolid), while 417 patients (61% linezolid) met the "narrow" ICD-9 code criteria. Unadjusted pneumonia-related rehospitalization rates were lower for linezolid relative to vancomycin in both the "broad" (9% vs. 15%, $p < 0.01$) and "narrow" (6% vs. 15%, $p < 0.01$) groups. In the multivariate analysis, linezolid users were less likely to have a pneumonia-related rehospitalization in both the "broad" (OR=0.59, 95%CI: 0.42 - 0.83) and "narrow" (OR=0.34, 95%CI: 0.17 - 0.69) populations. Adjusted total costs were significantly lower for linezolid users in the "broad" population (cost savings: \$1525; 95%CI: \$1423 - \$1627). No significant difference in cost savings was observed in the "narrow" population (adjusted point estimate of cost savings with linezolid: \$341; $p = 0.63$). **CONCLUSIONS:** Among

commercially insured patients treated with either linezolid or vancomycin following hospitalization for pneumonia, linezolid was associated with significantly lower pneumonia-related re-hospitalizations and total direct medical costs in the "broad" population of all pneumonia patients. In the narrower, FDA labeled-indication group, significantly lower pneumonia-related re-hospitalizations occurred among linezolid users but the between-treatment difference in total adjusted medical costs was not significant.

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PUBLIC EXPENDITURE FOR ANTIRETROVIRAL TREATMENT AND PROJECTED COST-SAVINGS AFTER THE ENTRY OF GENERIC ANTIRETROVIRALS IN THE ITALIAN PHARMACEUTICAL MARKET

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OBJECTIVES: Aims of this study were to quantify the expenditure for antiretroviral (ARV) treatment in Italy, and to estimate the potential impact of the introduction of generic antiretrovirals in the Italian pharmaceutical market. **METHODS:** Using a data-set of pharmaceutical expenditure in Italy, we analysed the total expenses for ARVs at national level. Since in the near future generic zidovudine (AZT), lamivudine (3TC), nevirapine (NVP) and efavirenz (EFV) will be available in Italy, we calculated the potential cost-saving, modeling scenarios with price reduction between 20%-60% of the originators prices. In sensitivity analyses, we assumed that branded emtricitabine could be substituted by generic 3TC, and that fixed dose combinations (FDC) could be partially substituted by single components with generic medicines. **RESULTS:** In 2010, €500.689.927 were spent for antiretroviral therapies (total ARV use: 1.91 DDI/1000 inhabitants/day), with an increase of 12.6% compared with the 2009 expenditure. The most relevant proportion was attributable to FDC, accounting for €238.826.599 (47.7% of total costs). The total percentage of costs for ARVs related to the use of AZT, 3TC, NVP and EFV was 7.33% (€36.713.056). Assuming the prescriptions of these drugs to be constant in next years, different scenarios of price reduction (from 20% to 60%) for generic drugs showed an estimated cost-saving ranging from €7.342.611 (1.47% of total ARV costs) to €22.027.833 (4.40%). When including emtricitabine substitution by 3TC, cost-saving rises to €7.435.738-22.307.213 (1.49-4.46%) and to €26.832.726-80.498.178 (5.36-16.08%) considering the unbundling of branded FDC. **CONCLUSIONS:** The forthcoming availability of some antiretroviral generics could be an option for safely and effectively cost-saving. However, in our study, the greater reduction of costs has been estimated by FDC substitution, raising the potential dilemma of increasing regimen complexity. Further studies will be needed to evaluate safety and efficacy of FDC substitution with generics incorporating both treatment adherence and pharmacoeconomic outcomes.

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HOSPITAL OUTCOMES AND COSTS OF CARE FOR SEVERE SEPSIS: A POPULATION-BASED STUDY

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OBJECTIVES: Despite recent advances in critical care, severe sepsis is one of the world's leading causes of death and remains both an important clinical challenge and an economic burden to western health care systems. Our aim is to analyze the costs and discharge status of severe sepsis in Spain and to examine the impact of age in terms of hospital outcomes. **METHODS:** Analysis of the 2008 nationwide hospital discharge database. We identified cases based on the ICD-9-CM codes for sepsis and organ dysfunction. We examined demographics, comorbidities, clinical outcomes and hospital costs and performed a logistic regression analysis to identify factors associated with in-hospital mortality. We calculated hospital charges based on the National Health Service charges for DRGs. To depict the amount of resources spent to procure a given level of desired outcome (hospital survival) we also determined the cost per survivor. **RESULTS:** A total of 37,746 cases were analyzed. Median age was 73 year (p25:59; p75:82); 58% were men, 28% surgical cases, 31% of cases had no associated comorbidity. In-hospital mortality was 45%. An inverse relationship between survival rate and age was consistently observed after adjusting by other clinical variables. Total costs of hospitalizations exceeded €500 million with 35% spent in patients aged >74 years. Age-related costs per survivor were €19,538 in cases aged <1 year; €12,390 in those aged 1-14 years; €16,703 in patients aged 15-44 years; €15,917 in patients 45-64 years, €13,828 in patients 65-74 years and €9,366 in those aged >74 years. **CONCLUSIONS:** Severe sepsis associates with high mortality and hospital-resources utilization. Age has a significant impact on outcomes both from clinical and economic perspectives. Age is an independent predictor of mortality. Costs per survivor, however, are substantially lower in elderly patients. These data will help inform health care decision-making and resource planning in the face of an ageing population.

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ASSESSING THE AWARENESS ABOUT HUMAN PAPILLOMAVIRUS (HPV) AND ATTITUDE TOWARDS THE HPV VACCINE IN A COHORT OF MALE COLLEGE STUDENTS

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OBJECTIVES: The Human Papillomavirus (HPV) infection is the most common sexually transmitted disease in the United States. HPV infected males also put their female partners at increased risk of cervical cancer. Recently a HPV vaccine was approved for use in males aged 9-26 years. The purpose of this study was to assess awareness regarding HPV and the vaccine amongst a cohort of male university students. Further, we evaluated their attitude towards the HPV vaccine and its relationship with awareness. **METHODS:** A self-administered anonymous survey