a 5 year-horizon budget impact analysis of SOF-based regimens for the management of HIV/HCV-coinfected patients **METHODS:** This prospective study involved 4 Italian Infectious Diseases Departments in the Liguria Region. A total of 1.005 coinfected patients (30% cirrhotics) in any stage of their hepatic disease stages was considered (F0-F4, cirrhosis,transplanted,HCC). Disease stage costs per patient were collected, taking into account the rate of expected disease progression in absence of treatment and the rate of Sustained Virological Response (SVR)with SOF-based regimens. The success rate for SOF-based Regimens was estimated based on literature data, whilst the liver disease progression in a such short period was evaluted according to expert opinion. Drugs prices used in the calculation were those paid by the Italian Health Service. Two scenarios were compared: "no treatment" versus b) SOF-based treatment. Data were analyzed from the Regional Health Service standpoint **RESULTS:** Over the next 5 years, the total expense in a "no treatment" scenario (base case) should approximate 54 M Euros. Assuming an SVR success rate of 90%, average SOF-based regimens price higher than € 50.000 costs more than € 55 millions, resulting not convenient. At the average price of 15.000 € per patient, the total expense in the SOF-based scenario should approach 20 MEuros , i.e. more than 60% lower than in the "no-treatment" scenario. **CONCLUSIONS:** The results suggest that at the average price of € 15.000 per patient over the next 5 years, the use of SOF should allow saving half of the economic resources needed to manage the HIV/HCV disease population.

PIN24
A DYNAMIC MODEL TO ESTIMATE THE BUDGET IMPACT OF A NEUMOCOCCAL VACCINATION PROGRAM IN SPAIN

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OBJECTIVES: The purpose of this study is to estimate the 5-year budget impact of a pneumococcal vaccination program of population aged 65-year-old in Spain. **METHODS:** A dynamic model based on differential equations was built for the conceptualization of the disease and the parameters were populated with the vaccine efficacy data coming from the CAPITA clinical trial of the 13-valent pneumococcal conjugate vaccine (PCV13). If S stands for susceptible, I for infective, V shows the number of individuals who are effectively vaccinated at each time and t is the time variable and the parameters beta and gamma show the transmission and natural recovery coefficients respectively, the differential equation of the model is: $dS(t)/dt=-\beta^*I(t)^*S(t)+\gamma^*I(t)-V(t)$ and $dI(t)/dt=+\beta^*I(t)^*S(t)-\gamma^*I(t)$. Program duration was fixed to 5 years, and every year the 65-year cohort would be vaccinated (coverage of 49.3%). Economic parameters included hospital costs of treating pneumonias, meningitis, bacteremia, and empyema as well as the outpatient costs of treating pneumonia in the community (41.5% of the cases). Costs sources were official databases for hospitalizations and vaccine, and a local study for outpatient costs of pneumonia. Mortality rates related to pneumococcal infections reported in the UK are applied to the Spanish case. **RESULTS:** In 5 years-period with a 65 year old cohort of 513,000 people, the vaccination program is expected to avoid about 35,700 cases of pneumococcal disease (the majority of them otherwise causing pneumonia), and about 1,419 related deaths. Vaccination costs of 59.5 million euros would be completely offset by medical cost reduction of 124 million euros, yielding to a net saving of 64.5 million euros. **CONCLUSIONS:** PCV13 vaccination targeting the cohort of 65 year-old Spanish adults is expected to result in net savings for the health care system in addition to significant cases of pneumonia avoided and related health improvements for the patients.

PIN25
BUDGET IMPACT ANALYSIS OF THE USE OF DACLATASVIR FOR THE TREATMENT OF HEPATITIS C VIRUS (HCV) GENOTYPES 3, IN THE ITALIAN SETTING

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OBJECTIVES: New HCV antiviral treatments showed higher effectiveness (sustained virologic response - SVR) compared with that of available drugs. Due to the high cost of such treatments and in absence of scientific evidence on their economic impact on the Italian National Health Service (NHS), it is crucial to investigate the sustainability of their use in the Italian setting. The study aimed at evaluating the budget impact on the Italian NHS of the use of Daclatasvir for HCV treatment. **METHODS:** An analytical decision model was implemented with a five year time horizon. Two scenarios were structured considering the market shares of HCV treatments (expert opinion) with or without the use of Daclatasvir. The target population (HCV genotype 3 infected patients) was estimated based on literature data. Patients enter the model in fibrosis stage 3 and 4 and may evolve in an SVR state (based on effectiveness data), decompensated cirrhosis, HCC, liver transplant or death. The costs considered in the analysis were those of antiviral treatment, adverse events management and health state costs. **RESULTS:** The use of Daclatasvir, in comparison with the scenario without Daclatasvir, would lead to an increase of costs for the Italian NHS of 21.31 million euros in year 1, 21.33 million euros in year 2, 23.36 million euros in year 3, 23.26 million euros in year 4 and 17.20 million euros in year 5. **CONCLUSIONS:** Daclatasvir would lead to an increase of healthcare costs for the treatment of genotype 3 HCV infected patients in the first three years, followed by a reduction of the cost's increase in years 4 and 5 (-0.44% in year 4 compared with year 3, and -26.0% in year 5 compared with year 4), thanks to the management of better health conditions, due to the higher effectiveness of Daclatasvir based therapies than the comparators.

PIN26
COST IMPACT OF THE DELAY OF BROAD-SPECTRUM ANTIMICROBIAL AGENTS DE-ESCLATION ON SURGICAL WARDS

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OBJECTIVES: To measure the cost impact of the delay of broad spectrum antibiotics de-escalation on surgical wards at a tertiary care center in Jeddah, Saudi

Arabia **METHODS:** Retrospective cohort study for patients admitted to surgical wards at a tertiary care center in Jeddah, Saudi Arabia over 3 months. Three broad spectrum antibiotics were targeted; piperacillin/tazobactam, imipenem, and meropenem. De-escalation delay was measured in days from the time of getting the culture identification and susceptibility until narrowing the antimicrobial therapy to target the identified organism. The cost impact was measured by multiplying the period that patients were on broad spectrum antibiotics after the final identification and susceptibility of microorganism by the cost of broad-spectrum antibiotics per day. **RESULTS:** One hundred sixty-three patients received broad spectrum antibiotics over 3 months on surgical wards at our institution. Sixty four out 163 patient (39.2%) had identified organism and susceptibility for other antibiotics. Thirty one patients (48.4%) had de-escalation of antimicrobial therapy within 24 hrs of culture identification and susceptibility result. Thirty three patients (51.6%) had a delay in their broad spectrum antibiotics therapy de-esclation despite getting the culture identification and susceptibility. The total delay of broad spectrum antibiotics and cost impact were as follow: piperacillin/tazobactam 267 days (3,920 USD); imipenem 5 days (230 USD); meropenem 110 days (9,925 USD). **CONCLUSIONS:** the delay of broad spectrum antibiotics de-escalation on surgical wards at our hospital has resulted in a cost impact of 14,075 USD over 3 months period. Pharmacy intervention program on surgical wards to enforce the de-escalation process is needed.

PIN27
CHALLENGES IN ECONOMIC EVALUATION OF ANTIBIOTICS IN HEALTH-CARE ACQUIRED INFECTIONS: A TARGETED REVIEW

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OBJECTIVES: Health-care acquired infections (HCAIs) and resulting antibiotic treatments have been raising global concerns. HCAIs represent a substantial economic and humanistic burden with increasing costs, morbidity and mortality. Concerns around antibiotic use include resistance and lack of new products to market. The latter is related to difficulty in gaining approval, potential lack of profitability, complicated market assess, and difficulty in demonstrating value. Methods used for economic evaluations may contribute to the difficulty in assessing antibiotics. Our objective was to review published economic evaluations of antibiotics in HCAIs and to summarize currently used methods and challenges in assessing cost-effectiveness. **METHODS:** We conducted a MEDLINE search for model-based, health economic evaluations of antibiotics in the six most prevalent HCAIs in the UK (respiratory tract, urinary tract, surgical site, clinical sepsis, gastrointestinal and bloodstream infections). Original, English language studies were included. Among others, analysis type, model structure, perspective, time horizon and outcomes were extracted. **RESULTS:** We identified 126 papers, of which 19 met the inclusion criteria. These included 13 cost-effectiveness, four cost-consequence, one cost-minimization and one cost-benefit analyses. Of the models 12 were decision trees/decision models, three cost-calculators, one Markov model and one discrete even simulation. 2 papers did not report sufficient methodology. Time horizons were mainly the length of an infection. Main outcomes were cost-per cure, cost-per patient treated, cost-per QALY and total cost saving. Economic models tend not to account for changes in prevalence of resistance, and additional potential benefits such as preventing transmission of resistance. **CONCLUSIONS:** Most identified economic evaluations were simplistic, using cost-effectiveness approach through a simple decision tree, over short time-horizon, with payer perspective. This limits the flexibility of the evaluations to account for benefits of antibiotics in addressing burden of HCAIs and the current global concerns, contributing to the difficulty of assessing economic benefit of antibiotics.

PIN28
A SYSTEMATIC LITERATURE REVIEW OF THE ECONOMIC IMPLICATIONS OF ACUTE BACTERIAL SKIN AND SKIN STRUCTURE INFECTIONS (ABSSSIS)

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OBJECTIVES: During the years, acute bacterial skin and skin structure infections (ABSSSIs) have seen an increase in incidence in many parts of the western world. Additionally, the treatment of ABSSSIs, generally consisting of surgical debridement or drainage and empiric antibiotics in the hospital, can be further complicated by emerging multi drug resistant bacteria, most notably methicillin-resistant Staphylococcus aureus (MRSA). As the incidence rates increase alongside with rising antibiotic resistance, ABSSSIs are becoming a significant burden for healthcare systems. This study aims to collect evidence on the healthcare resource utilization of ABSSSI and the economic implications of different treatment modalities for the management of these diseases. **METHODS:** A systematic literature search in MEDLINE, Cochane and ISPOR abstract databases with predefined inclusion criteria and subsequent quality assessment was performed. **RESULTS:** The search identified 1,799 unique publications of which 26 contained relevant economic data on ABSSSIs treatment and were therefore included in this manuscript. There were six healthcare resource utilization studies, 11 cost analyses, three cost-minimization and six cost-effectiveness analyses, of which only a single study reported quality adjusted life years. Vancomycin was evaluated in most studies (21), followed by linezolid (15), daptomycin (8) and others (7). **CONCLUSIONS:** This review provides an in-depth overview of the economic implications of current ABSSSI management. Major cost drivers of ABSSSI treatment were length of hospital stay and the overall cost associated with frequent intravenous antibiotics administration. While most studies (20) applied a hospital perspective, there was a substantial disparity on the specific costs in- or excluded in the analysis, and on the unit prices. This led to significant variations of the final cost outcomes. Notably, over 10-fold differences were found. The overall quality and comparability of the literature reviewed was sub-optimal, elevating the need for more high-quality and reproducible economic evaluations in the area of ABSSSIs.