availability of novel 2CDAs. Treatment patterns are sensitive to market entry of new HCV medications. HCV treatment selection and duration may be influenced by disease severity and treatment history.

PINF9 TREATMENT PATTERN AND CHARACTERISTICS OF MEDICARE BENEFICIARIES WITH HIV RELATED CACHEXIA

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OBJECTIVES: CacheXia is characterized by a loss in muscle mass leading to an overall reduction in function and is often related to severe chronic conditions such as cancer, kidney disease and HIV. Anabolic steroids (AS) have been seen as a potential aid to reducing the impact of cachexia in HIV patients, but AS therapy remains controversial. The purpose of this study was to characterize HIV related cachexia patients and link cachexia to those treatments that have been tried or not tried by these patients. To complete this study we used Medicare LDS 5% random sample for 2011-2013. Patients were identified as having HIV (ICD-9 code 042) and then cachexia (ICD-9 code 799.4, 783.5, 783.7, and 783.3) using inpatient and outpatient claims. AS treatment among patients receiving AS were compared to those who were not using frequencies, means, t-test, and chi-square statistics. RESULTS: There were over 4,000 HIV patients in the sample, 1,835 of which had cachexia. Only 54 patients received AS therapy, but there were still differences between treated and non-treated patients in terms of gender (90.74% and 72.09%, respectively, p = 0.01) and race (66.67% and 45.65%, respectively, p = 0.03). Treated patients had higher CGI scores (1.17 versus 9.75, p = 0.01). In each category, 9% of individuals received Medicare benefits because of chronic disability. Treated and untreated patients had similar ER and inpatient visits as well as similar total costs ($4,038,76 versus $29,930.82, inpatient, p = 0.07). CONCLUSIONS: In this study, hesitancy to use AS in HIV-related cachexia those patients who receive AS therapy for cachexia are the most severe of an already severely ill group. This study indicates that AS treatment is being used as a last resort instead of earlier in the cachexia process when the treatment could potentially have a larger impact on a patient’s disease progression.

PINF9 ASSESSING THE COST-EFFECTIVENESS OF ANTIRETROVIRAL TREATMENTS IN HIV: AN INDIVIDUAL PATIENT SIMULATION APPROACH

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OBJECTIVES: Over 100,000 people in the UK are living with human immunodeficiency virus (HIV). This once acute condition has been transformed into a near chronic condition by antiretroviral treatment (ART), providing people living with HIV (PLHIV) with a life expectancy similar to the general population. Our objective was to develop a HIV model with the ability to capture adherence and NARMs, suitable for health technology assessments. METHODS: A review of HIV models concluded that existing models do not adequately account for either adherence benefits associated with STRs or the impact of non-AIDS related morbidities. We developed an individual patient simulation model in R to predict clinical and economic outcomes of ART in treatment-naïve patients entering treatment in 2012 and recommend treatment pathways based on previous treatments and standard of care. The probability of viral suppression at 48 weeks for each anti-retroviral treatment, informed by a recent network meta-analysis was derived for each regimen and summarised into an outline of the process to make vaccines available. Examples of vaccines, the challenges they have faced and potential solutions to those challenges were examined. RESULTS: Since a license has been obtained, usually through the European Medicines Agency, the Joint Committee on Vaccination and Immunisation (JCVI), makes recommendations to the Department of Health (DH). The JCVI covers all UK countries (subject to potential devolution of powers to Scotland). The JCVI is considering allowing indication to attend Committee meetings, which would be a huge step forward for such a secretive body. There is no scoping phase, limited stakeholder engagement; recommendations are not made public and their rationale not given, and there is no appeal element to the process. The DH agrees the price of each vaccine, which in a recent example took around a year, with input from NHS England (NHSE) and Public Health England (PHE). PHE is then responsible for implementation and procurement through its Health Protection Directorate. To draw together this process, the NHSE and DH jointly convened a Senior Oversight Committee, chaired by NHSE. CONCLUSIONS: Companies proposing to bring vaccines to market need to pay special attention, well in advance, to navigating this complicated structure. This is needed to achieve a satisfactory price, which rewards R&D and other costs, within a reasonable period.

PINF10 A DECISION OPTIONS APPROACH TO ANTIBIOTIC R&D INVESTMENT

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OBJECTIVE: As healthcare expenditure on antibiotic resistance development is a critical global health policy issue. A number of policy initiatives are under development globally. Some focus on alternative reward mechanisms such as public-private partnerships or price support for highly expensive antibiotic therapies. Others focus on enhanced reimbursement once the drugs reach market. Understanding how the timing and magnitude of the rewards impact antibiotic R&D investment decisions is essential to effective and efficient policy development. METHODS: The R&D portfolio investment decision process and underlying decision logic were modelled as a decision tree with outcomes based on deterministic decision nodes and probabilistic uncertainties. (e.g., the probability of success during phase 2 trials). Monte Carlo simulations and calculations for net present values and the decision options at the vaccine decision tree are incorporated into the decision tree analysis in order to provide insights into the valuations at the vari-