PATIENT PREFERENCES AND STATED ADHERENCE FOR HEPATITIS C VIRUS TREATMENTS

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OBJECTIVES: To estimate patient preferences for attributes of hepatitis C virus (HCV) treatments and the effect of product attributes on stated medication adherence.

METHODS: HCV patients, 18 years and older completed an online survey instrument that included 9 conjoint choice-format trade-off tasks. Subjects chose among pairs of hypothetical medication alternatives, each defined by chance that the medicine will eliminate the virus completely (EFFICACY), injection frequency, duration of flu-like symptoms after each injection, injection device (DEVICE), average number of days they worked each week (LOST WORK DAYS), probability of reversible hair thinning while on treatment (HAIR THINNING), and probability of developing clinical depression while on treatment (DEPRESSION). Subjects also answered 3 rating questions assessing how often people with HCV would miss or skip doses of medications with different characteristics. We used mixed-logit methods to estimate mean relative importance weights for each attribute. We used a Heckman two-stage model to estimate first the effect of subject characteristics the effect of medication attributes on non-adherence.

RESULTS: A total of 143 subjects completed the survey. In the model, number of flu days (FLU DAYS) was specified as injection frequency multiplied by the duration of flu-like symptoms after each injection. EFFICACY was the most important attribute. The remaining attributes were ranked in order of importance as follows: DEPRESSION, FLU DAYS, LOST WORK DAYS, HAIR THINNING, and DEVICE. Subjects who worked more than 35 hours per week saw the number of flu days increased the likelihood of non-adherence.

CONCLUSIONS: The results of this study demonstrate that efficacy is the most important medication attribute to patients but medication side effects like the number of flu days affect stated medication adherence. Reducing the number of flu days by reducing the frequency of injections or the duration of flu-like symptoms after each injection may increase medication adherence.

Assessing disease burden for measles using a clinical and health outcomes approach: A focus on lower-income countries

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OBJECTIVES: We developed a measles health outcomes model for lower-income countries to understand the potential effectiveness (CE) and policy models assessing measles interventions as well as long-term investment decisions for potential interventions.

METHODS: The clinical, HO, and CE literature for measles was evaluated, including methodological issues related to using disability-adjusted life years (DALYs) and/or quality-adjusted life years (QALYs) to assess disease burden. We constructed a descriptive clinical model of measles infection depicting clinical sequelae as a health outcomes tree. DALY and QALY weights were estimated from the literature. Morbidity and mortality were considered using two alternative approaches, one based on an aggregate estimate of measles-associated disability and the other based on a detailed consideration of these sequelae. Deaths from measles were assumed to occur at 2.5 years of age. Aggregate impacts were assessed using estimates from an infectious disease model applied to 6 developing countries between 2010–2029. RESULTS: A focus on DALYs in the measles global health literature led us to concentrate on the aggregate and not the individual DALY estimates. India and Nigeria were estimated to have the greatest avoidance in life years lost and morbidity-adjusted life years (DALYs avoided). QALYs gained due to reduced measles outbreaks, partly due to population size (e.g., >170,000 and >3,000 DALYs avoided, respectively; 3% disc. ret.). For all countries, under various scenarios and discount rates for both approaches, the mortality effect dominated morbidity effects and accounted for approximately 90–99% of the overall DALY burden. CONCLUSIONS: Evaluating morbidity and mortality outcomes of measles in developing nations is complex and involves substantial uncertainty. LYL effects dominated disability effects in resource-limited countries, even with higher rates of complications from measles (50–80% of cases). Several challenges include limited clinical and economic data, unavailable country-specific health-state weights, and sparse HO data for vulnerable sub-populations, such as those with HIV/AIDS or that are malnourished.

THE IMPACT OF ADVERSE DRUG REACTIONS ASSOCIATED WITH ANTITUBERCULOSIS MEDICATIONS ON HEALTH-RELATED QUALITY OF LIFE: A LONGITUDINAL ANALYSIS

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OBJECTIVES: Anti-tuberculosis (anti-TB) treatment commonly results in adverse drug reactions (ADRs). This study examined the impact of ADRs on health-related quality of life (HRQOL) among patients with active TB. METHODS: HRQOL was assessed at baseline and three months of treatment using the Short-Form-36 (SF-36). Information regarding ADRs to anti-TB treatment was obtained from electronic health charts. Linear regression was used to explore the impact of ADRs on the 3-month SF-36 outcomes. Logistic regression was performed to examine the correlation between baseline SF-36 scores and occurrence of ADRs during the first three months of treatment. Socio-demographic factors were adjusted for in all regression models.

RESULTS: A total of 89 patients with active TB were included. During the first three months of treatment, 21 (23.6%) patients developed major ADR(s) that led to discontinuation of treatment and/or additional interventions. When compared to those who never experienced ADRs, subjects who developed major ADR(s) scored significantly lower on three SF-36 subscales: physical functioning (33.77 vs. 46.89, p = 0.033), vitality (39.13 vs. 50.08, p = 0.004), and mental health (39.16 vs. 50.28, p = 0.025). Compared to those who had no recent ADRs, subjects who experienced rare ADRs (HRs) (within the past four weeks) and infrequent ADRs (HRs) on three subscales, and also the mental component summary score. Logistic regression analyses suggested that baseline scores from the six SF-36 subscales (physical functioning, role-physical, vitality, role-emotional, social functioning, and mental health) and the summary components were significantly associated with developing ADR(s) during the first three months of treatment. CONCLUSIONS: ADRs due to anti-TB treatment had substantial and profound impact on patients’ HRQOL. Poor baseline HRQOL might be associated with a higher risk of developing ADR(s) during treatment.