ECONOMIC MODELLING TO DETERMINE THE COST-EFFECTIVENESS OF TREATMENT OF PATIENTS WITH HISTOLOGICALLY MILD CHRONIC HEPATITIS C WITH PEGYLATED INTERFERON ALPHA-2B PLUS RIBAVIRIN

OBJECTIVES: Eligibility criteria for government-funded chronic hepatitis C treatment in Australia stipulate that patients must have biopsy-proven evidence of liver damage. This was initially incorporated in an effort to limit treatment to those patients who were most likely to achieve the greatest clinical benefit, namely patients with more progressed disease who are closer to poor health states. However, recent evidence acknowledges significant quality of life impairments in patients with histologically mild disease and suggests that earlier initiation of treatment may be more cost-effective than previously thought. With no randomised controlled trials that directly compare “earlier” versus “later” treatment of patients with pegylated interferon alpha-2b plus ribavirin, the aim of this study was to model the incremental cost-effectiveness of treatment in subjects with mild versus more advanced disease.

METHODS: A cost-utility Markov model was developed to compare “earlier” versus “later” treatment, where “earlier” treatment commences in the mild health state or after progression to the moderate health state, and “later” treatment commences after histological evidence of significant hepatic fibrosis. The analysis was conducted from the perspective of the Australian health care system using data from an international randomised controlled trial in chronic hepatitis C.

RESULTS: The incremental cost-effectiveness ratio (ICER) ranged from $14,047 to $71,208 per quality adjusted life year (QALY) using different sets of published utility weights and transition probabilities. For patients infected with viral genotypes 2 or 3 the ICER is $9584/QALY, while for genotypes 1, 4, 5, or 6 the ICER is $19,297/QALY. Sensitivity analyses based on alternative inputs yield ICERs ranging from $1034 to $22,277/QALY.

CONCLUSIONS: Treatment with pegylated interferon alpha-2b plus ribavirin is universally cost-effective in patients with mild chronic hepatitis C, regardless of hepatitis C virus genotype. Withholding treatment until a patient exhibits histological evidence of liver damage is not justified from the current analysis.

IS THE PRESCRIBING OF ANTIBIOTICS FOR THE MOST COMMON INFECTIONS IN PRIMARY HEALTH CARE RATIONAL OR NOT?

OBJECTIVES: The growing emergence of bacterial resistance is related to the overuse and misuse of antibiotics. The aim of this study was to evaluate the prescribing of antibiotics by Montenegrin primary health care (PHC) practitioners in the treatment of the most common infections. METHODS: We used the computerised report that was extracted from the Information system named “The Control of Distribution and Use of Drugs” that has been established within The Republic Health Insurance Fund since 2003. The report covered ATC code, generic name, number of defined daily doses that were prescribed during 2005 and the diagnoses of infections (International Classification of Diseases–ICD) for which antibiotics were prescribed. Our results were expressed as number of DDD/1000 inhabitants/day (DTID).

RESULTS: The prescribing of antibiotics was highest for the treatment of acute upper respiratory tract infections (URTI, ICD codes J00-J04) (7.9 DDDs), acute bronchitis (J20) (1.7 DTIDs) and cystitis (N30) (1.1 DTIDs). For the treatment of URTI amoxicillin had the highest prevalence (2.7 DTIDs, 34%), Amoxicillin with clavulanic acid was the second drug (1.4 DTIDs, 17%) and narrow-spectrum penicillin V was the third (0.8 DTIDs, 10%). Acute bronchitis was treated mostly by macrolides azitromycin (0.4 DTIDs, 23%) and erythromycin (0.3 DTIDs, 19%), followed by amoxicillin (0.3 DTIDs, 17%). Sulfamethoxazole-trimethoprim was most common prescribed antibiotic for the treatment of cystitis (0.4 DTIDs, 37%), cefalexine was the second drug (0.3 DTIDs, 25%) and ciprofloxacin (0.2 DTIDs, 15%) was the third.

CONCLUSIONS: This survey showed a slight tendency of Montenegrin PHC physicians to more frequently prescribe wide-spectrum (and more expensive) antibiotics. They also prescribed antibiotics in some diagnoses where it was controversial and wasn’t supported with strong clinical evidence. Further studies about patterns of bacterial resistance to antibiotics and pharmacoeconomic aspect of pharmacotherapy are needed to fully estimate the prescribing of antibiotics rational or not.