

suggestions based on their experiences for others embarking on this work, for example including patients and members of the public in the process.

### CONCLUSIONS:

We identified a small but diverse set of HTA organizations internationally that are evaluating their PPI activities. Our results add to the limited literature by documenting a range of evaluation strategies that reflect the range of rationales and approaches to PPI in HTA. It will be important for HTA organizations to draw on formal evaluation theories and methods when planning future evaluations, and to also share their approaches and experiences with evaluation.

---

## OP115 Effect Of Multiple Drug Resistance On Costs For Patients With Intra-Abdominal Infections in China

### AUTHORS:

Xuemei Zhen ([zhenxuemei@zju.edu.cn](mailto:zhenxuemei@zju.edu.cn)), Yuanyuan Li, Yixi Chen, Peng Dong, Stephanie Liu, Hengjin Dong

### INTRODUCTION:

Multiple drug resistance (MDR) intra-abdominal infections (IAIs) are associated with noteworthy direct and societal costs. Compared to previous studies, the present one takes both resistance rate and total medical costs (TMCs) into consideration, focusing on the impact of MDR on TMCs in IAIs, as well as further estimating the additional costs at a national level.

### METHODS:

All inpatients discharged between 1 January 2014, and 31 December 2015 from a teaching hospital were included. Due to limits in budget and the large number of inpatients, the randombetween (bottom, top) function was applied to randomly select 40 percent of patients per year. Subsequently, we manually screened out 254 patients with IAIs, according to the International Classification of Disease (tenth revision) and electronic

medical records. Eventually, 101 IAIs patients were included, in which 37 were infected by non-MDR bacteria and 64 by MDR bacteria. The Kruskal-wallis non-parametric test and multiple linear regression were employed to analyze the effect of single and multiple variables on TMCs.

### RESULTS:

Compared to patients with non-MDR infections, those with MDR were associated with significantly higher TMCs, higher antimicrobial costs, increased insurance, combination antimicrobial therapy, higher usage of antimicrobial agents, greater number of pathogens, longer length of stay, and longer intensive care unit stays. In addition, the average TMCs among patients with MDR were CNY131,801.17 (1USD was equal to CNY 6.227 in 2015), which were CNY 90,200.99 higher than those with non-MDR infections. If our results are generalizable to the whole country, the total attributable TMCs are estimated to be CNY37.06 billion, and the societal costs of CNY111.18 billion in 2015.

### CONCLUSIONS:

This real-world data analysis demonstrated the significant excessive burden MDR infections are posing to the current Chinese healthcare system in terms of both TMCs and healthcare resource utilization. Enhanced antimicrobial stewardship in China is necessary to curb the distribution of MDR bacteria.

---

## OP116 Cost-Effectiveness Of Sacubitril/Valsartan In Heart Failure

### AUTHORS:

Liang Lin ([lin\\_liang@moh.gov.sg](mailto:lin_liang@moh.gov.sg)), Mohamed Ismail Abdul Aziz, David Bin-Chia Wu, Kwong Ng

### INTRODUCTION:

Heart failure (HF) is a major public health problem worldwide and in Asia. Sacubitril/valsartan reduces

cardiovascular death and hospitalizations for HF. However, decision makers need to determine whether its benefits are worth the additional costs, given the low-cost generic status of current standard of care.

## **METHODS:**

Using a Markov model, we projected lifetime clinical and economic outcomes of sacubitril/valsartan versus enalapril for 66-year-old patients with HF in Singapore. Key health states included New York Heart Association (NYHA) classes; patients in each state incurred a monthly risk of hospitalization for HF and cardiovascular death. Probabilities of events were based on the PARADIGM-HF trial. The uncertain treatment effect of sacubitril/valsartan in Asian patients was modelled using a hazard ratio (HR) of 1 as upper limit in sensitivity analyses. Utilities were obtained from published literature. Local national epidemiological and cost data were applied. Analyses were conducted from the Singapore healthcare payer's perspective. Both one-way and Probabilistic Sensitivity Analyses (PSA) based on 10,000 Monte Carlo simulations were performed.

## **RESULTS:**

Compared to enalapril, sacubitril/valsartan was associated with an incremental cost-effectiveness ratio (ICER) of SGD74k (USD52k) per quality-adjusted life year (QALY) gained. The cost-effectiveness of sacubitril/valsartan was highly dependent on its effectiveness in reducing the risk of cardiovascular death. However, this was uncertain, particularly in the Asian subgroup, where results were not statistically significant. In sensitivity analyses using results from Asian patients, the ICERs ranged from SGD41k (USD30k) to SGD1.3 million (USD 0.94 million) per QALY gained. PSA showed the probability of sacubitril/valsartan being cost-effective was below 1 percent, 12 percent and 71 percent at thresholds of SGD20k (USD14k), SGD50k (USD36k) and SGD100k (USD 72k) per QALY gained, respectively.

## **CONCLUSIONS:**

Given the uncertain ICER, sacubitril/valsartan may not provide good value for money compared to enalapril in reducing cardiovascular morbidity and mortality in

patients with HF at the current daily cost. Our study highlights the cost-benefit trade-off that healthcare professionals and patients face when considering HF therapy.

---

## **OP118 Cost-Effectiveness Analysis Of Molecular Profile Selection For Advanced Head And Neck Cancer**

### **AUTHORS:**

Carla Rognoni ([carla.rognoni@unibocconi.it](mailto:carla.rognoni@unibocconi.it)), Paolo Bossi, Lisa Licitra, Silvana Quaglini

### **INTRODUCTION:**

Relapsed/metastatic head and neck squamous cell cancer patients are offered a combination of platinum-based chemotherapy (PF, cisplatin-fluorouracil) plus cetuximab regimen (PF+C) according to results of the EXTREME trial (1). However, two economic evaluations showed that addition of cetuximab was not cost-effective.

This study aimed to evaluate the cost-effectiveness of a putative predictive molecular test (MT) to identify and treat only patients potentially responsive to cetuximab when added to PF.

### **METHODS:**

A Markov model was developed to compare both health and economic outcomes of PF+C regimen administered to all patients (PF+C ALL) versus the regimen administered only to MT-positive patients (PF+C POS).

The model considered the following health states: partial/complete response with/out mild/severe adverse events (AEs), progression and death. Rates of progression and survival, response rates to systemic treatment and adverse events were retrieved from the EXTREME trial (1). According to Mesía et al. (2), we assumed that addition of cetuximab to PF would not negatively affect life quality compared to PF alone, and