A cost-effectiveness study was performed to determine whether the use of i.v. Daptomycin or i.v. Vancomycin is the most cost-effective alternative for the treatment of infective endocarditis in public health care institutions in Mexico. OBJECTIVES: A cost-effectiveness study was performed to establish more precise model parameters, such as vaccine efficacy, duration, adverse event rates and cost for adverse events. RESULTS: The use of i.v. Daptomycin results in the lowest total cost (DAP: $7,847.00 USD; VAN:$7,990.00 USD) and the lowest per clinical success (CS) (DAP: $17,745.00 USD; VAN:$23,083.00 USD/CS) compared with i.v. Vancomycin. The sensitivity analysis varying clinical success rates of all evaluated alternative showed robustness of base study. CONCLUSIONS: Daptomycin is the most cost-effective alternative in the treatment of Infective Endocarditis and MRSA Bacteremia when used as first-line antibiotic therapy, since its use reduces the length of hospital stay, reducing expenses of public health system budget in Mexico. The use of Daptomycin can be considered as safer when compared to use Vancomycin, because it has been reported less frequently event adverse in long term treatments.

CLINICAL EFFECTIVENESS AND COSTEFFECTIVENESS OF A POLYMYXIN B-IMMOBILIZED HEMOPERFUSION CARTAGE FOR THE TREATMENT OF SEVERE SEPSIS: A SYSTEMIC REVIEW AND ECONOMIC EVALUATION
Lee J1, Lee H2, Park B1
1Seoul National University, Seoul, South Korea; 2Seoul National University, Seoul, South Korea
OBJECTIVES: Polymyxin B-immobilized hemoperfusion cartage (PMX) is a medical device for the treatment of severe sepsis by adsorbing and eliminating plasma endotoxin. The objective of this study is to assess the clinical effectiveness and cost-effectiveness, conventional therapy in treating patients with sepsis. METHODS: For a systematic review, we searched OVID, EMBASE and Cochrane central register of controlled trial (CENTRAL). Inclusion criteria of clinical trials were RCTs on‘sepsis’, ‘severe sepsis’ and ‘septic shock’ patients. We included those studies that reported at least one of the four specified outcomes: mortality, plasma endotoxin level, days of ICU stay and blood pressure. Relevant outcomes were synthesized using RevMan 5.0. The average medical cost of sepsis was estimated from a national health insurance (NHI) claims database and the PMX related cost was calculated from the fee schedule of NHI. For economic evaluation, we assessed incremental cost effectiveness ratio (ICER) of PMX compared with conventional therapy. The assessment was performed from a purchaser’s perspective. RESULTS: A total of 11 RCTs were identified with pooled sample size of 802; 477 in PMX and 325 in conventional therapy group. Meta-analysis results showed that PMX therapy had significantly lower mortality risk. The 28-day mortality rate of PMX group and conventional therapy group were 35.4% and 70.4% respectively with risk ratio of 0.51 (95% CI, 0.43–0.59). The medical cost for sepsis turned out 3,536,000 KRW per patient, which is common in PMX and conventional treatment. The additional cost related to PMX treatment was estimated to be KRW3,496,984 KRW per patient. Applying this mortality outcome and cost data, we produced an ICER of KRW15,705,669 per life gained. CONCLUSIONS: Compared with conventional therapy alone, PMX therapy with conventional therapy for the treatment of severe sepsis was found clinically superior and cost-effective as well.

COST-EFFECTIVENESS OF PNEUMOCOCCAL POLYSACCHARIDE VACCINATION IN ADULTS: A SYSTEMATIC REVIEW OF CONCLUSIONS AND ASSUMPTIONS
Aguas M1, El Khoury A2, Ait M1, Dabach B1, Grabenstein J3, Goethehbeur MM4
1BiomedCom Inc, Montreal, Q.C, Canada; 2Mark & Co, Inc, West Point, PA, USA; 3BioMedCom Consultants Inc, Montreal, Q.C, Canada
OBJECTIVES: Streptococcus pneumoniae infections in adults are associated with substantial morbidity, mortality, and costs. The objective of this study was to provide an analysis of the conclusions and assumptions of published studies on the cost-effectiveness of pneumococcal polysaccharide vaccination (PPV-23, 23 serotypes) in adults. METHODS: A search of recent literature (1997–2008) was conducted to identify cost-effectiveness studies pertaining to the use of PPV-23, based on published case series, large epidemiological and economical data obtained from Turkish sources or, when unavailable, from international literature. A stochastic Monte Carlo simulation estimated the incremental cost-effectiveness ratio in Euros ($) per life year gained (LYG), assuming that vaccination protected for 5 years with 50–70% effectiveness against pneumococcal bacteremia

VARIATION IN EFFICIENCY FRONTIERS FOR HIVAIDS PREVENTION AND TREATMENT
Kamae M1, Kamae F1, Cohen JT2, Neumann PA3
1Tufts-New England Medical Center, Boston, MA, USA; 2Yale University, Fukushima, Kanagawa, Japan
OBJECTIVES: To investigate how the cost-effectiveness of preventing or treating HIV/AIDS varies by a series of potentially relevant external factors. METHODS: We reviewed the cost-effectiveness evidence for HIV/AIDS prevention and treatment in the Cost-Effectiveness (CEA) Analysis Registry at Tufts Medical Center (www.cearegistry.org) from 2002–06, and then constructed efficient frontier curves (EF curve) in terms of incremental cost per QALY ratios based on extracted evidence using methods introduced by Institute for Quality and Efficiency in Health Care (IQWiG), Germany. All articles that report cost-effectiveness as USD/QALYs were selected, including information on the following factors: payer perspective; prevention stage; intervention type, and country of study. We excluded articles with time horizon <30 years and those without discounting. RESULTS: Of 237 eligible articles in the CEA Registry, we extracted 11 HIV/AIDS-related articles, which included 84 individual cost-effectiveness (CE) ratios. Plotted EF curves were visually distinct, depending on the prevention type, with primary prevention interventions being most efficient. With respect to country, the EF curve for the U.S. and South Africa were separate, with the curve for South Africa lying near the vertical axis, reflecting low cost per QALY ratios for interventions studied. Subgrouping by payer perspective (societal or health care payer) and intervention type (pharmaceutical, education, and screening) did not affect the separation of the lines. CONCLUSIONS: The CE ratio clustering in HIV/AIDS was found on the C-E plane, which suggested separate EF curves should be considered by stratifying by prevention stage and country. These results may differ for other diseases, but this analysis shows that stratified EF analysis could help to develop a deeper appreciation of cost-effectiveness beyond crude cost per QALY ratios without stratification.

COST OF PNEUMOCOCCAL INFECTIONS AND COST-EFFECTIVENESS ANALYSIS OF PNEUMOCOCCAL VACCINATION IN TURKEY
Akın L1, Kaya M1, Akdoğan S2, Pehlivan ı3, Durand L1, Taştecin A1
1Hacettepe University, Ankara, Turkey; 2Sanoft Pasteur; Istanbul, Turkey; 3Sanoft Pasteur; Lyon cedex 07, France; 4Sanoft Pasteur Lyon, France
OBJECTIVES: Vaccination of elderly and at-risk population against Streptococcus pneumoniae is recommended and partially reimbursed in Turkey due to the substantial medical and economic burden. However, only ~2% of these populations were vaccinated in 2007. A three-step economic analysis was designed to measure the burden of pneumococcal infections (pneumonia and bacteremia) from a public payer perspective of elderly (~60 years) and at-risk (~60–89 years), and to evaluate the benefits of implementing a vaccination program. METHODS: Firstly, we evaluated the cost of pneumonia and bacteremia in retrospective and prospective studies in public hospital services in Ankara. Secondly, a static model was used to evaluate cost-effectiveness of vaccination in the two targeted populations using demographic and epidemiological data obtained from Turkish sources or, when unavailable, from international literature. A stochastic Monte Carlo simulation estimated the incremental cost-effectiveness ratio in Euros ($) per life year gained (LYG), assuming that vaccination protected for 5 years with 50–70% effectiveness against pneumococcal bacteremia