**Conclusions.** According to the concepts of A4R and deliberative decision making, a transparent, evidence-based, fair, and efficient allocation of limited healthcare resources is indispensable for justifying decisions on health funding priorities in democracies. However, these criteria can be diametrically opposed. For example, methods, processes, and decisions can be evidence based, transparent, and fair, but also significantly more time consuming. Thus, a balance between the individual options for action is necessary, and priorities must be set.

## PP88 Economic Impact Of New Diagnostic Tools In Severe Sepsis

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**Introduction.** Constantly rising healthcare costs and the increasing incidence of antimicrobial resistance represent a growing burden on public health, affecting patients, physicians, payers, and health authorities. This analysis assessed the economic impact of improved diagnostic accuracy among septic patients.

**Methods.** A cost-consequence model was developed to evaluate two different scenarios for the treatment of severe sepsis: scenario one represents the current status of diagnostic performance used for an antimicrobial treatment; scenario two is based on the assumption that a more accelerated diagnostic process results in 15 percent more patients being treated with an efficient antimicrobial drug early in their therapy. Data for the average patient-related cost for diagnostics (EUR 1,182) and overall cost (EUR 12,090), length of hospital stay (average 18.7 days), and number of patients affected annually (n = 771) were derived from the German Diagnosis-Related Group Catalog for 2017. Further, the impact of optimal versus inadequate therapeutic approaches on length of hospital stay (38% decrease), hospitalization cost (40% decrease), and mortality rate (28% decrease) were derived from published sources.

**Results.** By using more efficient tests to enable earlier detection of sepsis in patients who otherwise would not receive appropriate treatment, 36 additional patients were appropriately treated. The overall annual length of hospital stay can be shortened by 319 days and the number of sepsis-related deaths reduced by three. The overall annual costs in scenarios 1 and 2 amounted to EUR 11.4 and EUR 11.2 million, respectively. The main savings resulted from reduced expenses for hospital stay, drugs, readmissions, and progression to septic shock.

**Conclusions.** Increasing cost pressure and the rise in multi-resistant germs are a burden, which will increase over the next decade. The present analysis showed that a willingness to intervene early and stop detrimental developments, and to invest in effective technologies, can promote affordable health care.

## PP89 Cost Effectiveness Of Hepatitis A Vaccination In India

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**Introduction.** Due to epidemiological transition, a rise in hepatitis A outbreaks among adults in the state of Kerala, India has been noted. This has intensified the need for hepatitis A vaccination (HAV), but evidence regarding the cost effectiveness of HAV, which is essential to guide policy decisions, is lacking. This study was undertaken to evaluate the cost effectiveness of HAV among adults in Kerala state.

**Methods.** To determine the cost effectiveness of HAV from a societal and a payer perspective, a Markov model was constructed with a cycle length of two months. The lifetime costs and outcomes for HAV and no vaccination were compared using a discount rate of 3 percent. Data for the model input parameters of cost, coverage, and effectiveness were derived from the published literatures. One-way and probabilistic sensitivity analyses were applied. A threshold based on the per capita gross domestic product (GDP) was used (1 GDP = INR 127,702.48 [USD 1,886.03]).

**Results.** The incremental cost-effectiveness ratios for both societal and payer perspectives were negative, indicating that HAV was dominant, being less costly and more effective than no vaccination. The discount rates and utility values for adults with HAV were the most sensitive parameters.

**Conclusions.** A HAV strategy would be cost-saving, compared with no vaccination, in the Kerala state of India.

## PP93 Efficacy Of Pharmacological Treatments For Type 2 Diabetes In China

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**Introduction.** There are multiple antidiabetic drugs available in China, which vary in their efficacy and safety. However, no study exists that compares all the classes of antidiabetic drugs simultaneously. This study aimed to estimate and compare the efficacy of alternative classes of antidiabetic drugs for Chinese patients with type 2 diabetes, either in a monotherapy regimen or combined with metformin.

**Methods.** A systematic literature review was conducted by searching various literature databases to identify relevant randomized controlled trials published from 1990 to 2016. A meta-analysis was conducted to compare the efficacy of antidiabetic drug monotherapy and placebo or lifestyle interventions (i.e., diet and exercise), and antidiabetic drug plus metformin versus metformin alone, in Chinese patients with type 2 diabetes. An indirect comparison was used to estimate the efficacy of antidiabetic drug plus metformin versus placebo or lifestyle-intervention using metformin as the common comparator.

**Results.** The database search identified 354 relevant studies. Compared with placebo or lifestyle interventions, combination therapies achieved greater reductions in hemoglobin A1c (HbA1c) level (1.9% versus 0.9%), body mass index (BMI) (2.66 versus 0.98 kg/m2), and total cholesterol level (1.07 versus 0.35 mmol/L) than monotherapies. For monotherapies, the top three treatments for reducing HbA1c level were insulin, sulfonylurea, and glucagon-like peptide-1 (GLP-1) receptor agonist. The top three monotherapies for reducing BMI level were metformin,