

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, sulfonyleurea, and glucagon-like peptide-1 (GLP-1) receptor agonist. The top three monotherapies for reducing BMI level were metformin,

GLP-1 receptor agonist, and α -glycosidase inhibitor. The top three monotherapies for reducing total cholesterol level were metformin, GLP-1 receptor agonist, and dipeptidyl peptidase-4 (DPP-4) inhibitor. For combination therapies, the top three treatments for reducing HbA1c level were GLP-1 receptor agonist plus metformin, insulin plus metformin, and glinide plus metformin. The top three combination therapies for reducing BMI level were glinide plus metformin, GLP-1 receptor agonist plus metformin, and DPP-4 inhibitor plus metformin. The top three combination therapies for reducing total cholesterol level were insulin plus metformin, GLP-1 receptor agonist plus metformin, and α -glycosidase inhibitor plus metformin.

Conclusions. Pharmacological treatments had better efficacy than placebo or lifestyle interventions, while combination drug therapies were superior to monotherapies.

PP94 Clinical Effectiveness Of Regorafenib For Metastatic Colorectal Cancer

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Introduction. Colorectal cancer (CRC) is the third most common malignant neoplasm among men and the second most common among women. According to the World Cancer Report, the number of people suffering from this disease is growing steadily. In 2012, there were more than 1.36 million new cases of CRC, and approximately 694,000 people died from this disease worldwide.

Methods. A sensitive literature search identified 12 relevant publications, including: a CORRECT phase III study assessing the effect of regorafenib in patients with metastatic CRC that continued to progress despite using all standard treatment methods; a CONCUR Phase III study evaluating the clinical effect of regorafenib in Asian patients with metastatic CRC; a CONSIGN study conducted after the CORRECT and CONCUR studies that assessed the safety profile of regorafenib prior to market entry; and various systematic reviews evaluating the safety of regorafenib.

Results. The efficacy and safety of regorafenib for treating patients with metastatic CRC was evaluated in two major clinical studies: CORRECT and CONCUR. Although the studies were randomized, double-blind, and placebo-controlled, they were conducted in different patient populations. Before treatment with regorafenib, patients received, depending on the country, fluoropyrimidines, oxaliplatin, irinotecan, or bevacizumab, and patients with the wild-type KRAS gene also received cetuximab and panitumumab. Results from both studies indicated that regorafenib had a clinically significant positive effect on rates of progression-free survival and overall survival in patients with treatment-resistant metastatic CRC.

Conclusions. Regorafenib can be recommended as a monotherapy for resistant metastatic CRC when there are no contraindications to use. Considering the safety profile of regorafenib, further research is needed to determine the best dosage of regorafenib and the most appropriate clinical and molecular biomarkers for determining which patients would benefit most from this treatment.

PP98 Educating Medical Students Toward Quality-Targeted Leadership

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Introduction. Classic health technology assessment (HTA) is based on safety, efficacy, and costs. However, in the dynamic world of medicine, “real-world” experience is used to improve HTA. Aggregating evidence is a constant challenge. Physicians are traditionally trained in professionalism (knowledge and skills) and compassion, concentrating on the patient and disease rather than the technology. Currently, medical education also emphasizes quality of care by promoting standardization, and reducing mistakes by root cause analysis. We aimed to integrate the key parameters of safety, effectiveness, quality measures, economic aspects, and assessment guidelines for real-world experience in medical education.

Methods. A group of medical students participated in a targeted HTA-orientated education program, which focused on the identification of challenges and barriers in the adoption of health technologies, and then completed a structured survey.

Results. The program included 243 students. They raised four major emerging challenges: (i) to initiate a culture of quality and HTA-targeted perception for individual physicians; (ii) to better understand the role of different stakeholders in the health system; (iii) to be exposed to considerations of budget allocation; and (iv) to incorporate patient preferences, expectations, and engagement so that patient-centered care becomes a critical part of HTA.

Conclusions. Incorporating values of HTA-targeted quality at an early stage of medical education, while future physicians are developing their professional identity, may create a professional, quality-focused leadership group in health care. The understanding and implementation of these “new” dimensions may serve as a platform for building smart capability to ensure better decision making processes among caregivers and medical managers.

PP99 Hospital-Based Health Technology Assessment Units In Brazil: Present And Future

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Introduction. Since 2007, 23 Núcleos de Avaliação de Tecnologias em Saúde or hospital-based health technology assessment (HB-HTA) units have been established in teaching hospitals across Brazil. These units aim to promote the development of health technology assessment in hospitals, assisting the decision-making process for implementing new technologies and evaluating and promoting the rational use of widespread technologies.

Methods. An online questionnaire was sent by e-mail to all HB-HTA units registered in the Brazilian Network for Evaluation of Health Technologies. Information was acquired to comprehensively assess the activity of the units.