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.

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Results. All 23 HB-HTA units answered the questionnaire. Of these, 65 percent had a technology prioritization process. The technologies assessed included drug therapies (73%), equipment (64%), medical devices (64%), clinical protocols (46%), and emerging technologies (27%). The dimensions of health technology assessment (HTA) evaluated by these organizations were: efficacy (76%); effectiveness (67%); safety (67%); costs (52%); cost effectiveness or cost utility (52%); and budget impact (43%). The hospital departments that required more HTA studies were: cardiology (50%); infectious diseases (45%); hospital management (45%); oncology (40%); surgery (40%); and endocrinology (20%). HTA studies supported: incorporation of new technologies (81%); protocol or guideline development (57%); new indications for already approved technologies (38%); and withdrawal of obsolete technologies (29%). Half of the institutions also conducted educational or training activities. The main difficulties reported were a lack of trained professionals (78%), funding (70%), and material resources (48%).

Conclusions. For low- and middle-income countries, the process of implementing HB-HTA units remains a challenge. Even though human resources and funding are scarce, HB-HTA units continue to develop. Given their importance in the decision-making process, it is imperative that every effort is made to ensure their activities continue.

PP100 Unraveling Hospital-Based Health Technology Assessment In Brazil

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Introduction. In Brazil, hospital-based health technology assessment (HB-HTA) units have been implemented countrywide since early 2000 to improve decision-making processes. Multiple-criteria decision analysis (MCDA) can provide a deeper understanding of a given subject. The present study used MCDA to evaluate capacity building among HB-HTA units in Brazil.

Methods. This study analyzed preliminary data from a survey developed and sent to all HB-HTA units in Brazil in 2018. The survey comprised 116 questions covering a wide range of aspects. Initially, an expert panel was organized, and 46 objective questions (out of 116) were selected by four experts. Next, these experts classified the selected questions by weighting them according to their relative importance. A Likert scale was used to identify the levels of importance, which were converted to weights ranging from zero to one. The experts then defined a final importance score threshold of 60 percent to classify units as fully operational. Grades below this threshold indicated the need for a more detailed evaluation. Of the 80 survey questionnaires, 23 were evaluated by the proposed method.

Results. Importance weights for each classification were defined as follows: personnel (25%); level of expertise (31%); work production (31%); and infrastructure (13%). The mean final importance score for the HB-HTA units was 68 percent. The maximum and minimum scores achieved were 95 percent and 15 percent, respectively. The HB-HTA units had been established for an average of 6 years, and ten of the 23 units were classified as fully operational.

Conclusions. The multicriteria method presented by this study simplified HB-HTA unit evaluation, reducing the subjectivity of results. Final importance scores for each unit's categories indicated which areas need improvement. Results from the study indicated that infrastructure and personnel could be greatly enhanced, even though the production profile was satisfactory.

PP103 A Comparative Study Of Catastrophic Health Expenditure In China

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Introduction. China has made great achievements in health insurance coverage and healthcare financing. Nonetheless, the rate of catastrophic health expenditure (CHE) in China was 13 percent in 2008, which is higher than in some other countries. There are differences among the provinces in China in terms of the lifestyles, customs, prevalent medical conditions, and health consciousness of their populations. This study aimed to compare the proportion of households with CHE and the factors influencing this expenditure between the Zhejiang and Qinghai province in China.

Methods. Data were derived from household surveys conducted in Zhejiang and Qinghai. Sampling was based on a multi-stage, stratified random cluster method. Households with CHE were defined as those with an out-of-pocket payment for health care that was at least 40 percent of the household income. Univariate and multivariate logistic regression analyses were used to identify the factors associated with CHE.

Results. A total of 1,598 households were included: 995 in Zhejiang and 603 in Qinghai. The average rates of CHE in Zhejiang and Qinghai were 10 percent and 31 percent, respectively. The economic status of a household influenced the likelihood of experiencing CHE; households headed by an employed person were less likely to experience CHE. In contrast, households that included outpatients or individuals with chronic diseases had a higher risk of experiencing CHE across the two provinces. Poorer or uninsured households in Zhejiang were more likely to experience CHE, as were households in Qinghai that included outpatients or were headed by a person from a minority nationality.

Conclusions. This study highlighted the importance of promoting economic development, expanding employment, and adjusting policies to better protect individuals with chronic diseases and outpatients from the risk of CHE. The Chinese government should pay more attention to actual conditions in different provinces to ensure that policy decisions incorporate local knowledge.

PP107 Harpoon™: A Novel Device For Transapical Mitral Valve Repair

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