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ASSESSING ASSESSMENT: DOES HEALTH TECHNOLOGY ASSESSMENT DO ITS JOB OF CONTROLLING COSTS WITHOUT COMPROMISING QUALITY?

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OBJECTIVES: The pace of innovation in health care has facilitated gains in life expectancy, but at a tremendous cost. Rational use of limited health care resources remains one of the greatest challenges in health care worldwide. This analysis sought to compare health care spending and health outcomes in countries with and without formal health technology assessment programs. **METHODS:** Data was collected on health care spending from 1990-2012 in European countries with and without HTA and compared to the United States, which eschews any formal evaluation of comparative or cost effectiveness. Measures of health outcomes were considered, including life expectancy and overall mortality. The impact of population age, tobacco use and obesity rates on health outcomes were considered. Lastly, the number, content and methodology of HTA publications in countries with HTA were assessed. **RESULTS:** The majority of HTA evaluations have focused on pharmaceuticals. Countries with established HTA had lower spending on pharmaceuticals, but not always lower overall health care spending, while maintaining or improving health outcomes relative to non-HTA countries. The United States had the highest rate and annual increase in rate in pharmaceutical spending as well as overall health care spending, with the worst health care outcomes in countries analyzed. **CONCLUSIONS:** The incorporation of formal health technology assessment as part of overall health care decision making appears to assist in controlling the rise in health care spending, particularly drug spending. While better health outcomes in life expectancy and mortality were found in HTA versus non-HTA countries, correlation versus causality can only be considered at this point. Systematic use of HTA on both pharmaceutical and non-pharmaceutical interventions may help to control overall health care spending.

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THE TREND OF THE PRICES OF NEW MARKETED DRUGS IN TURKEY

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OBJECTIVES: Health Transformation Program was started at year 2002 by Ministry of Health (MoH) in Turkey. Today, Turkey has a well established health system mostly dominated by government on health care provider and payer. The program allows the patient access to all drugs. There was an increasing trend for the pharmaceutical consumption in years depending on the taken policies as other health care services. The aim of this study is to review an analysis for the new drug release prices for Turkey in the recent years. **METHODS:** The data was obtained from the last price list of each calendar year published by MoH for the years between 2009-2014. The year 2014 year data limited with the first quarter (Q1). The data classified in three groups which were: over 100 TL, over 1000 TL and over 10000 TL. All the result were based on ex-factory prices. A descriptive analysis was conducted on the price lists with the number of the products, maximum and average ex-factory prices. **RESULTS:** The numbers of new released products over 100 TL were; 1, 7, 58, 36 and 52 in the years 2009, 2010, 2011, 2012 and 2013, respectively. The numbers of new released products over 1000 TL were; 0, 1, 10, 11 and 13 in the years 2009, 2010, 2011, 2012 and 2013, respectively. The highest ex-factory prices were 739 TL, 1117 TL, 4066, 72 TL, 5781, 05 TL, 22791, 55 TL and 36577, 33 in the years 2009, 2010, 2011, 2012 and 2013, respectively. The average ex-factory prices were 178, 98 TL, 329, 28 TL, 214, 36 TL, 312, 93, 497, 44 TL and 612, 85 TL in the years 2009, 2010, 2011, 2012, 2013 and 2014Q1 respectively. **CONCLUSIONS:** It was shown that the number of high prices drugs, the highest price and the average price of the new drugs were increased year by year. Increased patient access may encourage pharmaceutical companies to enter the Turkish market with their innovative drugs which have high price tag compared to regular drugs.

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SETTING TARGETS FOR PUBLIC SPENDING UNDER EU-IMF ASSISTANCE TO PORTUGAL - THE CASE OF HEALTH CARE AND PHARMACEUTICALS

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OBJECTIVES: The 2008 global financial crisis hit Portugal strongly culminating in request financial assistance from European Union and International Monetary Fund on 17th May of 2011. In addition, Portuguese economy had already before 2008 a decreasing real growth rate of GDP, stagnant from early in the decade, and an increasing external deficit. Health care measures represented a key area within the assistance program. Specific targets were set for public spending in pharmaceuticals in order to align with EU average at 1.25 and 1.0 percent of GDP for 2012 and 2013, respectively. The aim of our study was to demonstrate that GDP targets was a political decision not supported by evidence, technically inaccurate, created a hurdle and equity asymmetries for patients access to medications, as well as jeopardized the future sustainability of Pharmaceutical sector. **METHODS:** We analyzed health, pharmaceuticals and medicines public spending EU benchmark in real terms, GDP ratio and per capita. We also revise the System of Health Accounts methodology and conceptual framework of International Classification of Health Accounts. OECD definitions, sources and methods were also studied. **RESULTS:** Despite the efforts to improve the comparability across countries through common and better information framework of greater relevance for policy concerns, we observed that such approach is not recommended. For a more comprehensive understanding of health spending in relation to GDP ratio, it should be considered together with health spending per capita. Portugal comparisons are an OECD example for this rational. Importantly, OECD measures of pharmaceutical spending exclude in-patient (hospital) spending. In addition, pharmaceuticals definition is broader than prescription medicines only. **CONCLUSIONS:** Important political decisions were taken assuming pharmaceuticals and prescription medicines as the same concept. Here, we demonstrate

that setting arbitrary benchmarks based on empirical observation of comparative EU countries is incorrect due to wide inconsistencies over pharmaceutical distribution.

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HTA INFORMED PRICE NEGOTIATIONS: COST SAVINGS TO THE HEALTH PAYER IN IRELAND

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OBJECTIVES: In Ireland, the reimbursement decision process involves the Marketing Authorisation Holder (MAH) submitting a Health Technology Assessment (HTA) dossier to the National Centre for Pharmacoeconomics (NCPE). The NCPE evaluates this dossier and submits a reimbursement recommendation to the Health Service Executive (HSE) (the decision maker). Along with Cost-Effectiveness and Budget Impact analyses, the decision maker considers other criteria in determining the health benefit of an intervention. Those interventions which are not deemed cost effective at a threshold of €45,000/QALY may proceed to HTA informed HSE-MAH price negotiations. The aim of this study was to estimate the potential annual cost savings (reduced potential budget impacts) to the HSE as a consequence of HTA informed price negotiations. **METHODS:** All NCPE assessments received over a 2 year period were reviewed. Interventions were included if initially they had not been recommended for reimbursement, but had subsequently been reimbursed after HTA informed price negotiations. The potential total annual cost saving to the HSE (difference between the original Gross BI (submitted price) and the revised Gross BI (negotiated price) was estimated. The respective MAH BI models were used for these analyses. **RESULTS:** Eight interventions fitted the inclusion criteria; all were classified as either oncology drugs or drugs for orphan diseases. When all such drugs are considered, it is estimated that the cost savings to the HSE, as a result of HTA informed price negotiations is over €19 million per annum. **CONCLUSIONS:** In Ireland, HTA informed price negotiations lead to considerable cost savings to the Health Payer.

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ACCESS TO NON COMMUNICABLE DISEASE MEDICINES IN INDIA: A COMPARATIVE ANALYSIS OF STATE LEVEL PUBLIC PROCUREMENT DATA

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OBJECTIVES: - To assess access to NCD medicine in India using public drug procurement data. **METHODS:** - State procurement data was used to calculate, total and per capita value of procurement towards purchase of essential medicines. ABC analysis was performed to identify priority medicines that together account for 80% of total expenditure (Category A items). The proportion of NCD medicines among category A items was then estimated. Finally, the efficiency of the system was captured through comparative price analysis of procurement price to International Reference Price (IRP). **RESULTS:** - Out of the 91 NCD medicines on WHO list of essential medicine, states were procuring 40 to 87 NCD medicines. In addition, the share of NCD procurement value to total procurement value was in range of 1.32% to 37%. Similarly, the annual per capita spending was in range of 0.1 to 103 Indian Rupees (INR). The procurement prices across all the states were lower than the international reference price. The retail market prices were between 45%-3600% higher than the state procurement prices, and were higher on average by 6 times of international reference price. The defined daily dose estimates were not uniform for all ATC. The most neglected category among all ATC's was mental health, in the range of 0.020-56.688 DDD per 1000. **CONCLUSIONS:** - There is limited access to NCD medicines in public health system in selected Indian states.

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CONSTRUCTING A COMORBIDITY INDEX ACCORDING TO ISO-RESOURCE CONSUMPTION

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OBJECTIVES: To construct a comorbidity index according to iso-consumption of health resources and their associated costs in routine clinical practice. **METHODS:** We made a multicentre study through review of computerized medical records. The study population consisted of patients assigned to seven primary care centres, two acute care hospitals and one social health centre, all managed by Badalona Serveis Assistencials SA. The following variables were analysed: age (0-100 years), sex, comorbidity (chronic diagnoses) and direct health care costs. We estimated the resource use and gross health care costs attributed to all patients requiring health care in 2013. Subsequently, an expert panel identified the most-prevalent chronic diseases (ICD-9). Subgroups were established according to age and number of chronic comorbidities. The main variables and comorbidities associated with the costs were identified using a multivariate model. This allowed a total score to be developed for each patient. Statistical analysis: Spearman's correlation coefficient, multiple logistic models and linear regression were used. A value of p < 0.05 was identified as significant. **RESULTS:** We recruited 103,764 patients (86.5% of the total). Mean age was 43.1 (23.9) years and 52.4% were female. The mean unit cost was € 836.9 (2032). The gross cost was associated with age (r = 44.8) and comorbidity (r = 0.512). The final score was obtained from the logistic model. The score obtained showed a good correlation with age (r = 81.8), comorbidity (r = 0.939) and the cost of health care (r = 0.696). The index obtained explained 44.7% of the gross cost. The index was better adapted to the adjusted costs. We describe the disaggregated results and the results according to levels of comorbidity (healthy, low, medium, high). **CONCLUSIONS:** The comorbidity index obtained was shown to be a simple potential predictor of the cost of care and may be applied in routine clinical practice.