the characteristics of community pharmacies in Egypt. The current study and future ones would significantly improve the ability to probe practice-related issues and economic challenges community pharmacies and pharmacists face in Egypt.

PHP141 BRIDGING HTA AGENCIES ACROSS EUROPE: A SYSTEMATIC APPROACH TO CATEGORIZE EVOLVING AGENCIES
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OBJECTIVES: HTA agencies are mushrooming in Europe. Industry faces the challenge to meet their diverse requirements and comply with decision criteria. Our aim was to investigate similarities and distinguishing characteristics of HTA agencies using different approaches to HTA and serve as a reference for others, and to assign other countries to one of the anchor institutes. METHODS: We identified the primary institutions in European countries where HTA plays a role in decision making. We developed a template for the unified assessment of the input needs of the agencies, and a set of criteria an anchor country should meet. Agencies were assessed based on a literature review, and assigned to one of the anchor countries, which was validated by MSD subsidiaries across Europe. Future trends in anchor countries were investigated. RESULTS: We identified three anchor institutes in Europe using different value assessment concepts. IQWiG in Germany primarily assesses HTA submissions on the basis of patient-related outcomes requiring hard endpoints. HAS in France sees the medical benefit of technologies in innovativeness rating them from no innovation to breakthrough innovation. NICE in the UK uses evidence of cost-effectiveness as a major mapping consideration. We found that other European countries tend to primarily follow one of these concepts. Analysing future trends, one can see convergences in the fields of HTA requirements, between regulatory and HTA, in coordination and problem solving. CONCLUSIONS: HTA agencies can be systemized based on their requirements. This review can serve as a depositary of individual country needs in HTA, an input to the design of clinical trials, and can support the development of new HTA strategies. Such a snapshot however cannot substitute the deep knowledge of local requirements and needs regular update to follow up future trends.

PHP142 CHANGES IN THE NUMBER OF ENROLEES IN THE HUNGARIAN MANAGED CARE PROGRAMME
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OBJECTIVES: A pilot care managing programme was introduced in Hungary in 1999. The conceptual foundations of the Hungarian implementation of managed care is closer to what was called the GP fundholding in the UK than TMOS in the USA. The purpose of the study is to analyse the changes in the number of enrollees in the care managing programme. METHODS: The data derive from the financial database of the Hungarian National Health Insurance Fund Administration (NHIFA) covering the period 1999-2007. We identified the average annual number of persons enrolled to Care Managing Organizations. The Hungarian EPMOs was financed through a risk adjusted capitation fee and the health services covered by CMOs were defined in legal regulations. RESULTS: The total number of the Hungarian population was around 10 million people during the study period. Since the beginning of the programme (1999) the total number of persons covered by the care managing programme increased from 158,984 (1.5 % of the Hungarian population) to 601,915 persons (5.9 %)(100 %) during the study period. Since the beginning of the programme (1999) the total number of persons covered by the care managing programme increased from 158,984 (1.5 % of the Hungarian population) to 601,915 persons (5.9 %) to 1,961,025 (19.4 %) in 2005. After this peak, the number of enrollees decreased to 1,823,732 persons in 2006 and 1,409,475 persons in 2007. Later the number of enrollees for the Hungarian population was around 10 million people, which means that the population decreased to 18.8 persons per each million people in 2007. The proportion of occasions CMS cited, a "lack of relevant health outcomes" increased from 14% in 2000 to 67% in 2012 (p<0.0001; exact test, 1999-2012). The proportion of occasions CMS cited, a "lack of relevant health outcomes” increased from 14% in 2000 to 67% in 2012 (p<0.0001; exact test, 1999-2012). CMS has increasingly relied on coverage with evidence development (CED) policies since 2000. Since 2009, 10 NCDs (29% of NCDs in this period) resulted in CED policies, more than half of all CEDs (n=19) (40%) to primarily lower missing out-of-pocket costs. To improve their F&T Committee process, 23.3% would incorporate more CED results. 13.3% would enhance the physician/specialist presence on the review committee, and 6.6% would increase the time allowed for review to allow for a more in-depth evaluation. CONCLUSIONS: The environment for P&T Committee decision making in managed care is undergoing a series of changes, and payer medical directors and pharmacy directors, who commonly are P&T Committee members, have distinct opinions as to how to alter the process to adapt to these influences.

PHP145 A REGRESSION ANALYSIS OF THE IMPACT OF PATIENT ACCESS SCHEMES
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OBJECTIVES: Patient Access Schemes (PASs) are part of the UK Pharmaceutical Price Regulation Scheme (2009). PASs enable patients to receive drugs, and allow pharmaceutical companies to collect cost-effectiveness and efficacy data, even if the drug is not covered by the cost-effectiveness project. This study assesses the HTA submissions on the basis of patient-related outcomes requiring hard endpoints. Has in France sees the medical benefit of technologies in innovativeness rating them from no innovation to breakthrough innovation. NICE in the UK uses evidence of cost-effectiveness as a major mapping consideration. We found that other European countries tend to primarily follow one of these concepts. Analysing future trends, one can see convergences in the fields of HTA requirements, between regulatory and HTA, in coordination and problem solving. CONCLUSIONS: European HTA agencies can be systemized based on their requirements. This review can serve as a depositary of individual country needs in HTA, an input to the design of clinical trials, and can support the development of new HTA strategies. Such a snapshot however cannot substitute the deep knowledge of local requirements and needs regular update to follow up future trends.

PHP146 THE CHANGING FACE OF MEDICARE’S NATIONAL COVERAGE FOR NEW TECHNOLOGIES, 1999-2012: PREVENTION, DIAGNOSIS, AND COVERAGE WITH EVIDENCE DEVELOPMENT
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OBJECTIVES: The Centers for Medicare and Medicaid Services (CMS) makes 10-12 National Coverage Determinations (NCDs) for medical interventions each year. Our objective was to identify evolving trends in NCDs. METHODS: We analyzed the CMS’s NCDs with the use of text mining to identify trends in NCDs from 1999 to 2012. RESULTS: The proportion of PASs in the UK were analysed. These included: leukaemia, thrombosis, bortezomib, sunitinib, and cetuximab. These were analysed in France, Germany, Italy, Spain and the UK, between 2010 and 2011 using IMS sales data and the GloboScan Project 2008 prevalence data. RESULTS: The results of the regression analysis showed that the existence of a PAS does not seem to have an effect on the change in PA. Therefore, this model cannot support a relationship between these two variables. The R2 is 0.6191, however the only variable which was statistically different from 0 is the number of competitors, with a p-value of 0.014, which means it is the only variable which had a significant effect on the change in PA. CONCLUSIONS: Further research needs to be conducted for a detailed analysis on this relationship.

PHP147 WHAT PAYERS WANT? THE ATTRACTION OF THE HEAD-TO-HEAD CONTROLLED TRIAL
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OBJECTIVES: Industry faces the challenge to meet their diverse requirements and comply with decision criteria. Our aim was to investigate similarities and distinguishing characteristics of HTA agencies using different approaches to HTA and serve as a reference for others, and to assign other countries to one of the anchor institutes. METHODS: We identified the primary institutions in European countries where HTA plays a role in decision making. We developed a template for the unified assessment of the input needs of the agencies, and a set of criteria an anchor country should meet. Agencies were assessed based on a literature review, and assigned to one of the anchor countries, which was validated by MSD subsidiaries across Europe. Future trends in anchor countries were investigated. RESULTS: We identified three anchor institutes in Europe using different value assessment concepts. IQWiG in Germany primarily assesses HTA submissions on the basis of patient-related outcomes requiring hard endpoints. HAS in France sees the medical benefit of technologies in innovativeness rating them from no innovation to breakthrough innovation. NICE in the UK uses evidence of cost-effectiveness as a major mapping consideration. We found that other European countries tend to primarily follow one of these concepts. Analysing future trends, one can see convergences in the fields of HTA requirements, between regulatory and HTA, in coordination and problem solving. CONCLUSIONS: European HTA agencies can be systemized based on their requirements. This review can serve as a depositary of individual country needs in HTA, an input to the design of clinical trials, and can support the development of new HTA strategies. Such a snapshot however cannot substitute the deep knowledge of local requirements and needs regular update to follow up future trends.
OBJECTIVES: As payers decide makers increasingly become primary gatekeepers for access to novel therapies, pharmaceutical, biotech and medical device manufacturers strive to fulfill the evidentiary requests of the pharmacy benefit managers (PBM). One particularly interesting notion is the group of patented drugs. The purpose of this work is to present a proportional rule for setting ceiling prices of new innovative drugs. In essence, a proportional rule sets out that drug prices change in proportion to the size of health benefits. The rule of proportionality has its theoretical foundation in economic consumer theory, which states that willingness to pay (for drugs) is a direct measure of the value of patient time and the role of prices change in proportion to the price of health benefits. The purpose is to present a proportional rule for setting ceiling prices of new innovative drugs. In essence, a proportional rule sets out that drug prices change in proportion to the size of health benefits. The rule of proportionality has its theoretical foundation in economic consumer theory, which states that willingness to pay (for drugs) is a direct measure of the value of patient time and the role prices change in proportion to the size of health benefits, in accordance with economic consumer theory. The suggested proportional rule combines four desirable properties: first, it increases transparency and equity; second, it helps pharmaceutical companies in making better predictions about whether their investment in R&D is worth it; and forth, it obviates the need to put an explicit dollar value on a person’s life. Optionally, the decision rule can account for additional aspects beyond an increase in health benefits: i) lack of growth of gross domestic product; ii) price difference between patented drugs and generic drugs; and iii) savings which go beyond the reduction in clinical events. In summary, the suggested proportional rule avoids many of the shortcomings of existing cost-per-QALY rules while limiting the introduction of new weaknesses.

PHP148
A DECISION PROGRAM TO DETERMINE THE COST-EFFECTIVENESS AND HEALTH BENEFITS OF PAY-FOR-PERFORMANCE PROGRAMS
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OBJECTIVES: Industrially countries are increasingly adopting pay-for-performance (P4P) mechanisms for quality improvement. The purpose of this work is to present a decision program that is able to estimate the cost-effectiveness, budget impact, and health benefits of P4P programs. METHODS: The decision program builds upon previously published decision models on the cost-effectiveness of implementation programs. The model analyzes the three possible benchmarks for rewarding performance: absolute performance, improved performance, and relative performance. RESULTS: The model shows that when P4P programs do not lead to a substitution of other health care programs their incremental cost-effectiveness ratio (ICER) is deterministically determined and ranges from treatment ICER to infinity. This holds regardless of the reward mechanism and in the presence or absence of a budget constraint. A P4P program will be adopted only if it substitutes other programs with lower financial incentive to providers. Budget impact and health benefits are calculated as the difference in costs and health benefits between the P4P program and the programs that are replaced. A P4P program is cost saving when the programs to be substituted have higher per patient costs despite a lower financial incentive. CONCLUSIONS: The proposed decision program is able to deterministically model the cost-effectiveness and budget impact of P4P programs under different reward mechanism and in the presence or absence of a budget constraint.

HEALTH CARE USE & POLICY STUDIES – Conceptual Papers

PHP150 ROLE OF PATIENT FINANCIAL CONTRIBUTIONS IN IMPROVING PATIENT ACCESS TO MEDICINE Shanker R, Birksmo JC, Lee STM
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Patient financial contributions or copayments are an important funding source for access to medicine in both developed and emerging markets. In the former, they are on the rise as fiscally strapped health systems shift costs to patients; in the latter, they are declining as governments expand public funding for access. In this paper, we address three topics. First, we characterize the systems of patient contributions in eleven established markets and eight emerging markets using data from IMS and international organizations such as OECD. We also quantify the current level of use and the trends in application of patient contributions. Second, we conduct a systematic review of research literature on the impact of patient contributions published between 2000 and 2012 to examine if they achieve their intended policy objectives in practice. Specifically, we look at the implications of patient contributions on whether they (1) encourage responsible or rational medicine use by patients; (2) allow governments to contain public health care costs while still sustaining patient access to treatments; (3) provide flexible choice for patients who want to pay for non-essential prescription medicines; and (4) improve the health status of all patients to gain medicine by increasing funding for health care allowing public investment to focus on higher need patients, or if they tend to displace public investments thereby reducing overall public health care provision. We find that in some cases, patient contributions have the desired effects, while in other cases they have limited or even opposite effects. Whether or not patient contributions achieved desired objectives depends on the design of the policy, e.g., if these contributions are discriminated between treatment choices or not. Third, based on our findings, we draw out key elements that patient contribution systems must have to achieve their objectives in developed and emerging markets.

PHP152 A PROPORTIONAL RULE FOR DETERMINING CEILING PRICES OF NEW INNOVATIVE DRUGS
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In many countries policy makers are concerned about an increase in drug expenditure. One particular medical direction is the group of patented drugs. The purpose of this work is to present a proportional rule for setting ceiling prices of new innovative drugs. In essence, a proportional rule sets out that drug prices increase in proportion to the size of health benefits. The rule of proportionality has its theoretical foundation in economic consumer theory, which states that willingness to pay (for drugs) is a direct measure of the marginal value of patient time and the role prices change in proportion to the size of health benefits. The suggested proportional rule combines four desirable properties: first, it increases transparency and equity; second, it helps pharmaceutical companies in making better predictions about whether their investment in R&D is worth it; and forth, it obviates the need to put an explicit dollar value on a person’s life. Optionally, the decision rule can account for additional aspects beyond an increase in health benefits: i) lack of growth of gross domestic product; ii) price difference between patented drugs and generic drugs; and iii) savings which go beyond the reduction in clinical events. In summary, the suggested proportional rule avoids many of the shortcomings of existing cost-per-QALY rules while limiting the introduction of new weaknesses.

PHP153 REEMPHASIZING THE ECONOMICS IN PHARMACEUTICALS
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Among the many definitions of economics are several that focus on the role that price and income play in determining human behavior. In many pharmacoeconomic studies little attention is paid to different levels of prices and the resulting differences in behavior. More important, in most studies based on randomized controlled trials there is no variation in income and variations in income are not even measured. It is not so much that the authors believe that prices and incomes have no effect on behavior. It is more that the effect is believed to be minor or the goal of the study is not really an economic one. This paper will review the changes in behavior the resulting from one’s role as a provider of health care, the role of the patient behavior, providers, payers, and pharmaceutical companies. The discussion of patient behavior will focus on the value of patient time and the role of out-of-pocket costs in determining adherence. Physician and hospital behavior will be considered in light of market prices of their inputs and outputs. Government and private payer behavior will be characterized. A brief discussion of pharmaceutical company profit incentives will be included. Finally, we will review the information typically used to get a formulary in the United States. We propose adding discussion of behavioral responses to changing market conditions in pharmacoeconomic submissions to regulatory bodies including those making formulary decisions.

PHP154 DISPOSAL OF DATE EXPIRED AND UNUSED MEDICINES IN INDIA– A CONCEPTUAL FRAMEWORK
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The medicines used for common ailments are stored by many household for emergency use. Many times these medicines expire despite being stored under prescribed conditions. It is important to dispose these medicines that are date expired and unused in an appropriate manner. The guidelines for disposal for medicines are prescribed by World Health Organization (WHO) and United States Food and Drugs Administration (USFDA). Some of the methods suggested to dispose date expired and unused medicines include returning to manufacturer, landfill, and waste immobilization: encapsulation/ inertization, flushing it down the Sewer and incineration. Despite precautions associated with these methods, these methods are not effective. Studies have shown that these methods sometimes pose a risk not only to human beings by increasing chances of taking wrong medicines, accidental poisoning, adverse drug reactions, drug-drug interactions that increases health burden but also to the environment. In India, the knowledge regarding disposal of date expired and unused medicines is lacking among common people. A conceptual framework to dispose date expired and unused medicine is devised. Pharmacies interested in program would be identified wherein patients visiting their pharmacies would be charged of changing prices and in return the unused/date expired medicines to participating pharmacies. The unused and date expired medicines collected in pharmacies shall be segregated into various dosage forms and packing material. The recovered contents will be sent to a specialist company that uses specific procedures in order to recycle the collect reusable components and safely dispose of chemical components based on prescribed procedures. The recovered products are not only medical waste but also a valuable and worth material that can be used for various purposes.