EGYPTIAN PHARMACOECONOMIC UNIT
CENTRAL ADMINISTRATION FOR PHARMACEUTICAL AFFAIRS
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MINISTRY OF HEALTH

What’s The News!!

Flow Chart

LIMITATIONS OF EGYPTIAN CURRENT PRICING SYSTEM

COST MINIMIZATION ANALYSIS OF U100 INSULIN AND U40 INSULIN IN EGYPTIAN DIABETIC PATIENTS.

PHARMACEUTICAL INDUSTRY IN MENA REGION: CHALLENGES AND RECOMMENDATIONS.
INTRODUCTION

Egyptian Pharmacoeconomic Unit had been established since August 2013.

VISION

Provide scientific guidance for the value of drugs in delivering expected outcomes to decision makers, health professionals and the public.

MISSION

- Conduct and evaluate economic studies of both new and existing technologies to ensure best outcome for the patient by adhering our local guidelines.
- Derive the value for money spends at pharmaceutical expenditure so the resources can be used in the most beneficial manner to improve the health and welfare of the public.
- Offer new and updated recommendations on the innovative value of the new technology compared to existing therapies.
- Providing education and training programs to facilitate advancement in understanding the clinical, humanistic, and economic impact of health technologies.

Editor: Andrew Botros Saleh, BScPharm
Editor in chief: Dr. Gihan Hamdy Elsisi, PhD
Head of Pharmacoeconomics Unit, Central Administration for Pharmaceutical Affairs

"Under supervision of the Assistant Minister of Health for pharmaceutical affairs Dr Faten Abd ELaziz"
The introduction of economic evaluations for pharmaceuticals or health technologies can help to optimize outcomes from resources allocations.

Researchers from the Egyptian Ministry of Health and Population proposed recommendations for reporting pharmacoeconomic evaluations, taking into account current practices and capacities for conducting pharmacoeconomic evaluations in Egypt.

A focus group of decision makers provide recommendations for researchers in presenting pharmacoeconomic evaluations in Egypt with special focus on pricing and/or reimbursement applications of pharmaceuticals.

As an initial step, the Egyptian Ministry of Health and Population was encouraged to establish a pharmacoeconomic unit for the support of pricing and reimbursement decisions. Recommendations for pharmacoeconomic evaluations will provide an essential tool for the support of a transparent and uniform process in evaluation of the clinical benefit and costs of drugs that do not rely on the use of low acquisition cost as the primary basis for selection.

Gihan Elsisi, MSc, Central Administration for Pharmaceutical Affairs and lead author of the study says, “Recommendations for reporting economic evaluations will help inform health care decisions for improving health systems and achieve better health for the Egyptian population.” The full study, “Recommendations for Reporting Pharmacoeconomic Evaluations in Egypt” is published in Value in Health Regional Issues.
Abstract

Objective: Introduction of economic evaluations for pharmaceuticals or other health technologies can help optimize the outcomes from resource allocations. This paper aims to provide recommendations for researchers in presenting pharmacoeconomic evaluations in Egypt with special focus on pricing and/or reimbursement applications of pharmaceuticals.

Methods: The Minister of Health approved the initiative of establishing a focus group of decision makers that included academic and industry experts with experience in health economics, pharmacovigilance and clinical pharmacy. The focus group has reviewed seventeen economic evaluation guidelines available on the web site of the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) for reporting health economic evidence. The Egyptian Ministry of Health and Population was encouraged to establish a pharmacoeconomic unit, as an initial step, for the support of pricing and reimbursement decisions. We anticipate that standardization of reporting would lead to progressive improvement in the quality of submissions over time and provide Egyptian healthcare system with health economic evidence often unavailable in the past. Therefore, recommendations for pharmacoeconomic evaluations provide an essential tool for the support of a transparent and uniform process in evaluation of the clinical benefit and costs of drugs that do not rely on the use of low acquisition cost as the primary basis for selection. These recommendations will help inform the health care decisions in improving health care systems and achieving better health for the Egyptian population.

Conclusion: Worldwide, health-care decision makers are challenged to set priorities in an environment where demand for health-care services outweights the allocated resources. Effective pharmaceutical pricing and reimbursement systems, based on health technology assessment that encompasses economic evaluations, are essential to an efficient sustainable health care system. The Egyptian Ministry of Health and Population was encouraged to establish a pharmacoeconomic unit, as an initial step, for the support of pricing and reimbursement decisions. We anticipate that standardization of reporting would lead to progressive improvement in the quality of submissions over time and provide Egyptian healthcare system with health economic evidence often unavailable in the past. Therefore, recommendations for pharmacoeconomic evaluations provide an essential tool for the support of a transparent and uniform process in evaluation of the clinical benefit and costs of drugs that do not rely on the use of low acquisition cost as the primary basis for selection. These recommendations will help inform the health care decisions in improving health care systems and achieving better health for the Egyptian population.

Limitations of Egyptian current pricing system

1. Health Minister Pricing Decree 373/2009 contains loopholes that allow pharmaceutical companies to circumvent the rules and obtain the highest possible price for their products regardless of their true cost.
2. Also it limits the innovation of products.
3. Presence of a regime based on recognition of patients’ right to access medicines without discrimination.
4. Removing unfairness & inequity in the availability of products in different localities.
5. Presence of pricing strategies that enhances innovation and registration of new products.

Objectives

1. The Egyptian pricing decree is based on reference pricing. It’s issued on the Egyptian Drug Authority website. CAPA is the final decision making body for setting the mandatory public price of drugs.
2. The Pricing Committee is the initial decision maker.
3. Pricing decisions are based on international pricing considerations in compliance with pharmaceutical Egyptian price regulations; upon pricing of the referenced product (Brand or innovator), it should be 10% deductible from the lowest price present in referenced countries.
4. Annual price reduction is by 1 % once the first generic is approved.
5. In case of pricing of a generic product, it should be lower than the referenced product by the following percentages:
   1) 20% for products manufactured locally and certified by FDA, EMEA, MHLW and TGA, or manufactured by Egyptian manufacturer accredited by World Health Organization (WHO) or which is a member in International Conference of Harmonization (ICH).
   2) 40% for products manufactured only by a manufacturer licensed by CAPA.
   3) 60% for products manufactured in another manufacturer (Toll) i.e. don’t have their own manufacturing.
6. This price includes profit margin of importer, wholesaler and pharmacist. The price of product can be changed upon appearance of other lower-price version of the same product in any reference country.
7. For more details, you can refer to the full text article at: http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2072.2012.09919.x/abstract

Recommendations for reporting pharmacoeconomic evaluations important to Egypt

Conclusion: Worldwide, health-care decision makers are challenged to set priorities in an environment where demand for health-care services outweights the allocated resources. Effective pharmaceutical pricing and reimbursement systems, based on health technology assessment that encompasses economic evaluations, are essential to an efficient sustainable health care system. The Egyptian Ministry of Health and Population was encouraged to establish a pharmacoeconomic unit, as an initial step, for the support of pricing and reimbursement decisions. We anticipate that standardization of reporting would lead to progressive improvement in the quality of submissions over time and provide Egyptian healthcare system with health economic evidence often unavailable in the past. Therefore, recommendations for pharmacoeconomic evaluations provide an essential tool for the support of a transparent and uniform process in evaluation of the clinical benefit and costs of drugs that do not rely on the use of low acquisition cost as the primary basis for selection. These recommendations will help inform the health care decisions in improving health care systems and achieving better health for the Egyptian population.

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Implementation Strategy

- Drug manufacturers just recommend prices for new medicines then the pricing committee sets the approved price according to Health Minister Pricing Decree 373/2009. Pricing committee reevaluates pricing of drugs every three years. It reevaluates pricing of drugs upon request of the Drug manufacturers in case of changed costs. In addition reevaluation also takes place in case of new indications or changed exchange rate by 15%.

- Data requirements for Pricing of product:
  - Preliminary market authorization by CAPA.
  - Cost study for the product (list of all costs).
  - List of product prices in countries which is being traded in or origin country (public price); including distribution margin to be shared between wholesaler, pharmacy, and VAT.
  - Copy of purchasing bills active ingredients, raw materials and packaging materials (in case of domestic products only).
  - Copy of manufacturing contract (in case of domestic products only).

Results

- Health Minister Decree 373/2009 failed to allow all the citizens to access good-quality drugs at reasonable prices, also there is a shortage in many vital products supplied by drug manufacturers. Spending on pharmaceuticals is 34 percent of total health spending in the country.
- The share of out-of-pocket spending to total health spending has increased from 51% to 72% in one year (2008-2009). In Egypt, the steady increase in out-of-pocket spending is occurring, even though the percentage of the population covered by insurance is going up, and this is because the decree leads to higher prices for generic drugs in particular, which Egyptians rely on heavily and are not covered by insurance. There are no innovative drugs appearing in the last 2 years.
- The Court of Administrative Justice issued a ruling suspending work under the new drug-pricing system, which tied drug prices in Egypt with global prices. The Egyptian Initiative for Personal Rights (EIPR) filed an urgent lawsuit (no. 2457/64) asking the court to suspend Health Minister Decree 373/2009, which would have entailed substantial price hikes for many kinds of drugs.
- CAPA is reviewing now a proposal of new pricing decree based on Health Technology Assessment and cost plus method.

Lessons Learned

- A gap exists between Health Technology Assessment (HTA) research and actual pricing decision making. Providing a stimulating environment for debate between decision makers on one side and researchers & industry on the other side, is an effective way to overcome this gap. Establishment of pharmacoeconomics unit offers new and updated recommendations on the innovative value of new drugs when compared to existing therapies and evaluate economic studies of both new and existing pharmaceutical products to ensure the best outcomes for the patient.

Application:

A new pricing decree 499/2012 had been approved by the Health Minister and in act now.

Objective:
The complications for the use of both concentrations U100 insulin (100 units [U]/ml) and U40 insulin (40 units [U]/ml) were not studied in Egypt. The objective of the study was a cost minimization analysis of the two available concentrations for U100 insulin and U40 insulin from the healthcare system’s perspective.

Methods:
A decision analysis model of patients with diabetes was constructed. Prevalence rate of diabetes in Egypt and complication rates of both the use of U100 insulin and U40 insulin were obtained from international published sources. Direct medical costs were derived from the Ministry of Health tender list. All costs were reported in Egyptian pounds of the financial year 2014. Deterministic sensitivity analysis was conducted.

Results:
Total expected costs for U100 insulin and U40 insulin were LE 262,218,165 and LE 345,582,844 respectively. In the base case, the use of U100 insulin displayed a cost advantage over U40 insulin for the treatment of diabetic patients with a minimal percent of complications. The model resulted in total savings of LE 83,364,678 in favor of Insulin 100 units. Sensitivity analyses determined that the cost of U100 insulin and U40 insulin had the potential to impact the base case model.

Conclusions:
This cost-minimization study illustrates that Conversion to U100 insulin would result in lower overall treatment costs in patients with diabetes from the healthcare system’s perspective. An intensive information campaign providing detailed advice for patients, physicians and pharmacists is essential for the prevention of medication errors and reduction of overall costs.

* Accepted to be published at ISPOR 6th Asia-Pacific Conference, Beijing, PR China.
Objective:
To estimate the budget impact of U100 insulin (100 units [U/ml]) in Egyptian diabetic patients over a time horizon of 5 years.

Methods:
Pharmacy and medical budget impacts were estimated over the first 5 years of U100 insulin use in diabetic patients from the Egyptian healthcare system’s perspective. Local epidemiology data were used to estimate target population size. Pre-U100 insulin entry treatment option included U40 insulin (40 units [U/ml]). Pre- and post-U100 insulin entry market shares were estimated based on market research and assumptions. Direct medical costs were derived from the Ministry of Health tender list. All costs were reported in Egyptian pounds of the financial year 2014. Deterministic sensitivity analysis was conducted.

Results:
In a hypothetical 85,294,388 member plan, 1,234,380 patients were expected to be candidates for U100 insulin treatment in type I and type II diabetes. The total budget impact after 5 years post-U100 insulin was EGP -0.04 per member per month [PMPM] (pharmacy budget: EGP -0.046 PMPM; medical budget: EGP -0.002 PMPM), assuming 53.59% of the target population would switch to U100 insulin. Sensitivity analyses determined that the cost of U100 insulin and U40 insulin had the potential to impact the base case analysis.

Conclusions:
The total budget for diabetes following U100 insulin use was cost-saving in comparison to U40 insulin. Conversion to U100 insulin would result in lower overall treatment costs in patients with diabetes from the healthcare system’s perspective. An intensive information campaign providing detailed advice for patients, physicians and pharmacists is essential for the prevention of medication errors and reduction of overall costs.

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Executive Summary
Today, the pharmaceutical industry is considered one of the largest and rapidly growing global industries in the world. It is strategically important to the overall growth of a nation and the continuous development of its economic and health sectors. This paper charts and reports upon the progress and challenges of the pharmaceutical industry’s commercial environment in key markets across the Middle East and North Africa (MENA) region (Saudi Arabia, United Arab Emirates, Egypt, Lebanon and Algeria), during the last decade. The paper provides an analysis of the strengths, weaknesses, opportunities and threats facing the industry, which offers the readers a broad perspective on the current market. Details of the pricing system impact on accessibility for patients as well as government needs and upcoming healthcare reforms are outlined. Finally, the paper presents recommendations on ways to attract higher foreign investments, and boost the overall market growth in the MENA region.
SWOT ANALYSIS OF PHARMACEUTICAL INDUSTRY IN EGYPT:

Though not at an optimal level yet, the pharmaceutical industry is one of the biggest industries in Egypt, and is playing an increasingly important role in the Egyptian economy.

Strengths:

• According to Egyptian Pricing Decree no 499/2012, Egypt supports local generics by:
  • a) allowing the first four products would all receive 60-75% of the price of the originator and;
  • b) subsequent products would receive consecutive 10% reductions in the set price.

• Increase in the size of the local market due to growth in the country’s population.

• Large Egyptian pharmaceutical workforce, offering the highest quality of performance standards and cost efficiency in the form of low labor costs and a large pool of highly skilled personnel which, if appropriately employed will drive the growth of the pharmaceutical industry. According to International Federation of Pharmaceutical Manufacturers and Associations (EFPIA) report, Egypt has around 100,000 employees working in the pharmaceutical industry [41].

• Foreign participation in the local production of under-license pharmaceuticals, supplying a significant portion of domestic demand at a fraction of the import cost which is very important to both the Egyptian economy and local consumers. The number of under-license pharmaceutical companies has increased to 72 by October 2013 [38].

• Government plans to increase the investments in the pharmaceutical sector and expand production capacity. The government target was to increase investments to US$10bn by June 2010 by encouraging foreign direct investment (FDI), however only US$2.6bn had been invested by April [42].

• The presence of locally-based active pharmaceutical ingredient (API) manufacturers, which will cut imports and reduce costs for existing drug manufacturers if developed efficiently [43].

• The demand for niche therapeutic areas is rising as more diverse drugs and Me too drugs reach the market. In 2011, there were 8973 pharmaceutical products registered in Egypt [39].

Opportunities:

• Healthcare system change towards privatization and reform of public sector pharmaceutical companies.

• Diversity of investment in primary, secondary and tertiary care units offering a wide range of options for different technologies for players to enter the market as Egypt has a total of 1,969 private and governmental hospitals and 5,034 primary health care units [39].

• New social health insurance system that will extend its beneficiary coverage. The main goal of the new system is to cover 90% of the population at the end of enrollment of all governorates.

• Increase in health and pharmaceutical expenditure that would increase the investment at all levels. The new social health insurance system target to increase health expenditure as a percentage of GDP from 5.1% to 8%.

• Low insurance penetration rate creating the need for additional private providers of health insurance. Health insurance organization (HIO), which has existed since 1964, covers about 59% of the population in 2011 [47] and opens up a growing market for pharmaceutical consumption.

• Investment in the gold standard treatments/older mature products with wide value spectrum in efficacy that have been on the market for 20 years could bring significant value in the emerging markets leading to increase in sales. For instance, Pfizer possesses a wide array for all customers, from generics to older mature products, to new innovative treatments.

• Reliance of pharmaceutical companies on imported raw materials. The industry generally meets more than 52% of raw material from abroad [46]. With the ongoing economic crisis due to political unrest pharmaceutical companies were unable to import the raw materials due to price hikes as a consequence of the increase in dollar rates leading to drug shortage.

• The absence of powerful partnership in the local market similar to successful international merges between GlaxoWellcome and SmithKline.

• Existence of expired drugs on pharmacist’s premises waiting for the pharmacists to recoup the costs from the companies.

• Low GDP per capita leading to reduced pharmaceutical consumption levels due to the high cost of living.

• Lack of effective patent legislation has not fully met the concerns of foreign investors. Strong intellectual property rights (IPRs) enhance technology transfer and increase trade, and licensing in the long-run by making a country more attractive to foreign partners. For example, after Egypt’s new patent law passed, Pfizer-Egypt obtained patent rights to Viagra. However, within two months the Ministry of Health announced it would authorize 12 local companies to produce and sell a generic version of the drug.

• Implementation of the latest international medicine registration system (CTD and Electronic CTD) in the next 3 years will improve the regulatory framework and shorten the time frame of the drug approval. Delays in new product registration constitute a serious trade barrier for foreign manufacturers.

Weaknesses:

• Reluctance of foreign companies to make significant long-term investment due to on-going political unrest in Egypt. The Foreign Direct Investment decreased from 6.8% in 2009/2010 to 2.2% in 2010/2011 [44].

• Lack of research and development (R&D) activities in local pharmaceutical industry while in the same time, international pharmaceutical companies devote around 20% of their R&D pipeline to producing medication that address the needs of the poor and the rare diseases [45].

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RECOMMENDATIONS FOR PHARMACEUTICAL INDUSTRY IN THE NEAR FUTURE:

The pharmaceutical industry should be engaged with the Egyptian government and other healthcare stakeholders in boosting pharmaceutical industry as a major player in the economy, which will help sustain patient access to medicines. The following 9 recommendations could help expand the growth of the pharmaceutical industry in Egypt:

• Raising awareness campaigns for rational use of drugs to avoid loss in effectiveness leading to better allocation of public resources and consequently higher coverage for more technologies.

• Develop partnership and risk sharing agreements with the government and pharmaceutical companies that allow for discounts on costly medicines to improve access to medicines.

• Foster strong domestic manufacturing capabilities that are accredited to meet the international manufacturing standards. Despite that legal provisions exist requiring manufacturers (both domestic and international) to comply with Good Manufacturing Practices (GMP), Ministry of Health had had to close before production lines of some local pharmaceutical companies not compliant to GMP.

• Establishment of strong domestic R&D facilities and programs in the selected products to be developed under: domestic synthetic manufacturers headquartered inside Egypt leading to increase in size of local pharmaceutical industry. In case of not fostering R&D capacities, the local pharmaceutical generics industry will indeed be negatively affected in the long run, and the result will ultimately be lack of accessibility of essential medicines.

• Promote health economics science and establishing of the Pharmaeconomic Unit [55] to increase awareness of the importance of a cost effective strategy leading to better pricing agreements.

• Develop more powerful partnerships with other pharmaceutical companies to work together especially in patient education projects for chronic diseases as well as the production of essential drugs.

• Exports should be encouraged through technical support programs that can prepare local firms for the aggressive competition in the global market.

• The local firms should be encouraged to specialize in the phyto-pharmaceuticals sub-industry by developing plant extracts and herbal drugs from Egypt’s abundant plants for expanding the local pharmaceutical industry.

• Fostering investments in building capacity of efficient health work force as well as a reliable health information system that provides the necessary information in a timely manner to improve performance.

Threats:

• An adverse impact of application of Trade related aspects of intellectual property (TRIPS) agreement on the generics drug industry that increased medicine prices because of the need to get the permission from the patent holder to produce the medicine locally.

• The difficult access to imported raw materials after the advent of China and India as large consumers for them leading to shortage in raw materials.

• Misconception about the superiority of patented drugs over generic and locally produced ones although they undergo the same assessment technique.

• Lack of economic incentives for production of orphan drugs in Egypt; the Orphan Drug Act in United States established several incentives to encourage the development of orphan drugs to treat rare diseases.
Cost-effectiveness of Drug-eluting Stents versus Bare Metal Stents in Egyptian Diabetic Patients

Gihan H. Elsisi1; Samah Ragab2; Rania Ashraf2; Mahmoud D. Elmahdy2

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2. Technical office, Central Administration for Pharmaceutical Affairs, Ministry of Health, Egypt
3. Hospital Pharmacy Administration, Central Administration for Pharmaceutical Affairs, Ministry of Health, Egypt

Objective

Chronic coronary artery disease remains the leading cause of morbidity and mortality among Egyptian patients. Cost-effectiveness of Drug eluting stents (DES) versus bare metal stents (BMS) in Egyptian diabetic patients with chronic coronary artery disease from a patient perspective was evaluated over a time horizon of 3 years.

Methods

A cohort Markov process model with five health states: stent, Coronary artery bypass surgery (CABG), non-fatal myocardial infarction (MI), pectoraneous coronary intervention (PCI) and death was derived from published data. This type of decision model is used for analyzing clinical problems involving risks that change or that can occur repeatedly over time. The transition probabilities from the index procedure to death, MI, PCI, and CABG were derived and updated, previously published meta-analysis of RCTs comparing sirolimus-eluting stents or paclitaxel-eluting stents with BMS in patients with coronary artery disease. The model corresponds to real practice of patient management in Egypt and was validated by experts and authors’ institutions.

Relative risk reduction, restenosis risks, mortality rates and utilities were derived using international evidence. Direct Medical costs were obtained from 4 top-rated cardiology hospitals in Egypt; Naser Institute, National Medical hospitals. All costs and effects were discounted at 3.5%. Cost-effectiveness of Drug eluting stents (DES) versus Bare Metal Stents (BMS) was calculated using a deterministic sensitivity analysis. Results between DES and BMS were most sensitive to the Mortality rate of both DES and BMS.

Conclusion

World Health Organization recommends that interventions that cost more than 3 times GDP/capita for one Disability Adjusted Life Year (DALY) avoided should not be reimbursed. Despite DALY is different from QALY but we can assume that they are similar to be able to put a value on the outcome. DES represents a good value for money compared to BMS in Egyptian diabetic patients with chronic coronary artery disease.

It was presented at ISPOR 16th Annual European Congress 2-6 November 2013; Dublin, Ireland.

Cost-effectiveness of Sapropterin versus Phenylalanine Free Diet in Patients with Phenyl-Ketonia in Egypt

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3. Hospital Pharmacy Administration, Central Administration for Pharmaceutical Affairs, Ministry of Health, Egypt
4. Market Access, Roche, Cairo, Egypt
5. Technical office for the Minister of Health, Egypt

Objective

Phenyl-Ketonuria (PKU) is an orphan disease with incidence rate 1:5000 in Egypt. Sapropterin (BH4) is a FDA-approved synthetic formulation of tetrahydrobiopterin (BH4) effective in reducing plasma Phenylalanine (Phe) concentrations in patients with hyperphenylalaninemia due to (BH4)-responsive PKU, offering potential for improved metabolic control. Cost-effectiveness of Sapropterin versus Phenylalanine free diet in PKU patients from the insurer perspective was evaluated over a time horizon of 10 years.

Methods

A half-cycle corrected Markov chain model with six health states: healthy, mild PKU, controlled mild PKU, classical PKU, controlled classical PKU and death was identified based on the process of the disease. The model structure reflects disease natural history and current treatment practice compared with published sources in the disease area. The model was built to be effective of patients’ initiating therapy at new born age. The length of a cycle was set at one year. To simplify the model, it was adapted to exclude clinical events not expected to differ among the comparator. The transition probabilities were derived from updated, previously published studies in Egyptian patients with PKU. Relative risk of Sapropterin and utilities were derived using international published sources. Direct Medical costs were obtained from the Ministry of Health mandatory Tariff in Egypt. All costs and effects were discounted at 3.5% annually. All costs were reported in Egyptian pounds of the financial year 2013. Deterministic sensitivity analysis was conducted.

Results

In the overall population, total costs for DES and BMS were LE 20,664 and LE 11,967 respectively. Total QALYs for DES and BMS were 2.26 and 2.06 respectively. The incremental cost-effectiveness ratio (ICER) for DES versus BMS was LE 41,616/QALY. DES is cost effective because it is less than 3 times GDP/capita in Egypt. The results were tested using a deterministic sensitivity analysis. Results between DES and BMS were most sensitive to the Mortality rate of both DES and BMS.

Conclusion

World Health Organization recommends that interventions that cost more than 3 times GDP/capita for one Disability Adjusted Life Year (DALY) avoided should not be reimbursed. Despite the difference between DALY and QALY, one can assume they are similar to be able to put a value on the outcome. Sapropterin doesn’t represent a good value for money compared to PHE free diet in the Egyptian PKU patients.

It was presented at ISPOR 16th Annual European Congress 2-6 November 2013; Dublin, Ireland.
EDUCATIONAL ACTIVITIES

PHARMACOECONOMICS IN THE ARABIC-SPEAKING COUNTRIES: CHALLENGES & OPPORTUNITIES IN EDUCATION AND TRAINING

Forum session I at ISPOR 19th Annual International Meeting 31st May-4 June 2014; Montreal, Canada.

Moderator:
Ola Ghaileb Al Ahdab, PhD, President, ISPOR United Arab Emirates Chapter and Pharmaceutical Advisor & Project Manager, Registration and Drug Control Department, Ministry of Health, Abu Dhabi, United Arab Emirates

Speakers:
Gihan Hamdy Elsisi, MSc, PhD Head of Pharmacoeconomic Unit and Part-time Lecturer of Pharmacoeconomics, Central Administration for Pharmaceutical Affairs, Ministry of Health, Faculty of Pharmacy Helwan University, Cairo, Egypt

Mona Abdulhussein, MSc, Clinical Education Specialist, Dasman Diabetes Institute, Dasman, Kuwait

Daoud Al-Badriyeh, BPharm, PhD, President, ISPOR Qatar Chapter and Assistant Professor of Pharmacoeconomics, College of Pharmacy, Qatar University, Doha, Qatar

Abdulaziz H. Al-Saggabi, MSc, PharmD, President, ISPOR Saudi Arabia Chapter and Director, Drug Policy & Economics Center, Ministry of National Guard Health Affairs, Riyadh, Saudi Arabia

Ibrahim Al-Abbadi, PhD, MBA, BPharm, President, ISPOR Jordan Chapter and Dean, Faculty of Pharmacy, Yarmouk University, Irbid, Jordan

Description:
This forum discussed the current status of Pharmacoeconomic (PE) education in the Arabic-speaking countries. Speakers particularly focused on the development of undergraduate and graduate level programs, as well as training opportunities. In countries such as Jordan, Saudi Arabia, Qatar, United Arab Emirates, Egypt and Kuwait, PE education is still at the early stage of development. Capacity building is imperative for the delivery of health care system, HTA implementation and collaboration between different stakeholders in the region. However, steps have been taken to address this issue such as establishing postgraduate PE degrees and utilizing regional and international expertise in the field to provide “training of trainers.” The aim of conducting long-term training programs is to address local needs that focus on producing integrated teaching modules and providing the right tools which are relevant to most stakeholders. For example, in the United Arab Emirates, “Introduction to Pharmacoeconomics” has been incorporated into pharmacy practice course for the 4th year pharmacy students in University of Sharjah, while the entire “Pharmacoeconomics” course was considered by the Ministry of Higher Education as a core subject for post-graduate MSc Pharm degree program in Ajman University. In order to enhance the knowledge and skills in topics such as formulary management, rational drug selection, budget impact analysis and introduction to HTA, many activities focusing on continuous education are being organized regularly for doctors and health care professionals in the region. The needs for PE education in the Arabic-speaking countries are great and can be further addressed by enhancing teaching materials, developing evidence-based training programs, and increasing basic level training opportunities in health economics. Presented by the ISPOR Arabic Network.

Weblink: https://www.ispor.org/Event/ProgramList/43?type=Forum#ForumI

HEALTH CARE IN AFRICA: CAN BIG DATA IMPROVE OUTCOMES?

Forum session II at ISPOR 19th Annual International Meeting 31st May-4 June 2014; Montreal, Canada.

Moderator:
Anthony Waka Udezi, PhD, Assistant Dean of Pharmacy and Senior Lecturer, Department of Clinical Pharmacy, University of Benin, Benin City, Nigeria

Speakers:
Gihan Hamdy Elsisi, MSc, PhD Head of Pharmacoeconomic Unit and Part-time Lecturer of Pharmacoeconomics, Central Administration for Pharmaceutical Affairs, Ministry of Health, Faculty of Pharmacy Helwan University, Cairo, Egypt

Doris Kwesiga, MSc, Managing Consultant, Global Health Economics Ltd., Kampala, Uganda

Ernest Attuquaye Quaye, BPharm, MPH, Principal Pharmacist, Medical Department, Ghana Cocoa Board, Accra, Ghana

Jacques Snyman, MBChB, MPharmMed, MD, President, ISPOR South Africa Chapter and Director, Product Development, Agility Global Health Solutions, Pretoria, South Africa

Description:
The availability of data in both private and state sectors is used to determine policy and interventions. This forum focused on the current state of “big data” in context of health care in Africa. A detailed analysis of challenges that prevent the “big data” from being adopted and used that examined from the perspectives of countries such as Egypt, Ghana, Nigeria, South Africa, and Uganda. Speakers provided practical examples of how “big data” predicts hospitalization with 80% accuracy. Questions whether Africa is ready for the application of “big data” and if it would in fact improve patient care and outcomes in the region, that examined. Furthermore, speakers described handling diverse data sets, their challenges and real-life outcomes in enabling better planning and enriching policy processes. Presented by the ISPOR Africa Network.

Weblink: http://www.ispor.org/Event/ProgramList/43?type=Forum#ForumII