rare diseases, consideration of alternative acceptance criteria for public reimbursement /health service provision may be required.

PHP40

THE IMPACT ON DECISION-MAKING OF CHANGING COST-EFFECTIVENESS OF HEALTH TECHNOLOGIES OVER TIME

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OBJECTIVES: Estimation of cost-effectiveness of health technologies tends to focus on the time period at or around launch, to fulfill the growing requirements of reimbursement or market access agencies. This study reviews the factors which influence cost-effectiveness over time and demonstrates the temporal impact on cost-effectiveness using a number of case-studies. The implications for decision making and market access are discussed. **METHODS:** A review of the factors that may influence cost-effectiveness over time and methodological approaches used to address these was conducted. Earlier analytical frameworks of studies from the 1990s in the fields of motor airbags, implantable cardiac defibrillators, statins, renal dialysis and hearing aids were revisited to re-estimate the cost-effectiveness. For example, parameters of an economic evaluation conducted in 1990 for erythropoetin were updated to 2004 values using a recent systematic review of clinical evidence together with revised unit costs and expert clinical opinion for resource utilisation. **RESULTS:** For the majority of case-studies examined, there was a trend for the reduction in cost-effectiveness ratios over time—e.g. for erythropoetin, the base-case cost per QALY decreased ten-fold over a 14 year period (£216,906 to £21,547). Significant factors included unit costs, dosage, utility gains and revised discounted rates. **CONCLUSIONS:** The timing of economic evaluation is critical in the estimation of cost-effectiveness. Production of this evidence may often be the first time that the conceptual framework of economic analysis has been applied to the technology, despite suggestions that economic evaluation should be used iteratively throughout the product life-cycle. This study has demonstrated that whilst there is a need for economic evaluation results to be timely to aid decision-making (i.e. at or around launch), it is important that the analysis is updated and reviewed periodically to assess whether cost-effectiveness has changed sufficiently to justify modifying the original decision.

PHP41

EXAMINING THE QUALITY OF HEALTH ECONOMIC ANALYSES SUBMITTED TO THE REIMBURSEMENT AGENCIES IN SWEDEN AND FINLAND—A CROSS COUNTRY COMPARISON

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OBJECTIVES: To compare the quality of the health economic material submitted to the Swedish Pharmaceutical Benefits Board and the Finnish Pharmaceuticals Pricing Board as part of the application for reimbursement for new pharmaceuticals. **METHODS:** The health economic evaluations were reviewed in each country against two checklists, marking each question Yes/No/Not Applicable. The checklists used were: 1) the respective national Guidelines transformed into yes or no questions, and 2) the QHES check list, a validated instrument, was also used to provide a common comparator. The central estimate of cost effectiveness was collected (cost per QALY) as well as whether the application was accepted or rejected in each country. **RESULTS:** The Swedish scores range from 0.24 to 0.87 and on the QHES from 0.09 to 1, with a mean quality of 0.61 and 0.67 respectively. The Finnish scores range from 0.58 to 0.96 and on the QHES from 0.28 to 0.84, with a mean quality of 0.76 and 0.62 respectively. The correlation between the respective national guidelines and the QHES scores is modest (approx. 0.7 both in Sweden and in Finland). This is mostly due to country specific criteria. There was a low observed correlation between quality score and acceptance in Sweden and also in Finland. Likewise, the correlation between cost per QALY and decision to accept/reject is low to medium. **CONCLUSIONS:** Health economic material as part of applications to reimbursement agencies varies widely in quality. There are differences even for the same product in the two countries. Secondly, due to the relatively small number of applications studied and the even fewer rejections, it is difficult to draw firm conclusions regarding the value the pricing authorities studied place on a QALY.

PHP42

PAYMENT FOR PHARMACY HANDLING COSTS IN THE HOPD: 2006 REIMBURSEMENT IMPLICATIONS

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OBJECTIVE: Medicare reform legislation requires the Medicare Payment Advisory Commission (MedPAC) to conduct a study of hospital pharmacy handling costs and to recommend whether payment for handling costs of Part B specified outpatient drugs should be made under the Medicare Hospital Outpatient Prospective Payment System (OPPS). This study explores the MedPAC approach to pharmacy departmental costs and potential reimbursement implications. **METHODS:** The MedPAC rationale and recommendations were deconstructed, evaluated, and compared to data about pharmacy operations obtained from two studies. The first study collected data from on-site observations of infusion therapy and related pharmacy activities in 24 hospital outpatient departments (HOPDs) located in 19 states. A subsequent telephone survey gathered information about staffing and workflow from 30 other hospital pharmacy directors located in 16 states and the District of Columbia. **RESULTS:** The MedPAC report places pharmacy costs into five categories; concludes that hospitals can estimate these costs; and recommends that hospitals develop and submit charges for a new set of handling fee APCs. Findings from the comparative on-site observations and telephone survey, however, reveal that significant portions of certain costs are not charged to the pharmacy. For example, 69.1% of respondents had information systems costs charged outside the department while 34.5% reported their entire information systems costs charged elsewhere. Likewise, 73.3% of respondents reported reimbursement, chargemaster, clerical and transport staff utilized by the pharmacy department but not charged to the department. Such disparities in departmental costing will significantly hinder the uniform interpretation of costs assumed by MedPAC. **CONCLUSIONS:** Payment methods in 2006 for handling costs of Part B separately paid drugs will be derived in large part from the MedPAC recommendations. If the payment methodology does not take existing variations in recording pharmacy expense outside the department, hospital providers may well be underpaid for handling costs in 2006.

PHP43

IMPACT OF PHARMACEUTICAL POLICIES ON PROMOTIONAL TARGETED DRUGS

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OBJECTIVES: To explore the trends in physicians' prescribing of promotional targeted drugs (PTD) in two categories—Statins and COX-2 inhibitors, before and after implementing the pharmaceutical policies which included the National Essential Drug List (NEDL), the health benefit schemes, and the regulation of the hospital Pharmacy & Therapeutic Committee (PTC). **METHODS:** Electronic outpatient prescription records of the PTDs and the established drugs in the same category at a teaching hospital were compared. Data on how and when the PTD got approved by the PTC including the prescribing restrictions were also assembled. A time series analysis of prescription data for each drug was constructed and marked for any known phenomena during 1998–2004. **RESULTS:** The highly promoted drugs in both groups showed significant increases in drug uses after the implementation of pharmaceutical policies especially if the drug was listed in the NEDL. The majority of the drug costs were acquired by cash payment and the price for expensive drugs varied between 5–10 times that of the alternatives in the same category. While the sales shares for expensive drugs increased enormously, the trend decreased drastically for the alternative drugs. Among the health schemes, the Civil Servants Medical Benefit Scheme beneficiaries were likely get expensive drugs than others. **CONCLUSIONS:** This exploratory study reveals the different types of pharmaceutical policies that can have an impact on the trend of physicians' PTD prescribing. The findings call for further in-depth investigation of critical factors influencing physician prescribing behavior of PTDs in order to curb the escalating drug cost and promote rational drug use in the country.

PHP44

COST AVOIDANCE OF CLINICAL PHARMACIST INTERVENTIONS AT A UNIVERSITY TEACHING HOSPITAL

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OBJECTIVE: The purpose of this evaluation was to identify the types of interventions made by clinical pharmacists, determine the cost avoidance of pharmacist interventions and incorporate the information into a new system at Grady Health System. **METHODS:** Two phases were required to characterize the type, cost avoidance and total number of daily documented interventions made by clinical pharmacists from April 1998 to July 2003. A third phase was used to evaluate interventions made from June 2004–May 2005. Interventions were classified by the intervention type, assigned cost avoidance and the assigned a probability of likely occurrence of an event without intervention. Data was collected in phase two of the evaluation to determine the average documented daily interventions per clinical pharmacist and the total cost avoidance of clinical pharmacist interventions for the department. **RESULTS:** A total of 1,871 (29.6%) of 6,311 documented interventions were reviewed. There was an average of 4.9 interventions per adjusted workday documented. The average cost avoidance of a documented intervention was $288. The daily adjusted work day cost avoidance was $1411.20 or an annual cost avoidance of $338,688 for the 64 month time period. If extrapolated to the entire data set, the cost avoidance would be $1,798,567. In the second phase of the project, the average number of daily interventions documented by a clinical pharmacist was 5.5 (SD ± 1.2) resulting in an extrapolated annual cost avoidance of $380,160 per clinical pharmacist. In the final phase of the project, the average number of interventions increased to 26.2/day or a total of 9,552 pharmacist interventions. The cost to the health system is $128,941 in pharmacist salary dollars with cost avoidance savings of $2,037,863. **CONCLUSION:** The return on investment of the system was $16 for every dollar spent on clinical pharmacy services. Each intervention saves $213 for the health system.

PHP45

APPRAISAL OF FIVE NEW OUT-OF-HOURS (OOH) PRIMARY CARE CENTRES IN THE PARISIAN REGION: "MAISONS MÉDICALES DE GARDE (MMG)"

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French GPs are increasing reluctant to dispense medical services in OOH because of security concerns and lack of economic incentives. In order to motivate GPs to participate to OOH care, experimental MMGs have been set up. A medical office is shared by GPs on duty to provide medical services in predetermined time schedules. Referrals to MMG are determined by emergency dispatching centres (C15) and/or hospital emergency departments (HED). GPs receive a forfeit, adjusted with effectively dispensed visits. Facilities are secured. **OBJECTIVE:** To assess the 5 MMG activity in comparison to HED, C15 and other home cares and patients and professionals satisfaction. **METHODS:** "Before-after" assessment month 2 to 6 after MMGs were set up and reproduced at month 14 to 18. Quantitative data were collected from MMGs, "C15", HED and health insurance. Questionnaires were submitted to patients (visiting/calling HED, "C15", GPs practices or MMG, n = 537), and professionals (GPs involved in MMGs, HED and C15 professionals n = 389). **RESULTS:** Half of the practitioners in MMGs area participated. Most patients (95%) were in need of primary care. On weekend days, number of visits to MMG were approximately equivalent or superior to an office based GP (22), but on weekdays (8pm–12pm) average number of visits was low (<4). Patients and GPs were satisfied with services. MMGs however can not meet all OOH needs, particularly home visits. Although they differ in organisation, there is room for optimization for all MMGs. Professionals are unable to define precisely OOH primary care, and communication to patients, highly desirable, is not yet harmonized. **CONCLUSION:** MMG should be encouraged but provide only partial response, as a global approach including home visits is needed.

PHP46

DEFINING COMPLIANCE/ADHERENCE AND PERSISTENCE: ISPOR SPECIAL INTEREST WORKING GROUP

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OBJECTIVE: To propose a definition of compliance/adherence and persistence which would be widely agreed and useful in providing consistency for clinical, health policy and clinical practice research. **METHODS:** The "Issues and Definitions Working Group" of the Medication Compliance Special Interest Group undertook to review definitions that could be used for medication compliance/adherence and persistence. Broad definitions were presented at an ISPOR workshop in 2003 and revised accordingly. These definitions were then placed on the ISPOR website and all members were given an opportunity to comment and vote on definitions in December 2004. Although consensus was reached for the compliance and persistence definitions, many key issues related to these definitions required resolution. At the Annual Meeting 2005, a workshop was held to discuss the issues