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.

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 $2,88. 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.

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”, GP 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.

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
around operationalizing compliance/adherence and persistence definitions. Comments were incorporated and the final operational definitions posted for consensus on the website. RESULTS: Medication Compliance (Synonym: Adherence) is the extent to which a patient acts in accordance with the prescribed interval and dose as well as dosing regimen. The unit of measure for compliance is administered doses per defined period of time, reported as a proportion (%) of prescribed doses (D) taken at the prescribed time interval (T) as measured by the period of time, i.e., % of TD, measured by percentage. CONCLUSION: Medication Compliance is the duration of time patient remains on treatment i.e. accumulation of time from initiation to discontinuation of therapy, where patient is defined as a discontinuer if medications were not taken within a predefined permissible time gap.

EVALUATION OF THE RELATIONSHIP BETWEEN PHARMACEUTICAL PRODUCT PRICE AND HEALTH-RELATED QUALITY OF LIFE USING WHOLESALE ACQUISITION COST AND AVERAGE EFFECT SIZE

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OBJECTIVES: The objective of this study was to evaluate the relationship between pharmaceutical product price and its ability to improve patient health related quality of life (HRQoL). METHODS: Comprehensive review of the literature was conducted to identify all HRQoL studies of pharmaceutical products that utilized a test-retest experimental approach. Effect sizes were calculated from data available for 31 products, representing a brand range of therapeutic areas. Wholesale acquisition cost (WAC), number of months on market, and number of products in therapeutic class was collected for each product. Cost per day of therapy was calculated using recommended starting dose in the labeling. Multivariate linear regression models were constructed where either WAC or cost per day of therapy at recommended starting dose was the dependent variable and effect size, number of months on market, and number of products in therapeutic class were independent variables. Diagnostics were performed to verify model assumptions. RESULTS: Using multivariate linear regression, average effect size, number of products in therapeutic class, and number of months on market were significant predictors of WAC (average effect size) = 167.13, p < 0.0001; β (number in class) = 14.85, p < 0.0001; β (number of months on market) = -0.47, p = 0.0001; R-square = 0.65). Diagnostics revealed no violations of model assumptions. CONCLUSION: There is sufficient evidence to suggest that there is a direct relationship between a pharmaceutical product’s ability to cause improvement in HRQoL and the price of the product, measured using average effect size and WAC, respectively. In addition, the number of products within a therapeutic class and their length of time on the market were influential of drug price. Further research should be conducted to evaluate the impact of prescription medications on HRQoL, and, to identify and characterize the effects of drug and marketplace variables on drug prices.

A SURVEY OF PATIENT REPORTED OUTCOME (PRO) CLAIMS IN PHARMACEUTICAL ADVERTISING

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OBJECTIVE: To investigate the quantity and quality of Patient Reported Outcome (PRO) claims in pharmaceutical advertisements in 2 Thai medical journals. METHOD: A retrospective review of all pharmaceutical advertisements in the 2004 issues of 2 Thai medical journals (Clinic and Pharmatime) was performed by 3 trained pharmacists. Two reviewers independently reviewed the advertisements. If the reviewers disagreed the final decision was made by the third reviewer. All distinctive pharmaceutical advertisements were classified into claim advertisement or reminder advertisement. PRO claims and economic claims were also identified. Then, the advertisements were categorized according to their reference statuses. Finally, the reviewers evaluated whether the cited references provided substantial evidence to support the claims. RESULTS: From 183 advertisements reviewed, there were 48 distinctive advertisements. Forty-five (0.94%) and three (0.06%) of the advertisements were classified as claim advertisement and reminder advertisement, respectively. Nineteen (0.42%) of the claim advertisements contained PRO claims while two (0.04%) of the claim advertisements contained economic claims. The result indicated that only 16 (0.36%) of the claim advertisements cited at least one published article retrievable from Medline as references, while the remaining 29 (0.64%) contained no reference or cited package inserted or non-published data on file as references. When looking closely at PRO claims, it was found that 12 (0.63%) of the PRO claims were misleading because the outcomes stated in the claims was not supported by the given references. In addition, there was not sufficient evidence to support all 2 economic claims. CONCLUSION: More than half of the PRO claims were misleading. Practitioners should be cautious in assessment of PRO claim advertisements in medical journal. There is also a substantial need for more rigorous regulation of PRO claims.

COST EFFECTIVENESS OF ESCITALOPRAM IN THE TREATMENT OF GENERALIZED ANXIETY DISORDER (GAD)

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OBJECTIVE: To determine the cost-effectiveness of escitalopram in the treatment of Generalized Anxiety Disorder (GAD) in Canada. GAD places a significant burden on primary care resources, exhibiting an 8% prevalence rate among patients seen by primary care clinicians. METHODS: A 24-week decision tree analytic model was constructed using Tree Age Data® Pro Suite. Patients received treatment for GAD with either escitalopram or generic paroxetine. Clinical rates were determined from a review of the literature; expert opinion guided model development in establishing decision pathways. Tolerance/intolerance to the initial drug was incorporated into the model, which included augmenting, titrating or switching comparators. Psychotherapy was used for patients not responding to either drug, or to the combination of either drug augmented with a benzodiazepine. Costs were measured in undiscounted 2005 Canadian dollars (CAD). Resources were valued using standard Canadian sources. Effectiveness was measured in Symptom Free Days (SFDs). Analyses were performed from two perspectives: the Ontario Ministry of Health and Long Term Care (MoH—including all direct costs: drugs, physicians visits), and societal (SOC-included direct plus indirect costs weighted using the average industrial wage). Extensive sensitivity analyses (1-way and probabilistic) were conducted. RESULTS: Results shown are preliminary. Base case analyses (MoH perspective) yielded an incremental cost of $24 for escitalopram (expected cost = $713 for 85 SFDs) over