OBJECTIVES: To determine the annual direct cost of treatment of vaginitis in Turkey. METHODS: A consensus panel approach was implemented in order to define the vaginitis management pattern and relevant resource utilization. The panel consisted of 11 gynecologists, affiliated with the existing patterns of outpatient health care settings. Cost analysis was based on the estimation of 1 year direct cost of treatment based on 2008 fees and prices, expressed in dollars. RESULTS: Total cost of vaginitis treatment was found to be $81.6 per patient. This cost covered partner expenditures. The disbursement included outpatient clinic fees and pharmacotherapy. The laboratory tests were included in the outpatient clinic fees according to new Social Security Institution (SSI) regulations. CONCLUSIONS: Although the prevalence and causes of vaginitis are uncertain, in part because the condition is so often self-diagnosed and self-treated, women often seek medical care for vaginal complaints. SSI may have to reimburse the vaginitis treatment more than once for a woman in a year. Therefore, the SSI should know the cost of vaginitis treatment in order to make a budget plan among other treatments.

A SYSTEMATIC REVIEW OF THE COST OF FALLS IN OLDER ADULTS: AN INTERNATIONAL PERSPECTIVE

P:\h2

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OBJECTIVES: To compare international estimates for direct and indirect cost of falls among older adults. We compared both the total cost of falls and the mean cost per individual. METHODS: We conducted a systematic review of peer-reviewed journal articles reporting estimates for the cost of falls in older adults. We searched for papers published between 1945 and July 2008 in MEDLINE, PUBMED, EMBASE, CINAHL, Cochrane Collaboration and NHS EED and identified papers that included a cost analysis of falls in older adults. We report cost of falls in the manuscripts’ currency and translated to US dollars at 2008 prices, cost items measured, perspective, time horizon and sensitivity analysis. We assessed the quality of the studies using a selection of questions from Drummond’s Checklist. RESULTS: Twenty-two studies met our inclusion criteria and these included 11 studies from the United States, three from Australia, four from Europe and two each from New Zealand and the UK. There were distinct variations across studies with respect to: viewpoint of the analysis, definitions of falls, identification of all important and relevant cost items and time horizon. Our quality assessment indicated that only two studies reported a sensitivity analysis and only four studies reported a viewpoint of their economic analysis. A prospective cohort study indicated the total one-year cost of all fall related injuries in 1995 was US $88.36 billion (at 2008 prices). CONCLUSIONS: The cost of falls depended largely on the time horizon over which costs were collected, cost items measured and definition of falls. To accurately compare costs among countries, we need a consensus on definition of fall related outcome measures and cost items.

AN INVESTIGATION OF THE EFFECTS OF GENDER, RACE, AGE, AND OTHER DESCRIPTIVE VARIABLES ON THE LENGTH OF HOSPITALIZATION AND TOTAL HOSPITALIZATION CHARGES ACCRUED BY PEDIATRIC INPATIENTS AFFLICTED WITH PHARYNGITIS

P:\h4

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OBJECTIVES: Pharyngitis is a disease that commonly affects patients from various ages, genders, and ethnicities. This investigation will serve as an exploratory analysis of basic pediatric inpatient descriptors, and their relationships with respect to hospitalization costs, length of hospitalization, and the contraction of Pharyngitis. METHODS: In this study, length of hospitalization and hospitalization charges are analyzed with respect to patient age, gender, and race. Logistic and linear regressions are included to show relationships among independent descriptors, descriptive variables, and the contraction of Pharyngitis. The Statistical Analysis Software (SAS), Enterprise Guide version 4.0, was utilized in the data analysis. The data are from the 2005 National Inpatient Sample and contained 4169 patients with Pharyngitis and a control group of 4200 patients. RESULTS: It was shown that on average, White, male, Pharyngitic patients 0–3 years old pay the least in hospitalization charges while female patients of Asian/Pacific Islander descent 12–15 years old pay the most in hospitalization charges. White, female patients 0–7 years old have the shortest hospitalization periods while male patients of Native American descent 12–18 years old have the longest average hospital visits. In total, several variables, including specific procedures and diagnoses, such as Volume Depletion and Fever, are seen as statistically significant in determining the likelihood of a patient contracting Pharyngitis. Additional results were derived from a linear regression, which contains analysis specific to length of hospitalization and hospitalization charges. CONCLUSIONS: This investigation provides only a general overview of the statistical relationships contained within a data set of pediatric inpatients primarily afflicted with the disease, Pharyngitis. Because of the nature of the disease, it should be noted that further investigations should be conducted to verify any relationships found to be statistically significant.

DIRECT COST OF INFERTILITY TREATMENT IN TURKEY

P:\h5

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OBJECTIVES: Infertility is a vital problem for men and woman in Turkey. It decreases the quality of life more than many chronic diseases. The infertility treatment is reimbursed by the government, only twice in a life-time and only if you are a woman younger than 39 years old. Infertility treatment can be considerably long, and many times, the couples need to try more than twice. The government reimburses €866 (1240 YTL) for each treatment. The objective of this study was to calculate the cost of infertility treatment at a University Hospital. METHODS: An expert panel composed of obstetricians in Osman Gazi University developed an infertility clinical protocol for this particular university. This protocol was used to calculate the cost of an infertility intervention. A third-party payer perspective to estimate cost of this intervention was chosen. Therefore, to estimate the total cost of an infertility intervention, the usual price lists established by the Social Security Organization was used. RESULTS: Specialists developed three clinical pathways; antagonist protocol, short and long protocol. Total cost of the antagonist protocol was 1079 Euro, for the short protocol this was €1117, and the long protocol €1039. If the couple had to try all protocols, they had to pay €3255. CONCLUSIONS: This meant that the couple had to pay €3495. CONCLUSIONS: The Social Security Organization extended the prospective payment system (fixed prices for treatment) coverage for hospital services including fertility treatments, in 2003. We found out that, fixed prices determined by SSO do not reflect actual costs of the services. Due to the fact that the cost of services delivered in university hospitals are higher than other hospitals, university hospitals should develop cost saving strategies to provide fertility treatment services.

THE ECONOMIC IMPACT OF SINGLETON, TWINS AND MULTIPLE GESTATION PREGNANCIES IN ALBERTA

P:\h6

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OBJECTIVES: The increasing rate of multiple pregnancies, which are associated with greater health resource use, has been attributed to the broad availability and use of assistive reproductive technologies (ARTs). The advocate of publicly funding ARTs argues that, if publicly funded, the government could consider mandating the number of embryos transferred per IVF cycle so as to contain the health care cost. The study was to investigate the association between multiple gestations and low birth weight (LBW) infants and to explore the impact on health resource utilization and costs. METHODS: The population cohort comprised mothers and infants born between April 1, 2004 and March 31, 2005 in Alberta, Canada. The study considered costs and resource utilization from birth to 1 year for infants and from pregnancy to 3 months postpartum for mothers. Information related to hospital costs was collected from Alberta Health Care Insurance Plan. A logistic regression was employed to determine the likelihood that twins and higher order multiples (HOM) was born LBW, compared with singletons. Linear regressions were used to estimate the impact of multiple births and LBW on resource utilization and costs. RESULTS: A cohort of 36,158 mothers and 36,767 infants were included in the study. The logistic regression indicated that, compared to singletons, twins and HOM were 43.8% and 90% more likely to be born LBW respectively. The odds were 46.2% more likely to be born LBW in comparison with twins. The mean total cost of LBW twins and HOM was respectively, 5.88 ($14,253 vs. $2,425) and eight times ($19,435 vs. $2,425) greater than that of NBW singleton. CONCLUSIONS: This study suggested that multiple births were associated with higher likelihood of being born LBW and consequently resulted in more resource utilization.

INDIVIDUAL’S HEALTH – Patient-Reported Outcomes Studies

THE IMPACT ON ADEHERENCE AND FORMULARY PERFORMANCE METRICS OF ALLOWING MEMBERS TO CHOOSE EITHER MAIL OR RETAIL PHARMACY FOR RECEIVING 90-DAY SUPPLY MAINTENANCE MEDICATIONS

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OBJECTIVES: To compare medication adherence for patients new to 90-day supply prescriptions under a new pharmacy benefit where pricing is equivalent, allowing...
members to choose either retail or mail pharmacy as their preferred distribution channel. METHODS: Claims (n = 168,381) submitted between April 1, 2008 and December 31, 2008 for an employer after it began offering the same price on 90-day retail and mail maintenance prescriptions were used to calculate Medication Possession Scores (MPS), Generic Dispensing Rate (GDR), Generic Substitution Rate (GSR), and Preferred Brand Dispensing (PBDR) for patients impacted by the benefit. GDR, GSR, and PBDR were calculated for all claims with a 90-day supply; MPR was calculated for all patients who were eligible 180 days before and after their first 90-day prescription between April 1 and June 30, 2008 for each maintenance class, using their first prescription and any within the subsequent 180 days. Overall metrics and those for select classes with sufficient sample size are presented. RESULTS: The average MPR, across all classes, was 80% for retail dispensed prescriptions and 78% for mail. Approximately six-week classes, the average MPR was 82% at retail and 81% at mail, with MPRs for individual classes ranging from 75% (PPis) to 89% (ACEs and Anti-convulsants) for retail-dispensed and 74% (SSRIs) to 85% (ACEs) for mail-dispensed. When comparing total mail and dispensed prescriptions, GDR (57% vs. 56%), GSR (99% vs. 99%), and PBDR (86% vs. 86%) were nearly identical. CONCLUSIONS: When out-of-pocket costs and days supply per prescription are identical, adherence rates and related formulary performance metrics for mail and retail-dispensed maintenance medications appear essentially similar in early results. This pilot results will need to be confirmed as more payers adopt this benefit design and longer follow-up periods improve adherence measurement precision.

THE IMPACT OF MEDICARE SUPPLEMENT INSURANCE ON ACCES, UTILIZATION, AND COST OF HEALTH CARE AND ON COMPLIANCE WITH RECOMMENDED PHARMACEUTICAL TREATMENT
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OBJECTIVES: The literature was reviewed to determine the impact of Medicare supplement insurance (i.e. Medigap) on the Medicare program with respect to access, utilization, costs, and drug compliance. Additionally, we discuss a new program to improve pharmaceutical utilization for Medigap enrollees. METHODS: We conducted a literature search using PubMed, looking for peer-reviewed articles that compared access, utilization, outcomes and costs between enrollees with Medicare fee-for-service coverage alone to those with Medigaps. Additional searches focused on differences in pharmacological compliance, for those with and without drug coverage, among the two groups. Finally, we searched for pharmacy compliance programs offered through supplement insurance plans. RESULTS: Twenty-seven articles met our search criteria. The literature suggests Medicare Supplement Insurance can be cost-effective, that it is correlated with better access to health care services, and may result in higher utilization of preventive services than would be the case with such coverage. Also, the type of supplement insurance did not significantly influence prescription drugs utilization among Medicare enrollees. No articles found discussed any current efforts to manage the pharmacological treatment of Medicare Supplement Insurance enrollees. CONCLUSIONS: Medigap programs have not historically managed their enrollees like Medicare Advantage plans have done. In particular, the literature suggests there is much room for improvement in pharmacy management for all Medicare programs and the programs those enrolled in Medigap programs. This has led AARP and UnitedHealth Group to offer a pharmaceutical compliance program, with disease management and case management programs, for their AARP Medicare Supplement Insurance enrollees, beginning in 2009. Results from this care management effort will help tailor models for more ways to better manage the care for fee-for-service Medicare enrollees with supplement coverage.

COMPARISON OF ADHERENCE, PERSISTENCE AND MEDICATION WASTAGE IN 30-DAY VERSUS 90-DAY REFILL CHANNELS
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OBJECTIVES: To compare medication possession ratio (MPR), medication persistence & pill wastage in 90-day versus 30-day refill channel among 5 different drug classes. METHODS: We conducted a retrospective study using pharmacy claim database. The cohorts were classified based on the type of refill duration (30-day or 90-day). Patients included in the study were continuously eligible in the insurance plan for the study duration and were new to therapy during the identification period (January 1, 2006 to June 30, 2006) and were followed for 21 months after their index date. Claims in the first 3 months after the index date were excluded from the analysis to avoid immortality bias. Outcomes included MPR, persistence to therapy, and pill wastage. Pill wastage was calculated only among those who switched therapy within a pharmacological class of drugs (i.e. diuretics). Therapeutic drug classes included in the study were antihypertensives (AH), anti-depressants (AD), antihyperlipidemics (AL), anti-asthmatics (AA) and anti-diabetics (AD). RESULTS: A total of 8403, 6289, 7197, 5383 and 2722 subjects in AH, AD, AL, AA and AD drug classes were included. MPR and persistence were consistently and statistically higher in the 90-day versus the 30-day classes in the 3 months and 18-month periods index among all the 5 drug classes studied. There was a consistent trend of decrease in MPR and persistence at 18-months in comparison to 9-months follow up in all the 5 therapeutic drug classes studied. The higher trend in pill wastage in the 90-day versus 30-day refill channel was not consistent across all therapeutic categories. CONCLUSIONS: Members who refilled 90-day versus 30-day were associated with a significant higher MPRs and persistency. Efforts to increase medication adherence should be continued steadily along the course of therapy as a medication adherence with chronic medications continues to decrease over time.

PATTERNS OF UTILIZATION AND DISCONTINUATION OF MEDICATION IN A RETIREE POPULATION
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OBJECTIVES: To describe the patterns of medication discontinuation in a retiree population. Premature discontinuation of medications adversely affects patients’ outcomes and the average of additional health care resources. METHODS: The study included pharmacy claims from a retirement system for the period January 2000-September 2005. The unit of analysis was the course of drug therapy (CDT), representing a unique combination of a patient and a drug product (i.e., generic name, formulation and strength). CDTs initiated between August 1, 2000 and July 31, 2001 and discontinued before March 1, 2005 were included in the analysis. Days in therapy for each CDT were calculated as the difference between the date of the first and last prescription of the CDT. RESULTS: The study included 1.1 million CDTs representing 5.9 million claims. 37.0% of CDTs were discontinued with less than a month in therapy, 50.0% with less than 6 months, and 76.0% within one year. Maintenance therapy comprised 740,788 CDTs (70.3%) of which 27.0% had a single claim. Maintenance therapies had the following cumulative utilization patterns: 36.7% CDTs discontinued in less than 3 months of therapy, 45.0% in less than 6 months of therapy within one year, and 82.7% within two years, 21.6% of non-maintenance CDTs were continued for more than a year and 11.8% for more than 2 years. CONCLUSIONS: Premature discontinuation of therapy intended for long-term use is highly prevalent with more than one-fourth of all maintenance therapies discontinued at the first prescription, and nearly three-fourths discontinued within the first 5 years of therapy. In the other hand, over one-fifth of non-maintenance therapies were used for over a year. The assessment of compliance using claims data should account for discontinuation therapy prior to the potential manifestation of positive patient outcomes and for the short-term usage of maintenance therapies and prolonged use of non-maintenance therapies.

ASSESSING THE VALUE OF LESS FREQUENT MEDICATION DOSING ON ADHERENCE AND OUTCOMES
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OBJECTIVES: To systematically evaluate studies assessing the outcomes and economic value of decreased medication dosing frequency. METHODS: We searched the literature from 1998 to 2008 using the MEDLINE database for articles that evaluated the cost-effectiveness of dosing frequency changes and adherence. Only non-English articles were initially excluded; from the identified citations, all abstracts were reviewed; those lacking a clear link between dosage frequency changes, adherence, and cost-effectiveness (and/or CEA) were excluded. These selected articles were thoroughly reviewed and summarized. RESULTS: A total of 168 citations were identified after exclusions by reviewing the abstracts, 21 were selected and reviewed–18 original studies and three systematic reviews. The articles encompassed several chronic pathologies, e.g., osteoporosis (seven) and hepatitis C (two). Seven of the ten econometric studies utilized decision modeling frameworks (usually one-drug), the effect of dosing frequency changes on adherence was not the primary outcome. In most cases, assumptions on adherence changes were used as part of the sensitivity analysis, but lacked support from strong evidence. Only two randomized clinical trials where adherence was not the primary outcome reported the effect of dosing changes, but focused, as did cross-sectional surveys, on patient preferences instead of cost-effectiveness. Observational studies and retrospective claims database reviews used different measures, definitions, and methodologies, making it difficult to summarize their results. Overall, the studies suggested that less frequent dosing leads to improved outcomes, although direct evidence of economic benefit was often lacking. CONCLUSIONS: Due to the lack of direct evidence, head-to-head direct comparisons of dosing regimens and long-term prospective studies are ideally needed to evaluate the cost-effectiveness of less frequent dosing that may improve outcomes through improved adherence or improved pharmacokinetic/pharmacodynamic effects.

THE BRAZILIAN PORTUGUESE VALIDATION OF THE PROLAPSE — QUALITY OF LIFE QUESTIONNAIRE – P-QOL
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OBJECTIVES: The aim of this study was to translate and validate a Brazilian version of the “Prolapse – Quality Of Life Questionnaire” (P-QOL) as a specific instrument to assess the severity of symptoms and their impact in the quality of life of Brazilian women with genital prolapse. METHODS: Sixty-five patients (45 with symptomatic and 20 with asymptomatic pelvic organ prolapse), were enrolled from the outpatient clinic of the Urogynecology and Vaginal Surgery Section of the Gynecology Department of the Federal University of Sao Paulo (UNIFESP). At first, we translated the P-QOL