RESULTS: The cost model generated an estimated retail price of €55 or €113 for the neck brace depending on assumptions. The estimated retail price for the neck brace was lower than the reimbursement tariff of €194 and the actual retail price of €241. With respect to the knee brace, the estimated retail price of €331 or €523 was inferior to the tariff of €580 and the actual retail price of €948. CONCLUSION: Actual retail prices and reimbursement tariffs for two selected neck and knee braces substantially exceeded retail prices based on estimated production and distribution costs. Therefore, there seems to be scope for reducing reimbursement tariffs and containing public expenditure on orthotic braces.

THE PROCESS OF UPDATING THE NATIONAL LIST OF HEALTH SERVICES IN ISRAEL: IS IT LEGITIMATE? IS IT FAIR?
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OBJECTIVE: The Israeli National Health Insurance Law stipulates a National List of Health Services (NLHS) which all residents are entitled from their HMOs. This list has been updated annually for almost a decade using a structured review and decision-making process. Although the Israeli explicit priority-setting experience is unique and may be considered groundbreaking, its fairness and legitimacy have not been assessed. To assess the priority-setting process for compliance with the four conditions of accountability for reasonableness, transparency, responsiveness, and accountability. METHODS: We used such data as public documents, audit reports, literature review, the mass media, observations from the meetings of the Public Advisory Committee responsible for recommending new technologies for the NLHS, and interviews with the committee members. RESULTS: The Israeli process for updating the NLHS does not fulfill the appeals and enforcement conditions, and only partially follows the publicity and relevance conditions, outlined in the accountability for reasonableness and transparency framework. Only the reasonableness and transparency steps of the trans-disciplinary model are partially fulfilled, but the priority setting process lacks responsiveness and accountability. CONCLUSION: The fairness and legitimacy of the priority-setting mechanism have not been established. The main obstacles for achieving these goals may relate to the large number of technologies assessed each year within a short time frame (300 technologies assessed in 2007), the lack of personnel engaged in health technology assessment and the desire for early adoption of new technologies. Changes in the priority-setting process should be made in order to increase its acceptability among the different stakeholders.

HEALTH CARE USE & POLICY STUDIES—Disease Management

COST-EFFECTIVENESS ANALYSIS AND RETURN ON INVESTMENT OF HIGH COST PATIENTS MANAGEMENT PROGRAM WITHIN A PRIVATE HEALTH CARE PLAN IN BRAZIL
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OBJECTIVE: To evaluate a methodology of managing high cost patients, called Case Management Program (CMP), within a private health plan in southern Brazil and show that such program is cost-effective and the return on investment (ROI) is positive. METHODS: Using NAGIS(c) model and software for disease management program, the CMP was implemented in 211 patients (0.9% of the health plan beneficiaries). I compared health plan utilization and costs including CMP costs of one period of time before the program starts with the same period of time that the program was in place. RESULTS: After 9 months of CMP, there were 162 patients. I considered outcomes for these 162 patients. For one Real invested, R$4,78 was saved (One 2008 American Dollar is 1,78 Brazilian Real). The average cost per enrollee per month reduced 45.9% (R$463,85 to R$250,89) and 39.4% (R$463,85 to R$280,90) if the program’s costs (direct and indirect costs) are included as fixed costs. The number of visits reduced by 11.3% (794 to 704), as well as the labs exams which reduce 35.7% (420 to 270). Nevertheless, the labs exams per visit index reduce by 27.5%, where almost 53% of the visits had at least one exam before starting the program against 38.3% after the same period of time that the program starts. The number of hospitalizations reduced 34.6%, from 483 to 316. Thus, the bed-days saved were 534 days at infirmaries and 62...
days at intensive care unit. The incremental cost per bed-day saved was R$419,66. CONCLUSION: The NAGIS(c) model of managed high cost patient, called Case Management Program is cost-effective where the incremental cost per bed-day saved is R$419,66, and its return of investment is highly positive.

**PHP31**

**DRUG PROXIES FOR IDENTIFYING SPECIFIC DIAGNOSES IN MEDICARE PART D**

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OBJECTIVE: The purpose of this analysis was to develop a method for identifying Medicare Part D members with cardiovascular disease using medication proxies. METHODS: A binary matrix was created from cardiovascular medication prescription claims for Medicare Part D MAPD and commercial members from the first quarter of 2007. The binary matrix was subjected to factor/principal component analysis. The maximum valued factor loading for each of the generated components were then used to create a member/factor loading matrix. This matrix was used to derive beta coefficients, from logistic regression, to calculate a member’s probability of having hypertension, CAD, or CHF. RESULTS: One-hundred and twelve factors were produced over 696,471 members prescribed cardiovascular medications. Different probability thresholds were evaluated to determine the sensitivity and specificity for the identification method. The threshold probabilities ran from >0.30 to >0.975. As the threshold probabilities increased, sensitivity/specificity for hypertension, CAD, and CHF ran from 0.99/0.50–0.50/0.99, 0.61/0.91–0.50/0.99, and 0.63/0.96–0.50/0.99, respectively. A similar result was produced using maximum score coefficients resulting from the principal component analysis. CONCLUSION: Although this approach to identifying members with medication proxies appears to separate members with and without certain cardiovascular conditions, it tends to exclude members at the cost of minimizing erroneously identified members.

**HEALTH CARE USE & POLICY STUDIES—Drug Use**

**PHP32**

**WHAT’S DRIVING PRESCRIPTION COPAYMENTS?**

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OBJECTIVE: Some contend that prescription copayment increases reflect a disproportional shifting of costs to members while others believe that copayments are simply keeping pace with rising prescription costs. To better understand the drivers of prescription cost sharing, this analysis examines recent trends in member copayments relative to total prescription costs. METHODS: The study is a retrospective descriptive analysis of prescription claims data for a sample of commercially-insured members enrolled with Express Scripts between 2002 and 2006. Plan sponsors included in the analysis offered integrated prescription coverage within an employer-based market (no Medicare or Medicaid). For each year, the data represent prescription claim activity for over 18 million members. Total per-prescription costs were calculated as the sum of the discounted ingredient cost, dispensing fee, administrative fees and any applicable tax divided by the number of 30-day equivalent prescriptions. Average member per-prescription cost was calculated as the total member cost divided by the total number of 30-day equivalent prescriptions. Costs were calculated separately for generics, preferred brands and non-preferred brand-name prescriptions. RESULTS: From 2002 to 2006 the average total per-prescription cost increased $10.23 or 20.5% while the average member per prescription copayment increased by $1.70 or 14.3%. The proportion of total costs paid by members decreased from 24% in 2002 to 23% in 2006. Per-prescription member costs increased by 10% for generics, 25.7% for preferred brands and 58.6% for non-preferred brands. CONCLUSION: These findings suggest that plan sponsors are not shifting a greater proportion of costs to members, nor is member cost share keeping pace with rising prescription costs. Actual per-prescription member cost share increased at a modest rate, influenced by increased generic use which grew from 42% in 2002 to 58% in 2006.

**PHP33**

**HERB/DIETARY SUPPLEMENT AND PRESCRIPTION DRUG USE TRENDS AMONG US ADULTS, 1999–2004**

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OBJECTIVE: The aim of this study was to evaluate trends in the use of herbs and dietary supplements (HDS) in relation to prescription drug (Rx) use, as well as their individual use, among US adults from 1999–2004. METHODS: Data were abstracted from the 1999–2000 and 2003–2004 cycles of the National Health and Nutrition Examination Survey (NHANES). HDS included herbs, vitamins, minerals, and other supplements. Trends in HDS and/or Rx use were examined based on stratified characteristics (i.e., sociodemographics, insurance coverage, health care visits during the preceding year, chronic conditions). Sampling weights were adjusted to allow for the pooling of data from multiple waves. RESULTS: Overall, the proportion of HDS users increased from 51.2% during 1999–2000 to 53.0% during 2003–2004, while that of Rx users increased from 49.9% to 55.6% over the same period. Between 1999 and 2004, the proportion of HDS-only users decreased while the proportion of people who only used Rx increased. The concomitant use of HDS and Rx increased for most subgroups, except for those who had an annual household income less than $14,999 or greater than $65,000, and who had never have health care visits during the preceding year. CONCLUSION: Trends suggest that concomitant HDS and Rx use increased over the period of observation in the general US population. Further research is needed to investigate the outcomes of concurrent HDS and Rx use.

**PHP34**

**PRINCIPAL COMPONENTS ANALYSIS OF DRUG UTILIZATION AND EXPENDITURE TRENDS FOR MAJOR THERAPEUTIC CLASSES IN U.S. MEDICAID PROGRAMS**

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OBJECTIVE: Drug expenditures have been increasing much faster than spending on other medical services and have become burdensome for state Medicaid programs. This study was to analyze the trends of Medicaid drug utilization and expenditures across all major therapeutic classes and to identify their similarities and differences. METHODS: Quarterly Medicaid reimbursed drug prescriptions and dollar amounts for each drug were extracted from the national claims data from the Centers for Medicare & Medicaid Services for 1991 through 2004. Expenditures were aggregated across all drugs in 64 different therapeutic classes, providing 64 different time series of length 56 quarters