and arthritis of the hand or wrist (34.1%) were the most commonly reported. Compared with other variables, age, arthritis, and depressive symptoms were highly associated with the SF-36 physical domains. Depressive symptoms had the strongest association with each of the four SF-36 mental domains. Among the chronic conditions, the adverse impact of having difficulty in controlling urination, a relatively neglected condition, was only second to depressive symptoms in its negative relationship with vitality, social-functioning, and mental health. CONCLUSION: Chronic conditions were commonly reported among the older adults. The unique associations found between chronic conditions and domains of health status demonstrate the importance of examining the burden of these conditions in terms of functioning and well-being.

PIH11
THE EFFECT OF OVER-THE-COUNTER DRUG MISUSE AND THE ASSOCIATED ADES ON HRQOL IN THE ELDERLY
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OBJECTIVES: To measure over-the-counter (OTC) drug misuse in the elderly and study its relationship with health-related quality of life (HRQOL). In addition, adverse drug events (ADEs) due to OTC misuse and its relationship to HRQOL were examined. METHODS: A questionnaire will be administered to a sample of elderly patients, aged 65 and above, selected randomly from those attending community wellness programs in the Houston area. Information on OTC drug use/misuse, ADEs, HRQOL and demographic data were obtained using a combination of self-administered questionnaire and personal interview technique. HRQOL was measured using the SF-12v2 scale and analyzed using the SAS statistical package at a priori set significance level of 0.05. RESULTS: A total of 157 surveys were collected resulting in a correct response rate of 66.53% from four senior retirement centers. There were slightly more males (56.21%) and Hispanic participants (67.55%) with a median age of 74 years. Misuse occurred in 18% of the respondents and ADEs in 23%. The mean physical (PCS) and mental (MCS) component scores of the SF-12 scale were similar for the elderly (PCS = 52.53 ± 8.35, MCS = 53.99 ± 6.91). There was no significant difference in the occurrence of ADEs between those who did or did not misuse OTC products. Although there was no significant difference in HRQOL in those who did or did not misuse OTC products, there was a significant difference in HRQOL between those who experienced ADEs (PCS = 49.50 ± 6.86) and those who did not (PCS 53.49 ± 8.21). However, the significant effect was predominately associated with the PCS and its domains namely, physical functioning, role physical, and general health. CONCLUSIONS: Understanding trends in OTC drug use and misuse will help in devising methods to prevent ADEs and additionally improve HRQOL.

PIH12
RELATIONSHIP BETWEEN QUALITY OF LIFE AND INAPPROPRIATE DRUG USE: A RETROSPECTIVE ANALYSIS IN AN ELDERLY POPULATION
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OBJECTIVES: The primary purpose of this study is to compare two widely used generic quality of life measures, SF-12 and EQ-5D, in differentiating between appropriate and inappropriate prescription medication users in an elderly cohort. METHODS: Participants 65 years or older were taken from the Medical Expenditure Panel Survey (MEPS) panel five from January, 2000 to December, 2001. A longitudinal retrospective cohort study was conducted. Potential appropriate and inappropriate prescription medication users were identified based on updated Beers criteria list identifying inappropriate drug use in the elderly (Fick, 2003). National Drug Code numbers were used to identify potential inappropriate prescription drug use. The dependent variable, quality of life was measured using self-report versions of SF-12 (mental health, MCS, physical health, PCS and general health score) and EQ-5D (index, EQ-5D index and visual analogue scale score, EQ-5DVAS). Using OLS regression, health status scores were regressed on age, gender, prescription number and health status in the previous year. RESULTS: Of the 716 participants aged 65 years in the dataset, 455 were identified to have appropriate drug use in 2000. Of these, 381 and 74 met the criteria for appropriate and inappropriate drug use, respectively, in 2001. Appropriate prescription drug users had higher health status scores than inappropriate users for PCS, and EQ-5D (index and VAS scores), at the 0.05 level. Regression analysis reported significant model for PCS (Adjusted R2 = 0.3032, p < 0.0001); with significant beta weights for prescription number, prior health status, age and inappropriate drug use (p < 0.05). CONCLUSION: Aging population is at greater risk of adverse health events which can significantly affect their quality of life. Generic measures showed higher quality of life scores for individuals with appropriate drug use over those without. Prospective studies investigating inappropriate drug use, disease specific quality of life measures, in addition to the impact on cost are warranted.

HEALTH—Men's

PIH13
COST-EFFECTIVENESS ANALYSIS OF BENIGN PROSTATIC HYPERPLASIA (BPH) TREATMENTS
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OBJECTIVES: The long-term cost-effectiveness of newer treatments for BPH, including transurethral microwave thermotherapy (TUMT) and combination medical therapy, has not been sufficiently studied against existing alternatives. This study compared the cost-utility and cost-consequences of watchful waiting (WW), alpha-blockers (AB), 5-alpha-reductase inhibitors (5ARI), their combination, TUMT, and transurethral prostatectomy (TURP) in men with moderate to severe BPH symptoms. METHODS: A Markov model was constructed to estimate the clinical consequences, costs, and incremental cost per quality-adjusted life year (QALY) gained. Clinical consequences included progression to TURP, adverse events, and corresponding QALYs. Treatment costs were estimated from an insurance claims database and Medicare fee schedules. Treatment response and adverse event estimates were derived from published literature. Analyses considered a 20-year time frame, societal perspective, different age cohorts, symptom levels, and possible treatment switching. Cost and effectiveness were discounted at 3% per year. RESULTS: AB was cost-effective for treating moderate symptoms using the threshold of $50,000/QALY for most cohorts ($15,000–26,000 per QALY relative to WW). TURP was the most cost-effective treatment for severe symptoms relative to WW ($4,000–17,000 per QALY). 5ARI and combination therapy were dominated by alternatives due to annual pharmacoeconomic costs. The cost/QALY increased with age for TUMT and TURP and was stable for AB. Results were robust to costs, but sensitive to probabilities, utility weights, and life expectancy. Acceptability curves showed consistent trends for the alternatives most likely to be cost-effective. Preliminary expected value of perfect information (EVPI) analysis suggests additional informa-

Abstracts
tion is needed on preferences and extent of improvement. CONCLUSIONS: AB and TURP were the most cost-effective alternatives for moderate and severe symptoms, respectively. TUMT was promising for moderate symptoms, and older patients with severe symptoms, but was dominated under many conditions. These results have implications for future health practice with aging of the population and rising expenditures.

PIH14

USE OF SILDENAFIL CITRATE IN NON-ADHERENT PATIENTS WITH CV, DIABETES OR DEPRESSION

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OBJECTIVES: Patients often attribute erectile dysfunction to comorbid medications and subsequently discontinue therapy. This study explores the impact of sildenafil citrate in patients non-adherent with comorbid medications. METHODS: Retrospective cohort study using administrative claims data and cash prescriptions (January 2002-July 2002). Identified adult male patients with an antihypertensive (AH), antidepressant (AD), oral hypoglycemic (OHG) or lipid-lowering (LL) prescription in the 12 months prior to / following index sildenafil prescription. Patients with a comorbid medication possession ratio (MPR) <0.8 prior to sildenafil (i.e., non-adherent) were evaluated for changes in days supply and MPR. RESULTS: About 60% of the 12,281 patients who initiated sildenafil were previously non-adherent with comorbid medications. Mean MPR, for all disease cohorts and irrespective of payment source for sildenafil, increased after the index date. Compared to self-pay sildenafil patients, 3rd party sildenafil patients had statistically significantly larger increases in MPR for AH, OHG and LL prescriptions (range of MPR change: 8%–17%). After initiation of sildenafil, 20% (OHG) to 36% (AH) became adherent. Significantly greater increases in MPR were seen in patients with 3+ sildenafil prescription claims. Cash patients were less likely to have 3+ sildenafil prescriptions vs. 3rd party patients. CONCLUSIONS: In patients who were previously non-adherent to chronic medications, there appeared to be a significant increase in overall adherence after initiating sildenafil. This increase was significantly larger in patients with insurance coverage for sildenafil, as well as in patients with increased sildenafil utilization.

PIH15

IMPACT OF BENEFIT DESIGN ON PDE-5 UTILIZATION AND COSTS IN A LARGE PBM DATABASE

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OBJECTIVES: To determine how different factors related to benefit design impact the utilization and costs of PDE-5 inhibitors including vardenafil, tadalafil and sildenafil in adult males. METHODS: Pharmacy claims from a large, private pharmacy benefit management company over a 2-year period from October 1, 2002 to September 30, 2004 were analyzed. PDE-5 utilization, average of age of database population and PDE-5 users, and PMPM were evaluated. RESULTS: The average PMPM for PDE-5 agents was $0.16 over the entire study period with an average of 5.7 pills/rx. The average age of patients for different benefit designs ranged from 52 to 68 years while the sample population age ranged from 24 to 48 years. Plans with no PDE-5 agent on formulary had an average PMPM of $0.08 vs. $0.22 in those with at least one PDE-5 on formulary. Copays for open formulary incentive plans with PDE-5’s on 2nd tier were approximately $10 less than PDE-5s on 3rd tier while plan sponsored PMPM costs were similar ($0.17 vs. $0.18). This was attributed to a lower quantity dispensed per prescription (4.5 vs. 6.9). Similar trends were found for closed formulary plans where PDE-5s were on formulary vs. not on formulary (PMPM of $0.03 vs. $0.02). Differences in plan sponsored PMPM costs for open formulary, 1-tier vs. 2-tier plans were attributed to differences in member copays ($3.60 vs. $18.63) and not utilization (6.1 vs. 6.4 pills/rx). CONCLUSION: Despite a younger overall population, PDE-5 utilization was utilized in the 50+ age group regardless of benefit design or restrictions. Plan sponsors can expand access to PDE-5 agents and at the same time limit their PMPM costs with quantity limits.

PIH16

UTILIZATION PATTERNS OF SILDENAFIL CITRATE IN A SENIOR MANAGED CARE POPULATION

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OBJECTIVE: To analyze the utilization patterns of sildenafil citrate in a senior managed care population. METHODS: Using a large managed care administrative claims database, all male patients with a prescription for sildenafil citrate from December 2003 through November 2004 were selected from among patients ages 18 years and older (n = 107,879). A diagnosis for erectile dysfunction (ED) was not required. Prevalence, age, number of prescriptions and days supply, per senior member per month (PSMPM) cost, concomitant medications, and cost by diagnosis were analyzed. The PSMPM of sildenafil was compared with antihistamines and proton pump inhibitors (PPI’s). RESULTS: The median age of sildenafil users overall was 52 years old and overall per member per month cost was $0.16. Patients ages 65 and older (65+) represented 11.5% of all sildenafil use in the study (n = 12,383). 4.0% of eligible 65+ members had at least one prescription for sildenafil compared with 2.5% of members younger than 65. The average age of senior sildenafil users was 69.5 years old with 62.9% of seniors between 65–69 years of age; 23.5% were 70–74, and 3.5% were 80 years of age and older. Over the year, seniors filled 33,800 sildenafil prescriptions (mail order and retail) representing 242,552 pills. The average PSMPM cost for sildenafil was $0.39 compared with $9.52 for PPI’s and $1.35 for antihistamines. CONCLUSIONS: The prevalence of treated ED patients in a senior managed care population is 60% higher than that of younger members ages 18–64. The cost of sildenafil use in senior males is relatively low.

PIH17

EVALUATION OF TADALAFIL AND VARDENAFIL TREATMENT PATTERNS IN PRIOR SILDENAFIL USERS

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OBJECTIVES: Among currently available oral PDE-5 agents, sildenafil remains the most commonly used ED therapy. We evaluated refill rates and costs in sildenafil users who tried a competitor using a claims database. METHODS: Males 18+ years old newly initiated on sildenafil were identified in NDCHealth’s Intelligent Health Repository. Patients had at least 6 months history prior to through 6 months following initial claim for sildenafil. Treatment patterns following switch to competitors and resource utilization in patients who switched vs. those who did not switch were evaluated. RESULTS: About 6% of the