

lowest-cost 2008 plan. When cost savings were calculated by individual participant, this equated to a median annual OOP cost savings of \$98.00 (22.3%) per participant. **CONCLUSION:** Trained student pharmacists can provide community-based interventions that reduce OOP prescription drug plan costs among underserved Medicare populations.

PIH16

THE DIRECT COSTS OF INJURIOUS FALLS IN SENIORS

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OBJECTIVE: Falls in the elderly pose significant health risk with substantial effects on health resource utilization and cost; 95% of hip fractures are due to falls. Previous estimates of the costs of falls used administrative data which underestimate falls incidence. We aimed to estimate the direct health costs of injurious falls requiring Emergency Department (ED) care. **METHODS:** Information was collected on patients >70 years who presented to the ED of Vancouver General Hospital. Fallers were identified through a search of ED census, ED presenting complaints, ED consultant records, and patient charts for reports of a fall. From hospital reports, data were collected on patient demographics, diagnoses, admission status, and hospital length of stay. Total costs were estimated for each fall from the third payer perspective. Unit cost estimates for ED visits, and hospitalizations were taken from a fully allocated hospital cost model. **RESULTS:** Between December 1 2006 and March 31 2007, we identified 390 falls by 381 individuals costing \$2,520,641. The mean age of fallers was 83.6 years (SD:7.4); 69% were women. Fallers sustained 183 (47%) fractures—these included 70 hip (39%) and 22 pelvic (12%) fractures. Other common diagnoses were contusions/lacerations (n = 63, 16%), and syncope (n = 31, 8%). 134 (34%) falls resulted in hospital admission with an average length of stay of 31.6 days (SD:41.59) and mean cost of \$18,375 (SD:23601). Logistic regression analysis showed that compared to those <80 years, those >80 years were more likely to be hospitalized (OR:1.8, 95% CI:1.1–3.0). Women were more likely than men to be hospitalized (OR = 1.5, 95% CI:0.9–2.4), however this association was not statistically significant. After adjusting for age and sex, a diagnosis of “fracture” was the strongest predictor of hospitalization (OR:15.5, 95% CI:8.2–27.2). **CONCLUSION:** Among seniors, the significant cost of fall related hospital admissions warrants increased fall prevention programs in this population.

PIH17

COST-EFFECTIVENESS OF MAGNETIC RESONANCE-GUIDED FOCUSED ULTRASOUND SURGERY FOR TREATMENT OF UTERINE FIBROIDS

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OBJECTIVE: Uterine fibroids are the most common tumours in women during their reproductive years, yet there is considerable paucity of data on treatments' effectiveness and costs. We developed a Markov model to compare currently available treatments with a new Magnetic Resonance Guided Focused Ultrasound Sound Surgery (MRgFUS). **METHODS:** Current

practice, comprising of uterine artery embolization (UAE), myomectomy and hysterectomy, was compared with MRgFUS, the least invasive procedure. A Markov model was used to simulate the clinical outcomes, costs, age and quality-of-life parameters to provide informed decisions on the part of providers, payers, and patients. The results were expressed as costs per quality-adjusted-life-year (QALY) gained. The analysis was conducted from the perspective of the National Health Service (NHS) in the UK. All model parameters were based on the most recent literature (post 1999). The effects of uncertainty in the model's parameters were explored using extensive deterministic and probabilistic sensitivity analysis. **RESULTS:** MRgFUS is likely to be cost-effective. In the base scenario, it is dominant, that is, has a lower cost and better outcomes than existing treatments, although the QALY difference per woman is small. MRgFUS remains cost effective ($\leq 30,000$ per QALY gained) when using alternative assumptions regarding current practice, health utility, and the effectiveness of alternative treatments (complication, recurrence, and procedural death rates). Multiple simulations show the range of outcomes that might be expected in all aspects of practice with the result that MRgFUS remains cost-effective in more than 86% of the simulations. **CONCLUSION:** The results of this study support the introduction of MRgFUS as a treatment for uterine fibroids. A treatment strategy starting with MRgFUS is potentially more effective and less costly than the current practice.

INDIVIDUAL'S HEALTH—Patient-Reported Outcomes

PIH18

ASSESSING THE ASSOCIATION BETWEEN SCORE DIFFERENCES ON THE PREMENSTRUAL SYMPTOMS IMPACT SURVEY (PMSIS) AND HEALTH-RELATED QUALITY OF LIFE

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OBJECTIVE: A woman's health-related quality of life (HRQoL) can be affected by her premenstrual symptoms. The study objective was to assess the association between HRQoL and score differences on the Premenstrual Symptoms Impact Survey (PMSIS), a six-item instrument for measuring impact of premenstrual symptoms on a woman's HRQoL. **METHODS:** Data were collected on the PMSIS and SF-12 Health Survey from a panel of representative U.S. women 18–45 years via Internet (N = 971). PMSIS scores were used to identify women “at risk for PMDD.” Items from the SF-12 were dichotomized and regressed onto the standardized PMSIS scores with age as a covariate. Logistic regression was used to derive odds ratios (OR) for experiencing a particular outcome as a function of score differences between “at risk for PMDD” and the population mean of the PMSIS. **RESULTS:** The overall sample mean PMSIS score was 26.6 (on a standardized scale of 0–100 from no impact to severe impact). Higher PMSIS scores were significantly associated with increased risk of negative HRQL outcomes ($p < 0.01$). Women identified as “at risk for PMDD” (PMSIS score ≥ 64) had 383% increased risk of pain interfering with normal work; 320% increased risk of doing work or activities less carefully than usual due to emotional problems; 253% increased risk of feeling limited in work or activities due to physical health or feeling they accomplished less due to emotional problems; and 196% increased risk of feeling downhearted and depressed, and feeling little or no energy. **CONCLUSION:** There is a significant association between higher PMSIS scores (more severe impact due to premenstrual symptoms) and diminished role functioning, physical

and mental health well-being. The PMSIS can be a significant predictor of HRQoL in women with PMDD.

PIH19

PREDICTING RISK OF WORK LOSS ASSOCIATED WITH PREMENSTRUAL SYNDROME (PMS) AND PREMENSTRUAL DYSPHORIC DISORDER (PMDD) USING PHYSICAL COMPONENT SUMMARY (PCS) SCORE

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OBJECTIVE: Clinically significant PMS and its more severe form, PMDD, can impact women's physical health and interfere with their ability to work. This study used the Physical Component Summary (PCS) scores to predict work loss risk associated with the two diagnoses. **METHODS:** Two data sources were used. From the Medical Outcome Study (MOS), PCS scores from SF-36 Health Survey was regressed onto three work loss outcomes (inability-to-work-due-to-health-problems at baseline, work loss follow-ups at 6-months and one-year) with age and gender as covariates. In an Internet survey, the SF-12 Health Survey and retrospective component of American College of Obstetricians and Gynecologists (ACOG) for identifying "at-risk-for-clinically-significant-PMS" and retrospective criteria in DSM-IV-TR for identifying "at-risk-for-PMDD" were collected from a panel of representative U.S. women 18–45 years (N = 971). Given PCS scores from SF-12 in the Survey, regression coefficients derived from MOS logistic regressions were used to generate odds ratios (OR) of work loss risk for women with and without PMS or PMDD. ANOVA tests compared the probability differences in ORs within each diagnosis. **RESULTS:** A total of 17.7% and 6.0% of women were identified as "at-risk-for-clinically-significant-PMS" and "at-risk-for-PMDD", respectively. Statistically significant differences were observed in all outcome comparisons in both diagnoses (p < 0.001). Women not at risk for either diagnosis had risks of work loss comparable to the general population. Women "at-risk-for-clinically-significant-PMS" had a 139% increased risk of work loss with the concurrent state; those who worked at baseline had 32% increased risk of work loss at both follow-ups. Women "at-risk-for-PMDD" had a 181% increased risk of work loss at the concurrent state; those who worked at baseline had 46% increased risk of work loss at both follow-ups. **CONCLUSION:** Using PCS scores, women with either clinically significant PMS or PMDD were more likely to experience work loss than the general population, especially women with PMDD.

PIH20

PREDICTING RISK OF WORK LOSS ASSOCIATED WITH PREMENSTRUAL SYNDROME AND PREMENSTRUAL DYSPHORIC DISORDER USING MENTAL COMPONENT SUMMARY (MCS) SCORE

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OBJECTIVE: Clinically significant PMS and its more severe form, PMDD, can affect women mentally and interfere with their ability to work. This study used the Mental Component Summary (MCS) scores to predict work loss risk associated with the two diagnoses. **METHODS:** Two data sources were used. From the Medical Outcome Study (MOS), MCS scores from SF-36 Health Survey was regressed onto three work loss out-

comes (inability-to-work-due-to-health-problems at baseline, work loss follow-ups at 6-months and one-year) with age and gender as covariates. In an Internet survey, SF-12 Health Survey and retrospective component of American College of Obstetricians and Gynecologists (ACOG) for identifying "at-risk-for-clinically-significant-PMS" and retrospective criteria in DSM-IV-TR for identifying "at-risk-for-PMDD" were collected from a panel of representative U.S. women 18–45 years (N = 971). Given MCS scores from SF-12 in the Survey, regression coefficients derived from MOS logistic regressions were used to generate odds ratios (OR) of work loss risk for women with and without PMS or PMDD. ANOVA tests compared the probability differences in ORs within each diagnosis. **RESULTS:** A total of 17.7% and 6.0% of women were identified as "at-risk-for-clinically-significant-PMS" and "at-risk-for-PMDD", respectively. Statistically significant differences were observed in all outcome comparisons in both diagnoses (p < 0.001). Women not at risk for either diagnosis had risks of work loss comparable to the general population. Women "at-risk-for-clinically-significant-PMS" had a 74% increased risk of work loss at the concurrent state; those who worked at baseline had 53% and 48% increased risk of work loss at 6-month and 1-year follow-ups. Women "at-risk-for-PMDD" had a 99% increased risk of work loss at the concurrent state; those working at baseline had a 70% and 63% increased risk at respective follow-ups. **CONCLUSION:** Using MCS scores, women with either clinically significant PMS or PMDD were more likely to experience work loss than the general population, especially women with PMDD.

PIH21

LITERATURE REVIEW OF DISCRETE CHOICE EXPERIMENTS TO ASSESS WOMEN'S PREFERENCES AND WILLINGNESS TO PAY FOR MATERNAL HEALTH SERVICES

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OBJECTIVE: Little is known about women's preferences and willingness to pay (WTP) for drug information services in pregnancy. Teratology information services (TIS) provide drug information to pregnant women via telephone. To inform planning of an economic evaluation of TIS, a literature review of previous program evaluations of maternal health services using discrete choice experiment (DCE) methodology was conducted. **METHODS:** A search of the literature in the databases PubMed, MedLine, and PsychLit, was performed. The search keywords used were "discrete choice experiment" and "pregnancy". The studies were critically reviewed. **RESULTS:** Five previous studies that have applied DCE methods in the context of pregnancy and maternal health were found. These studies have examined preferences for service attributes in relation to miscarriage management, in-vitro fertilization, prenatal screening for Down's syndrome, provision of emergency contraception, and provision of counseling services after rape. These studies found that preferred service attributes included good staff attitudes, continuity of care, sympathetic and non-judgmental treatment, privacy, and sensitive health care providers. Women were willing to pay to avoid pain and complications, and for good staff attitudes. **CONCLUSION:** Women's preferences and WTP for health care services that provide drug information during pregnancy remain unknown. A DCE approach to evaluating services avoids the methodological challenges associated with tracking and aggregating health outcomes in both the mother and her child over their lifetimes. DCEs are able to demonstrate the value of non-health attributes