

**HEMATOLOGICAL DISEASES—Methods & Concepts**

PHM8

**ESTIMATING UTILITY VALUES FOR SELF-REPORTED JOINT PAIN AND MOTION LIMITATION OUTCOMES IN ADULT HEMOPHILIA PATIENTS-THE HEMOPHILIA UTILIZATION GROUP STUDY-PART V (HUGS-V)**Wu J<sup>1</sup>, Nichol MB<sup>1</sup>, Globe D<sup>2</sup>, Gwady-Sridhar F<sup>3</sup>, Ullman M<sup>4</sup>, Johnson KA<sup>1</sup><sup>1</sup>University of Southern California, Los Angeles, CA, USA, <sup>2</sup>Amgen, Thousand Oaks, CA, USA, <sup>3</sup>University of Western Ontario, London, Ontario, Canada, <sup>4</sup>Gulf States Hemophilia and Thrombophilia Center, Houston, TX, USA

**OBJECTIVES:** To assess 1) the association between estimated-utilities and outcomes of relevance to hemophilia patients joint pain (JP) and motion limitation (ML), and 2) sensitivity of six methods for estimating utilities to these outcomes. **METHODS:** Questionnaires completed by HUGS-V adult patients provided demographic, SF-12, and self-reported JP/ML data. Six estimated-utilities were derived from the SF-12, including HUI3/VAS item models (IM) and categorical models (CM) from the Sengupta-Nichol-Globe, SF-6D (Brazier), and Lundberg VAS algorithms. An analysis of covariance was used to determine differences in mean estimated-utilities between categories of JP/ML (none, mild, severe). Covariate adjusted effect sizes (ES) were calculated for estimated-utilities between categories of JP/ML. Covariates included age, education, employment status, income, and hemophilia severity. **RESULTS:** Of the 143 patients, 37% reported severe JP, and 57% reported severe ML in at least one joint. Mean age was 35.1 years (range 18.1 to 68.4). Mean estimated-utilities ranged from 0.72 (SF-6D) to 0.77 (HUI3 CM). The estimated-utilities were strongly correlated with each other ( $r$  range 0.60 to 0.98,  $p < 0.0001$ ) and were significantly different across the JP/ML categories ( $P < 0.0001$ ). Patients reporting mild JP/ML compared to no JP/ML, had medium ES (0.6 to 0.7), although the HUI3 IM (ES = 1.0) and SF-6D (ES = 0.9) had large ES. Severe JP/ML showed large effects (ES range 1.1 to 2.1) compared to no JP/ML. Utilities derived from each estimation method were slightly different with a mean difference less than 0.05 for each paired set of methods. The utility scores were ordered similarly across categories of JP/ML. **CONCLUSION:** The medium to large ES imply the ability to measure moderate to large clinically significant differences in relevant hemophilia outcomes. Although these ES have not incorporated distribution-based outcomes, the estimated-utilities from the SF-12 appear to be clinically meaningful, interpretable, and may be used for cost-effectiveness studies in patients with hemophilia.

**HEMATOLOGICAL DISEASES—  
Patient-Reported Outcomes**

PHM9

**THE ASSOCIATION OF BARRIERS TO CARE AND HEALTH RELATED QUALITY OF LIFE IN PATIENTS WITH FACTOR VIII DEFICIENCY-THE HEMOPHILIA UTILIZATION GROUP STUDY-PART V (HUGS-V)**Wu J<sup>1</sup>, Globe D<sup>2</sup>, Gwady-Sridhar F<sup>3</sup>, Forsberg A<sup>4</sup>, Riske B<sup>5</sup>, Johnson KA<sup>1</sup><sup>1</sup>University of Southern California, Los Angeles, CA, USA, <sup>2</sup>Amgen, Thousand Oaks, CA, USA, <sup>3</sup>University of Western Ontario, London, Ontario, Canada, <sup>4</sup>New England Hemophilia Center, Worcester, MA, USA, <sup>5</sup>University of Colorado Health Sciences Center, Aurora, CO, USA

**OBJECTIVES:** To assess the association between self-reported barriers to care and self-reported health related quality of life

(HRQOL) in Hemophilia patients. **METHODS:** Data were derived from HUGS-V. Parents/patients completed a standardized interview, including demographic, barriers to care, and either the PedsQL or SF-12. Overall barriers to care were assessed from an item “In the past 12 months, has there ever been a time that you needed hemophilia care but it was difficult to get it?” Then, eleven specific barriers were assessed. An analysis of covariance, adjusting for age, education, employment, income, and hemophilia severity, was used to determine differences in HRQOL between patients with and without barriers to care. **RESULTS:** Data for 290 patients (50% adult and 62% with severe hemophilia) were analyzed. Mean age was 9.9 years (children) and 35.2 (adult). Forty-three (14.8%) patients reported one to six barriers to hemophilia care. Mean SF-12 physical and mental composite scores were not significantly different between patients with and without any barrier to care. Covariate adjusted PedsQL subscale and total scores (except for physical summary) were significantly lower in those reporting barriers to care versus no barriers to care. The score differences ranged from 7.5 (physical summary) to 23.5 (emotional function). Children who reported two or more barriers to care had lower HRQOL scores for psychosocial summary (61.6) and total score (67.9) when compared with those who did not report barriers to care (86.5 and 87.6, respectively). The most frequently reported barriers to care were “distance to the clinic” for both adults and children, “insurance coverage” for adults, and “clinic schedule not convenient” for children. **CONCLUSION:** Preliminary data indicate that barriers to care may have a significant association with HRQOL outcome in hemophilia patients, especially in children. Identifying and resolving specified barriers may improve care access and subsequently patient reported outcomes.

**INDIVIDUAL'S HEALTH—Clinical Outcomes Studies**

PIHI

**EVALUATION OF CAUSES AND CONSEQUENCES OF INJURIES IN CHILDREN**

Angalakuditi M

Surveillance Data Inc, Plymouth Meeting, PA, USA

**OBJECTIVES:** To evaluate the common causes and consequences of injury related admission to the hospital in children in Western Australia. **METHODS:** A retrospective study was conducted at a Pediatric Teaching Hospital of patients <18 years of age hospitalized between 11/01/2002 and 12/31/2002. Patient medical records were reviewed if their admission diagnosis was injury related. Data collected from the medical record were date of birth, sex, date of admission, date of discharge, and clinical details such as diagnosis, procedure, causes of injury, and outcomes of the injury. **RESULTS:** One hundred and eighty four patients were admitted as a result of injury during the study period. Of these, one neonate, six infants, thirty-eight toddlers, one hundred and eleven children and twenty-eight teenagers in this study. The common cause of injury-related hospital admission was due to falls (109, 59%). The other causes of injury were crushed in 15 (8%) patients, spilling fluids in 10 (5.4%), and bites in 8 (4.3%) patients. The most common consequence of an injury in children (43/111, 38.7%) and teenagers (12/28, 43%) was bone fracture. However, head injuries are the most common consequence of injury in toddlers (11/38, 29%), infants (5/6, 83.3%) and neonates (1/1, 100%). The radius/ulna (36/63, 57%) was the most common site for bone fractures. Majority (32/37, 86.5%) of the patients who suffered head injuries were diagnosed as minor. **CONCLUSION:** The main cause of injury related admission to the hospital in children was due to a fall

and the common consequences were fractures and head injuries. The common bones fractured were the radius and ulna.

#### PIH2

##### **E-PRESCRIBING REDUCES BEERS PRESCRIBING AMONG THE ELDERLY**

Hutchins DS<sup>1</sup>, Lewis M<sup>2</sup>, Valezquez R<sup>3</sup>, Berger JE<sup>4</sup>

<sup>1</sup>Caremark, Scottsdale, AZ, USA, <sup>2</sup>Caremark, Hunt Valley, MD, USA,

<sup>3</sup>OSF HealthPlans, Peoria, IL, USA, <sup>4</sup>Caremark, Northbrook, IL, USA

**OBJECTIVES:** The objective of this study was to assess the impact of a PDA-e-prescribing tool (e-tool) on prescribing potentially inappropriate drugs from the Beers List to the elderly. The Beers List documents potentially inappropriate medications that should be avoided or used with caution in patients over the age of 65 years. **METHODS:** All prescription claims (N = 383,855) from April 2002 through June 2005 were extracted for 14,557 plan participants aged 65 and older in which 70 of 3706 prescribers received an e-tool. For each claim, we identified whether the prescription was new and a Beers listed drug and whether the prescriber was an e-tool user and a staff model physician. E-tool use was split into before and after initiation. New prescriptions were classified into 6 and 12-month variables using prior eligibility. Rates were determined as Beers claims counts divided by total claims. We ran chi-square tests and logistic regressions incorporating these and selected demographic variables. **RESULTS:** After initiating e-tool use, providers prescribed significantly fewer Beers drugs than before across all (7.87% vs. 9.13%,  $p < 0.0001$ ) and new (6-month: 3.39% vs. 4.68%,  $p < 0.0056$ ; 12-month: 3.05% vs. 4.78%,  $p < 0.0025$ ) prescriptions; their before rates did not differ significantly from non-e-tool providers (overall: 9.09% vs. 9.13%,  $p = 0.8702$ ; 6-month: 5.04% vs. 4.66%,  $p = 0.5459$ ; 12-month: 3.05% vs. 4.78%,  $p < 0.9317$ ). Staff providers prescribed significantly fewer Beers drugs overall than non-staff providers (8.88% vs. 9.27%,  $p = 0.0002$ ), but not for 6-month (5.08% vs. 4.49%,  $p = 0.0558$ ) or 12-month (4.97% vs. 4.69%,  $p = 0.5816$ ) new prescriptions. Regressions, accounting for provider degree and specialty, participant sex and age group, and geography, yielded similar results. **CONCLUSION:** e-Tools providing Beers criteria can significantly reduce the prescribing of these drugs among the elderly. Such reductions have been shown to reduce morbidity, mortality, and health care costs.

#### **INDIVIDUAL'S HEALTH—Cost Studies**

#### PIH3

##### **COST-EFFECTIVENESS OF ORAL AND TRANSDERMAL CONTRACEPTIVE METHODS**

Gajria KL<sup>1</sup>, Wallenstein GV<sup>1</sup>, Hagan MA<sup>2</sup>

<sup>1</sup>QualityMetric Inc, Lincoln, RI, USA, <sup>2</sup>Berlex Laboratories, Inc, Wayne, NJ, USA

**OBJECTIVES:** The objective of this study was to identify the most cost-effective oral or transdermal contraceptives (CCs) using a provider perspective. **METHODS:** A decision analytic model was developed to compare the cost-effectiveness of oral CCs, 3 mg drospirenone/0.02 mg Ethinylestradiol (DRSP-EE), 0.18 mg norgestimate/0.025 mg ethinylestradiol (NO-EE), and 1 mg norethindrone acetate/20 mcg ethinyl estradiol (NA-EE); transdermal CC 6 mg norelgestromin/0.075 mg ethinylestradiol (transdermal N-EE); and no contraceptive use in preventing a pregnancy per patient per year. Direct medical costs were based on average wholesale prices for drugs (Wolters-Kluwer, 2006), and, physician, laboratory and hospital costs based on 2006 Medicare reimbursement rates. Probability data that included compliance and pregnancy rates were extracted from random-

ized clinical trials and public resources such as the 2002 National Survey of Family Growth. A probabilistic sensitivity analysis of all free parameters was conducted through a Monte Carlo simulation. Key parameters were sampled from beta distributions. **RESULTS:** In the base case, DRSP-EE was found to be the most cost-effective strategy. DRSP-EE cost \$688 compared to \$766 for NA-EE, \$736 for transdermal N-EE, and \$729 for NO-EE to prevent a single pregnancy per patient per year. No contraceptive use was the least cost-effective strategy, resulting in approximately \$52,529 to prevent a single pregnancy per patient per year. Monte Carlo sensitivity analysis confirmed these findings. Incremental cost-effectiveness analyses revealed that the use of transdermal N-EE costs an additional \$86,285 per patient per year to be as effective as DRSP-EE. **CONCLUSION:** In terms of cost-effectiveness, DRSP-EE dominated all contraceptive strategies. The overarching component driving differences in cost-effectiveness was related to direct medical costs associated with pregnancy. These direct medical costs, in turn, were driven by differential compliance and efficacy rates that favored DRSP-EE.

#### PIH4

##### **THE DIRECT AND INDIRECT COST BURDEN OF TREATED UTERINE FIBROIDS**

Lee DW<sup>1</sup>, Ozminkowski RJ<sup>2</sup>, Smith Carls G<sup>3</sup>, Wang S<sup>4</sup>, Gibson TB<sup>2</sup>, Stewart EA<sup>5</sup>

<sup>1</sup>GE Health care, Waukesha, WI, USA, <sup>2</sup>Thomson Medstat, Ann Arbor, MI, USA, <sup>3</sup>Thomson Medstat, Brooklyn, NY, USA, <sup>4</sup>Thomson-Medstat, Cambridge, MA, USA, <sup>5</sup>Brigham and Womens Hospital, Boston, MA, USA

**OBJECTIVES:** Estimate annual direct (medical expenditure) and indirect (absenteeism and short-term disability) costs for women with uterine fibroids (UF). **METHODS:** We compared 12-month direct costs among women aged 18–54 with clinically-significant, symptomatic UF (admission, emergency visit, or >2 office visits >30 days apart with a UF diagnosis) to a 1:1 propensity score matched cohort of women without UF, using the MarketScan Commercial Claims and Encounters insurance database data from for 2000–2004. We also compared indirect costs for the sub-sample of women with available data. Exponential conditional regression analysis controlled for confounding factors, and costs were adjusted to 2004 levels. **RESULTS:** Sample sizes for the direct and indirect costs analyses were 38,020 and 1820, respectively. Mean 12-month direct costs for women in the UF group were \$11,720 vs. \$3257 for controls (women without diagnosed or treated fibroids). Mean 12-month indirect costs were \$11,752 and \$8083 for women in the UF group and controls, respectively. Estimated direct costs attributable to UF were therefore \$8463 ( $p < 0.001$ ) and indirect costs were \$3669 ( $p < 0.001$ ). Employers' share of direct costs ranged from 84.1% to 87.5%. **CONCLUSION:** Direct and indirect costs of uterine fibroids represent a substantial burden to employers. Treatment options aimed at reducing symptoms and resultant absenteeism are needed to improve women's health and productivity.

#### PIH5

##### **SURGICAL COST OF PELVIC ORGAN PROLAPSE IN GERMANY, FRANCE AND ENGLAND**

Subramanian D<sup>1</sup>, Slack M<sup>2</sup>

<sup>1</sup>Ethicon, Livingston, Scotland, UK, <sup>2</sup>Addenbrookes Hospital, University of Cambridge Teaching Hospitals Trust, Cambridge, UK

**OBJECTIVES:** To estimate the direct cost of surgical interventions for Pelvic Organ Prolapse (POP) to the payers in Germany, France and the National Health Service (NHS) in England.