adjust these estimates to reflect baseline levels of information transmission using data on the baselines rates at which physicians can identify the optimal treatment without any explicit mechanism to elicit preferences from the patients. Obtaining data on the baseline levels of information transmission should be a high priority. The EVSOI approach may also be used to value direct to consumer advertising and certain educational programs for patients that aim to promote optimal health decisions.

PMD25
ELICITING WILLINGNESS TO PAY WITHIN THE HEALTH SECTOR WITHOUT BIAS
Blumenschein K1, Blomquist G2, Johannesson M3, Horn N4, Freeman P5
1University of Kentucky College of Pharmacy and Martin School of Public Policy and Administration, Lexington, KY, USA; 2University of Kentucky, Lexington, KY; USA; 3Stockholm School of Economics, Stockholm, Sweden; 4American Pharmacy Services Corporation, Frankfort, KY, USA; 5American Pharmacy Services Corporation, Frankfort, KY USA

OBJECTIVE: The contingent valuation (CV) method is increasingly employed within the health care sector (HCS); however, the extent to which hypothetical choices mimic real economic choices remains unclear. A few previous experiments have studied the correspondence between hypothetical and real willingness to pay (WTP) within the HCS. The findings suggest that hypothetical bias (HB) (i.e. overestimation of real WTP) exists in the HCS, just as it does outside of the HCS. An important area of research is whether or not HB can be “calibrated” so that hypothetical choices more closely mimic real economic choices. We conducted an experiment directly comparing responses to a dichotomous choice CV question with real purchase decisions using a pharmacist provided diabetes management service as the item valued. We examine whether HB exists and we evaluate the usefulness of two HB mitigation techniques: the “certainty approach” and the “cheap-talk approach”.

METHODS: A CV survey using 267 subjects with diabetes recruited from 9 Kentucky community pharmacies was conducted. Subjects fell into one of three groups: 1) hypothetical offer followed with certainty calibration; 2) hypothetical offer preceded by cheap talk; 3) real offer to purchase the service. All surveys were face-to-face with a trained interviewer. RESULTS: Before calibration, 45% of subjects in the hypothetical group stated that they would purchase the service compared to 26% of subjects in the real group (p = 0.006). After calibration with the “certainty approach” the difference between the calibrated (24%) and real response rate was no longer significant (p = 0.83). The cheap talk group had a purchase rate of 45%, which was significantly different from the real group (p = 0.006). CONCLUSIONS: This experiment confirms the existence of HB in CV applications within the HCS. Results suggest that a “certainty-approach” calibration technique is successful in mitigating HB, while “cheap talk” script is not.

METHODS

PMD26
UTILIZATION OF COMPLEMENTARY DATA SOURCES TO DEVELOP INDICATION ASSIGNMENTS
Morris LS, Von Allmen H, Margolis J
IMS HEALTH, Plymouth Meeting, PA, USA

OBJECTIVES: Emergence of retrospective data sources without diagnosis has necessitated development of methods of assigning diagnoses using medications as a proxy. The objective of this study is to define a method for this allocation of multi-indication products using several data sources. METHODS: The study was conducted using three IMS HEALTH databases: National Disease and Therapeutic Index (NDTI), a compilation of the treatment of disease by office-based physicians; LifeLink database, an employer claims database; and LRx, a longitudinal retail prescription database. Using NDTI, medications commonly prescribed for treatment of specific diseases were identified. Patients with these drugs and diagnoses separately or in combination were selected from LifeLink™ to examine convergence of drug and diagnosis information. Based on the findings, a clinical algorithm to allocate prescription use by indication was designed. RESULTS: Medications used for treatment of asthma or allergic rhinitis (AR) were identified using NDTI. When applying this to LifeLink data, findings indicated diagnosis alone was not an adequate means of identifying indication: 49.7% of patients filling only asthma medications had only an asthma diagnosis; 15.0% of those receiving AR medications had a corresponding AR diagnosis; and 31.2% had neither diagnosis, yet filled prescriptions for both types of medications. Using the information gained from this analysis, algorithms were built assigning the most likely diagnosis based on the patient’s drug history. Using this algorithm in LRx, only 8% of asthma/allergic rhinitis prescriptions could not be categorized. Similar patterns were seen in other therapeutic areas. CONCLUSIONS: Relying on a single source for defining medications as a proxy for diagnosis can result in under-identification of patients with a condition. Use of multiple data sources allows for increased accuracy in identifying drugs or drug combinations used as a proxy for diagnosis in a prescription database.

PMD27
THE APPLICATION OF TWO PRODUCTIVITY INSTRUMENTS AT A LARGE EMPLOYER
Ozminkowski RJ1, Goetzl RG2, Chang S2, Long S2, Lerner D3
1The MEDSTAT Group, Inc, Ann Arbor, MI, USA; 2Medstat, Washington, DC, USA; 3The Health Institute, Tufts New England Medical Center, Boston, MA, USA

OBJECTIVES: The growth in the literature documenting relationships between health and productivity has resulted from the development of several survey-based productivity measures. However, some of the survey instruments have been developed for particular situations and contain idiosyncrasies that make it difficult to understand whether differences in productivity measures noted across studies are due to differences in the instruments that were used or the populations to which they were applied. METHODS: To address this issue, we applied two productivity instruments to the same employees working at a large telecommunications firm. Productivity metrics obtained from the Work Productivity Short Inventory and the Work Limitations Questionnaire were compared. RESULTS: The results suggest that acute, intermittent, or chronic conditions may reduce productivity by 4.9% to 7.1% (or by about $2000 to $2800 per employee per year), depending on the instrument. CONCLUSIONS: While the productivity losses seem comparable, they suggest different courses of action. The WPSSI is designed to point to particular conditions that seem problematic, while the WLQ points to the types of productivity problems these or other conditions may elicit. Such problems may reflect difficulties managing the time, mental or interpersonal, output, or physical demands of the job. Given the different foci of these instruments, the results obtained seem complementary, and both may be
useful for employers who are interested in estimating productivity losses and in learning where to focus their energy to help stem those losses.

PMD28

USING A WEB-PANEL TO AID DEFINITION OF A TARGET PATIENT POPULATION TO ASSIST RISK MANAGEMENT

Eaton SC1, Cook SF2, Andrews EB1, Hollis KA1, Ameen YZ2, Fehnel SE1
1RTI Health Solutions, Research Triangle Park, NC, USA; 2GaloSmithKline, Inc, Research Triangle Park, NC, USA

OBJECTIVES: To estimate the prevalence of IBS-D in a US population, and to evaluate patients’ self-reported severity of episodes. Prior use of medications commonly used to alleviate IBS symptoms and FS were also evaluated. METHODS: A two-stage, population based, cross-sectional survey was conducted from December 2001–February 2002. Data were collected from U.S. participants via internet panel. Of the 31,829 person sampling frame, 25,986 (82%) completed a screening questionnaire to identify IBS and subtypes using ROME II criteria. A questionnaire was administered to IBS-D and alternating IBS (IBS-A) cases to assess symptoms, medication history, and FS using the Medical Outcomes Survey SF-36 instrument. RESULTS: Screening identified 1713 cases (6.6%) meeting Rome II criteria. Among these, 1,380 cases had IBS-D (n = 901) and IBS-A (n = 453). A total of 1180 of the 1380 IBS-D and IBS-A cases completed questionnaires. Between 8–43% of the cases’ most recent episode were considered severe depending upon various definitions of severity. Over 95% of cases reported taking OTC medications, while 50% used prescription medications to treat IBS symptoms. Functional status scores of respondents were substantially lower than national norms on all dimensions of the SF-36. Individuals reporting their most recent episode as severe had still further impaired levels of functioning. CONCLUSIONS: This novel methodology and technology generated population-based estimates of IBS-D in a short period of time and assisted a drug sponsor in developing a risk management plan. The pro-

SESSION II

ASTHMA/ALLERGY (including ARDS)

ASTHMA/ALLERGY (including ARDS)—Clinical Outcomes Studies

PAA1

MEASURING THE IMPACT OF AN ASTHMA DISEASE MANAGEMENT INTERVENTION ON PHARMACY AND IN-PATIENT SERVICE UTILIZATION IN A MANAGED CARE SETTING

Patel VD1, Weingarten J1, Wedemeyer D2, Ershoff D1, Horwitz K1
1University of Southern California, Los Angeles, CA, USA; 2Care 1st Health Plan, Alhambra, CA, USA

OBJECTIVE: To measure the impact of an asthma disease management intervention by comparing pharmacy and in-patient service utilization during a six-month “pre” and “post” intervention period. METHODS: Care 1st health plan enrollees, predominantly Medicaid members, were identified as having asthma if they had any ER or in-patient claims with ICD-9 codes 493, or a claim for short acting b2-agonists, or any anti-inflammatory medications in the year prior to the start of the intervention. Patients were mailed a baseline self-assessment and QoL survey. Patients were stratified into four asthma severity categories based upon claims data; mild-intermittent, mild-persistent, moderate-persistent, and severe-persistent. Respondents with mild-intermittent or mild-persistent asthma were enrolled in a program consisting primarily of educational material delivered via mail. Respondents and a small number of non-respondents with moderate-persistent or severe-persistent asthma were referred to a telephonic case management program. Patients not responding to the survey, and not enrolled into either of the two interventions, served as the control group. This analysis is limited to the 1522 patients with continuous eligibility for the entire study period, and with at least one pharmacy claim in each of the two 6-month periods. RESULTS: The mean age of the sample was 13 years, 47% were female, and 64% were of Hispanic origin. Overall, the percentage of patients with high b2-agonist use (4 + claims) decreased from 27.3% in the “pre” to 22.2% in the “post” period (P < 0.001). Use of oral steroids decreased from 35% to 28.7%, and inhaled steroids increased from 28.8% to 33.6% (P < 0.001). Overall percentage of patients with in-patient hospitalization decreased from 2.6% to 1.1% (P < 0.01). CONCLUSION: From this evaluation provides strong evi-

PAA2

THE PREVALENCE OF INAPPROPRIATE USE OF SHORT-ACTING ASTHMA MEDICATION

Hong SH

University of Arkansas for Medical Sciences, Little Rock, AR, USA

OBJECTIVES: The aims of this study were to estimate what portion of asthma patients are using quick-acting asthma medications inappropriately and to examine how the inappropriate use varies with age and sex. METHODS: Prescribed medicine data of 1996–2000 from the Medical Expenditure Panel Survey (MEPS) are retrospectively analyzed. The survey is on-going project, sponsored by the Agency for Health care Research and Quality. Non-institutionalized U.S. citizens of 5 or older who had used quick-acting asthma relievers in a given year were identi-

309

fied and further classified as “inappropriate users” if high doses of short-acting beta-agonists were taken in conjunction with low doses of inhaled corticosteroids. RESULTS: During the period of 1996–2000, a total of 2390 subjects reported that they had used quick-acting asthma relievers per year. Of those, 284 (11.88%) were 65 years of age or older and 862 (36.07%) were five through 17 years of age. The remaining 1244 (52.45%) were 18 through 64 years of age. More than half of the subjects were females (59.21%). About 6 percent (95% CI: 5.07–6.87%) of the users of quick-acting asthma relievers were identified and further classified as “inappropriate users” if high doses of short-acting beta-agonists were taken in conjunction with low doses of inhaled corticosteroids. RESULTS: During the period of 1996–2000, a total of 2390 subjects reported that they had used quick-acting asthma relievers per year. Of those, 284 (11.88%) were 65 years of age or older and 862 (36.07%) were five through 17 years of age. The remaining 1244 (52.45%) were 18 through 64 years of age. More than half of the subjects were females (59.21%). About 6 percent (95% CI: 5.07–6.87%) of the users of quick-acting asthma relievers were identified and further classified as “inappropriate users” if high doses of short-acting beta-agonists were taken in conjunction with low doses of inhaled corticosteroids. RESULTS: During the period of 1996–2000, a total of 2390 subjects reported that they had used quick-acting asthma relievers per year. Of those, 284 (11.88%) were 65 years of age or older and 862 (36.07%) were five through 17 years of age. The remaining 1244 (52.45%) were 18 through 64 years of age. More than half of the subjects were females (59.21%). About 6 percent (95% CI: 5.07–6.87%) of the users of quick-acting asthma relievers were identified and further classified as “inappropriate users” if high doses of short-acting beta-agonists were taken in conjunction with low doses of inhaled corticosteroids. RESULTS: During the period of 1996–2000, a total of 2390 subjects reported that they had used quick-acting asthma relievers per year. Of those, 284 (11.88%) were 65 years of age or older and 862 (36.07%) were five through 17 years of age. The remaining 1244 (52.45%) were 18 through 64 years of age. More than half of the subjects were females (59.21%). About 6 percent (95% CI: 5.07–6.87%) of the users of quick-acting asthma relievers were identified and further classified as “inappropriate users” if high doses of short-acting beta-agonists were taken in conjunction with low doses of inhaled corticosteroids.