followed by Italy, Spain and Hungary ahead of a group of six countries of about equal impact. When weighing edges between countries by market size the picture changed somewhat with Germany still the most important country ahead of Italy, UK, France and Spain. CONCLUSIONS: Taking the entire web of price referencing relationships into consideration provides 8 different conclusions than just counting the number of countries referencing a single country when assessing the importance of that particular country. Likewise, when incorporating the market size of each country, this gives a different result than just ranking countries by market size alone.

PHP17 PRESCRIPTION DRUG MONITORING PROGRAMS: THE PATIENT PERSPECTIVE
Goodin A, Blumenschein K, Freeman PR, Talbert J
University of Kentucky, Lexington, KY, USA
OBJECTIVES: Many states have implemented prescription drug monitoring programs (PDMPs) to address abuse and diversion of controlled substances. While the perceptions of prescribers and dispensers have been examined, the patient perspective on PDMPs is notably absent from existing research. This project examined patient perceptions of Kentucky’s PDMP by asking Medicaid beneficiaries about their experiences with the Kentucky All Schedule Prescription Electronic Reporting program (KASPER). METHODS: Medicaid beneficiaries over age 18 were contacted by mail to complete a modified version of the Consumer Assessment of Health Plans Survey. A reminder postcard and second survey were sent to non-responders two weeks after the first mailing. 1,305 surveys were returned (5% 297, response rate = 24.64%). Responses were coded and 25% of surveys were re-coded to test inter-coder reliability. Statistical analysis was conducted in STATA v11.0.
RESULTS: Of 461 respondents, 63 (13.67%) reported that their health care provider had discussed KASPER report with them. Fewer respondents reported that KASPER prevented them from getting (8.11%) or filling (8.53%) a prescription. Patients with chronic pain conditions were more likely to have a health care provider discuss a KASPER report with them (10.18%) than non-chronic pain patients (3.95%). Respondents with disabilities were also more likely to have a KASPER report prevented them from getting a prescription than non-chronic pain patients (6.01% vs. 1.75%). Chi-square testing demonstrates that these differences are statistically significant (discussed KASPER report p = 0.006, KASPER report prevented getting prescription p = 0.013). There were limited differences in patient-reported experiences with KASPER based upon patient gender, race, Hispanic ethnicity, or education level. CONCLUSIONS: Most respondents report they are unaffected by the KASPER program. Respondents with chronic pain are significantly more apt to report difficulty getting and filling prescriptions. States seeking to form or alter KASPER programs should consider patient input as well as prescriber and dispenser opinions.

PHP18 OPTIMAL HEALTH POLICY AND THE LINK BETWEEN OUTPUT MARKETS AND DEVELOPMENT
Philipson T
The University of Chicago, Chicago, IL, USA
OBJECTIVES: To examine whether R&D for medical products differs from other forms of R&D and should therefore be guided by different policy solutions in attempting to stimulate it. METHODS: Conceptual analysis and regression analysis. RESULTS: Although patents and patent coverage are opposed to standard products, there is a link between output markets and development of medical products in the sense that the cost developing new medical products depends on the quality and price of conventional care in output markets. This is because clinical trials are the major driver of development spending and the recruitment of subjects into trials requires them to forgo conventional care. This output market link induces non-standard effects on medical innovation. This output market link increases the importance of that particular country. Likewise, when incorporating the market size of each country, this gives a different result than just ranking countries by market size alone.

PHP19 TRENDS IN ON-LABEL AND OFF-LABEL PRESCRIBING OF MONTELUKAST IN A COMMERCIALLY INSURED POPULATION 1998-2008
Ali MM, Martin B
University of Arkansas for Medical Sciences College of Pharmacy, Little Rock, AR, USA
OBJECTIVES: Montelukast has been approved for the prophylaxis and chronic treatment of asthma in patients 12 months and older, acute prevention of exercise-induced asthma in patients 14 years and older, and relief of symptoms and relief of occasional nighttime and episodic seasonal and perennial allergic rhinitis in patients as young as 6 months. We examined trends in montelukast use, new use, and on-label and off-label use from 1998 to 2008. METHODS: In this retrospective cohort study of administrative claims data, we identified all subjects in the Lifelink database between January 1997 and December 2009 were analyzed. Study subjects had to be continuously enrolled for two years. On label use was determined by searching for ICD-9-CM codes for approved indications; asthma, exercise induced bronchospasm, and allergic rhinitis. OLS regression was used to assess linear trends over time. RESULTS: 0.16% of subjects were prescribed montelukast in 1998 and 2.44% in 2008 and the linear trend of increase in use was significant (R2 = 0.978, p < 0.0001). 37,793 subjects were eligible for the analysis of off-label use with a mean age of 31.22 years and 43.6% were male. Off-label use was lowest in 1999 (12.56%) and highest in 2007 (24.54%) with a significant increase in usage trend (p = 0.006). Montelukast use increased more modestly from 2002 (20.6%) to 2008 (23.91%). Overall 23.02% of subjects used montelukast off label and the elderly (31.45%) and persons from the south (28.16%) had the highest rates of montelukast off label use. CONCLUSIONS: Montelukast prescribing increased substantially over the previous decade where in 2008, 1 in 40 persons with commercial insurance had at least one prescription filled. Over three quarters of montelukast prescribing is supported by a diagnosis for a labeled indication. Off label use is greatest in the elderly which may be partially explained by more heavily prescribed off label uses in the literature for adults.

PHP20 MEDICATION USE SURVEY OF INPATIENTS WITH BASIC MEDICAL INSURANCE
Kong X
China Health Insurance Research Association, Beijing, China
OBJECTIVES: Understanding the characteristics and distribution of inpatients who have basic medical insurance within China, Analyzing the treatment status and inpatients’ expenses, Studying and summarizing the application of various kinds of medication, Providing database to government for supporting drug regulatory policy. METHODS: We conducted a sampling survey of inpatients with basic medical insurance in all the provinces in China by city. In 2010, we extracted data of 157,577 inpatients, and accounting for 0.5% of the total sample size. The sampled data was statistically analyzed by SQL Server 2003. RESULTS: Average hospital expenses while inpatients were hospitalized were 17,500 Yuan per visit, the average hospital expense of inpatients with basic medical insurance reached RMB7,670 Yuan per visit, a 13.6% increased from the previous year. The drug expense was accounted for 49.1% of the total. Overall the spectrum of diseases of inpatients has changed, Cardiovascular system diseases accounted for 26.75%, which still kept the first position, and Tumors accounted for 12.35% (10.95% in 2008). CONCLUSIONS: Effects from the aging population, the health insurance fund spent mostly on the elderly, are more obvious. In 2009, among urban basic medical insured people, inpatients that are over sixty accounted for 49.2%, with 55.26% of the total expense. 2) The Medical Insurance Fund had a high concentration of resource use. In 2003, 9.3% of the drugs accounted for 31.9% of the total drug expense, and 6% of the total drug expense accounted for 39.6% of the total drug expense. 3) The rational use of drugs is not optimistic. The expense of antibiotic medicines accounted for 29.3% of the total expense of chemical medicines, the number of the inpatients that have taken combinational antibiotics accounted for 63.7% of the total inpatients. Abuse of Traditional-Chinese-Medicine-injection and drugs for adjutant-treatment also needs to be monitored.

PHP22 ASSOCIATION OF SELF-REPORTED HEALTH STATUS WITH COST-RELATED MEDICATION NONADHERENCE AND OUT-OF-POCKET PHARMACY SPENDING AMONG SENIOR MEDICARE BENEFICIARIES
Tang Y
University of Pittsburgh, Pittsburgh, PA, USA
OBJECTIVES: To examine the association of self-reported health status with cost-related medication nonadherence (CRN) and out-of-pocket pharmacy spending (OOP) among senior Medicare enrollees. METHODS: We analyzed the Medical Expenditure Panel Survey (MEPS), a national survey of adults aged 50 or older. Self-reported health status was classified into three categories: excellent (excellent and very good), good, and poor (fair and poor) health. We estimated the association between self-report health status and 1) cost-related medication nonadherence using logistic regression; 2) monthly out-of-pocket pharmacy spending using generalized linear model (GLM) controlling for socio-demographic characteristics and physical health conditions. All estimates were weighted to be nationally representative. RESULTS: Among 9,090 Medicare beneficiaries aged 65 or older (74.8% female, 56.1% were female, 5.8% reported taking less medication because of cost. Compared to those with excellent health status, beneficiaries with good health (OR=1.643, p=0.0001, 95% confidence interval [CI] 1.263-2.138) and poor health (OR=2.947, p=0.0001, 95% CI 2.264-3.834) were more likely to report medication nonadherence. The GLM regression results showed that compared to excellent health beneficiaries, the average monthly out-of-pocket pharmacy spending was $13,844 ($p=0.0001, 95% CI 7,500-20,186) higher for good health and $27,245 ($p=0.0001, 95% CI 17,695-36,794) higher for poor health subjects. CONCLUSIONS: Drug spending is heavily concentrated among individuals 65 years or older, and cost-related medication nonadherence among seniors has been a big public health concern, especially before the implementation of Medicare Part D in 2006. This study find that worse health status is significantly associated with increased likelihood of cost-related medication nonadherence and higher out-of-pocket expenses. Senior Medicare beneficiaries are the most likely to face high out-of-pocket drug expenses and face higher OOP burden compared to younger Medicare beneficiaries with poor health status.

PHP23 THE IMPACT OF MEDICARE PART D ON PRESCRIPTION VOLUME AND OUT-OF-POCKET COSTS OF MEDICALLY NECESSARY DRUGS
Quddus Z, Qureshi J, White C
University of Rochester, Rochester, NY, USA
OBJECTIVES: With the January 2006 introduction of Medicare Part D Plans (PDP) intended to increase drug access, we hypothesized that it would impact trends in prescription volume (TRx) and out-of-pocket costs (OOPC). We evaluated these un-