CONCLUSIONS: Adoption of these laws increased 50% since the previous study. While 24 (43%) of 56 laws across localities, laws were grouped into 13 topic headings, including health, education, licensing, vital statistics, and insurance. Of 36 (64%) localities that have laws, addressing IIS creation, 42% authorize and 58% require development. Localities adoption of these laws increased 50% since the previous study. While 24 (43%) localities across localities, laws were grouped into 13 topic headings, including health, education, licensing, vital statistics, and insurance. Many others may not specify IIS, but do regulate collection, sharing and/or storage of immunization data within education, department of health or other records. Aggregate data for the localities is presented in tabular format and shaded maps.

RESULTS: Localities IIS policies have increased, more states include child health immunizations, and now Meaningful Use incentives include IIS participation. Expanding adoption of policies encouraging participation may suggest a diffusion of innovation, through both national and state channels. As entrepreneur localities experiment to improve IIS utility and uniformity, it will be important to consider how the current framework has influenced participation, and opportunities for future coordination through policy development.

Infection – Research on Methods

PIN53 COMPARISON OF EVIDENCE-BASED VARIATION AND CONSTANT PERCENTAGE VARIATION FOR ONE-WAY SENSITIVITY ANALYSES
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OBJECTIVES: A common approach to one-way sensitivity analysis is to vary inputs by a fixed percentage across the range of values. An alternative is to derive ranges using evidence-based probability distributions from published sources. Our objective was to compare one-way sensitivity analysis results when using these two approaches in the same decision model.

METHODS: We replicated a published HIV/AIDS cost-effectiveness Markov model (zidovudine vs. zidovudine plus lamivudine) in the UK using TreeAge®. We analyzed 30 states in a randomized controlled trial (RCT) that included 100 patients randomized to receive evidence-based or fixed percentage variation on the range of inputs.

RESULTS: Using evidence-based variation on the range of inputs, 95% of ICERs were within the range of ICERs when using fixed percentage variation on the range of inputs. Additionally, the mean difference of the lower and upper range of ICERs for all inputs was 0.00% for all inputs, and 22% using ±5% for all inputs.

CONCLUSIONS: Using evidence-based probability distributions from published sources and fixed percentage variation on the range of inputs produces a similar range in uncertainty in inputs should be used in all sensitivity analyses to reflect realistic uncertainty in the outcome was larger for the evidence-based probability distributions from published sources compared to the fixed percentage variation method. Additionally, the mean difference of the lower and upper range of ICERs for all inputs.

Musculoskeletal Disorders – Clinical Outcomes Studies

PMS1 DO BISPHOSPHONATES CAUSE ATYICAL FEMUR FRACTURES?
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OBJECTIVES: Clinical case reports support the occurrence of atypical fractures while Phase III trials for bisphosphonates have not shown this adverse effect. This study determines whether or not atypical fractures of the subtrochanteric region and diaphyseal femur are occurring in bisphosphonate users within the Kentucky Medicaid population. The incidence of atypical femur fractures in bisphosphonate users has been estimated to 30 per 100,000 person years. Bisphosphonates are commonly prescribed for the prevention of osteoporosis-related fractures, there are concerns about this possible, but rare, adverse event related to the long-term use of bisphosphonates.

METHODS: The retrospective Kentucky Medicaid claims database was used to identify atypical femur fractures in patients who have a clinical diagnosis of osteoporosis (ICD-9-CM G03.0). We included all patients aged at least 18 years old who were continuously enrolled in Kentucky Medicaid for at least one year. Atypical fractures were defined as fractures of the subtrochanteric region and diaphyseal femur. The analysis was limited to patients who had at least two physician visits or hospital stays for the index period.

RESULTS: A total of 45,960 patients met the inclusion criteria. Of these, 131 (0.29%) were identified with atypical femur fractures. The incidence of atypical femur fractures in bisphosphonate users in the Kentucky Medicaid population was estimated to be 30 per 100,000 person years. The risk of atypical femur fractures in bisphosphonate users was similar across sex, age, and geographic region.

CONCLUSIONS: Atypical femur fractures in bisphosphonate users are common and may be under-reported. Further research is needed to determine the true incidence of these fractures and to identify risk factors for their development.

PMS2 ATRIAL FIBRILLATION IN OSTEOPOROTIC WOMEN TREATED WITH ALENDRONATE
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BACKGROUND: Bisphosphonates have been associated with an increased risk of atrial fibrillation (AF) and may thus be associated with an increased risk of cardiovascular (CV) events. However, recent studies have so far not confirmed the potential risk of CV events associated with bisphosphonate use. In addition, whether the CV risk associated with bisphosphonate use remains an unanswered clinical question.

OBJECTIVES: The purpose of this study was to assess the CV risk including AF, stroke, or acute myocardial infarction in osteoporotic women exposed to oral bisphosphonates for at least three months.

METHODS: We used the 2000–2008 Taiwan’s National Health Insurance Program to conduct a population-based, cross-over study of 10,572 newly diagnosed osteoporotic women. Eligible patients were those who had taken alendronate, 10 mg or 70 mg, for at least 3 years. Study subjects were further categorized into continuous and discontinued users. Cox proportional models were used to compare the 1-year risk of CV events between continuous and discontinued users.

RESULTS: Among the 10,572 osteoporotic women, 8,852 received a weekly regimen of alendronate 70 mg while 1720 received a daily regimen of alendronate 10 mg. More than 80% of alendronate users continued their therapy after the first three months. Cumulative exposure to alendronate was 285 and 104 days (alendronate 70 mg) and 251 and 96 days (alendronate 10 mg) in continuous and discontinued users, respectively. Compared to discontinued users, continuous use of alendronate was not associated with a higher risk of CV events. These results were consistent among the users of alendronate 70 mg (HR = 0.96, 95%CI = 0.80–1.19) and alendronate 10 mg (HR = 0.67, 95%CI = 0.42–1.06). 

CONCLUSIONS: Continuous alendronate use was not significantly associated with an increased CV risk in osteoporotic women.

PMS3 RISK FACTORS FOR NON-INITIATION OF DISEASE MODIFYING ANTI-RHEUMATIC DRUGS (DMARD) BY PATIENTS WITH NEWLY DIAGNOSED RHEUMATOID ARTHRITIS (RA)
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OBJECTIVES: To evaluate adoption of treatment guidelines recommending the initiation of a DMARD within 12 months of new RA diagnosis and to identify risk factors for non-initiation.

METHODS: Newly diagnosed adult RA patients from 2003-2009 with 12 months of continuous enrollment before and after their first RA diagnosis were identified in the MarketScan Research Databases. Patients were non-DMARD users who started a biological DMARD within 12 months following diagnosis. Patients were categorized as DMARD initiators or non-initiators in the 12 months following diagnosis (follow-up period). We compared demographic and clinical characteristics of initiators versus non-initiators using Cox-proportional hazard models.

RESULTS: A total of 26,911 patients met the study criteria, 17,014 patients (63%) initiated a DMARD therapy in the follow-up period. At baseline, compared to initiators, non-initiators were older [mean age 62.6 (SD = 14.9) versus 58.1 (SD = 13.3), p = 0.001], had a higher Deyo-Charlson Comorbidity Index Score (CCI) [0.76 (SD = 1.3) versus 0.58 (SD = 1.1), p = 0.001], were more likely to have had an inpatient stay in the pre-index period (19% versus 13%, p<0.001), had higher pre-index total costs [$12,725 (SD = 24,500) versus $10,534 (SD = 20,259), p = 0.001] and had similar out-of-pocket total costs [$1,224 (SD = 1,370) versus $1,230 (SD = 1,519), p = 0.738] and out-of-pocket outpatient pharmacy costs [$492 (SD = 811) versus $478 (SD = 653), p = 0.052]. Multivariate-adjusted risk factors for DMARD non-initiation included older age (85+), high CCI (3+), and the presence of GI disorders, cardiac conditions, hypertension, osteoarthritis, or respiratory infections in the pre-index period. Patients who used an NSAID or corticosteroid, were diabetic, saw a rheumatologist, or had a rheumatologist in the pre-index period were all more likely to initiate a DMARD in the follow-up period. CONCLUSIONS: The majority of new RA patients followed treatment guidelines and initiated a DMARD therapy; nevertheless, over one-third of the patients did not initiate DMARD therapy within a year after diagnosis.

PMS4 THE ASSOCIATION BETWEEN TERIPARATIDE PERSISTENCE AND FRACUTURE OUTCOMES IN A US CLAIMS DATABASE
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OBJECTIVES: To evaluate the association between persistence on teriparatide within 45 days of initiating treatment and fracture rate and fracture risk among US patients.

METHODS: We used the Thomson Reuters MarketScan® Research Databases, 2004-2008, to identify new TPTD users ≥18 years with continuous medical and pharmacy coverage over 12-months pre-index and 24-months post-index date (index date). We identified patients who had at least 6 months of continuous TPTD prescription; those with their first registered fracture events (>3) occurring within 7 days, fractures within 90 days of index date or at the same site, and any hip fractures after 2nd occurrence were excluded from the post-index osteoporotic fracture definition. Persistence was measured as total days on TPTD until first 45-day gap. Logistic regressions were performed to model