formulation resulted in less erosion from the total brand. In cases where branded utilization is not converted to TR formulation prior to launch of generic competition, such as risperidone and fluoxetine, or TR launch precedes generic launch by less than six months or not at all, such as azythromycin and sertraline, dramatic reduction in total sales/brand population was observed. In the unique case where branded escitalopram was introduced prior to the generic launch of citalopram, an effect similar to a branded TR launch was observed. CONCLUSIONS: While generic use typically replaces the majority of branded equivalents in a short timeframe, branded products with a time-release formulation may limit uptake rate of the general version of the total branded product.

PUBLIC HEALTH AND ECONOMIC IMPACT OF 13-VALENT PNEUMOCOCCAL CONJUGATE VACCINE (PCV13) IN AN INFLUENZA PANDEMIC IN SINGAPORE AND HONG KONG

Rabin J1, McGarry L1, Klugman K2, Strutton D3, Gilmore K3, Hwang S4, Rinaldi F5, Westerink J6, Hutchinson M7, Goldman C8, Zhang Y9, Cao Y9, Clancy C10

13 Innovus, Medford, MA, USA, 2Rollins School of Public Health, Emory University, Atlanta, GA, USA, 3Pfizer Inc., Collegeville, PA, USA, 4Independent Consultant to Wyeth—Asia, 5University of California Pacific, London, UK, 6Harvard School of Public Health, Boston, MA, USA

OBJECTIVES: Historic data suggest that most 1918 influenza pandemic-related deaths were due to pneumococcal disease (PD); preliminary evidence shows a similar pattern for the 2009 H1N1 influenza outbreak. Implementation of 13-valent pneumococcal conjugate vaccine (PCV13) national immunization programs would likely lessen the impact of a pandemic in Asia-Pacific populations that currently have low pneumococcal vaccination rates; our objective was to quantify this impact in Singapore and Hong Kong.

METHODS: We used a decision-analytic model to assess the impact of PCV13 infant vaccination on PD incidence and mortality in an influenza pandemic in Singapore and Hong Kong versus no vaccination. The model was estimated from Hong Kong case series; both direct and indirect (herd) effects against PD were included. Effectiveness of PCV13 was extrapolated from observed US 7-valent PCV (PCV7) data, using assumptions on serotype prevalence in the pre-PCV7 era, and PCV13 protection against the 6 serotypes not in PCV7. Country-specific data were used where available; where unavailable, US data were used. To simulate acceleration of PD transmission in a flu pandemic, we calibrated to 1918 estimates of country-specific incidence and mortality, adjusting mortality for the advent of antibiotics. PD incidence and mortality, and total PD-related health-care costs were evaluated over a 1-year horizon. Results are reported in local 2008 currency.

RESULTS: Preliminary results of the model indicate that in a pandemic of 1918 severity, PCV13 vaccination would prevent 3,300 cases of hospitalized pneumococcal pneumonia and 320 deaths in Singapore, and save SGD1.53 million in health-care costs (net of vaccination). In Hong Kong, PCV13 would prevent 8,200 cases of hospitalized pneumonia (all-cause), and 2,200 pneumonia deaths, respectively; PCV13 would save HKD250 million in medical costs.

CONCLUSIONS: In an influenza pandemic affecting the Asia-Pacific region, infant vaccination with PCV13 would likely be highly effective in reducing pandemic-related deaths, PD cases and associated costs.
cost-effectiveness analysis. Initial responses suggest that manufacturers will accept the challenge to improve the quality of available evidence to support future decisions.

**CASE 3**

**THE VA TECHNOLOGY ASSESSMENT ADVISORY GROUP: INFORMING EVIDENCE-BASED POLICY RECOMMENDATIONS FOR ROBOTIC PROSTATECTOMY**

*Adams L*

Veterans Health Administration, Boston, MA, USA

**ORGANIZATION:** Veterans Health Administration (VHA) Office of Patient Care Services provides policy and program development and oversight of clinical care delivered to 7.8m veterans nationally.

**DESCRIPTION:** The Technology Assessment Advisory Group (TAAG) applies input from HTA, a clinical expert panel and a utilization and cost analysis (UCA). IMPLEMENTATION STRATEGY: The Technology Assessment Advisory Group (TAAG) applied input from HTA, a clinical expert panel and a utilization and cost analysis (UCA). GOALS: To apply a new health technology assessment (HTA) process for evaluating FDA-approved non-IT and non-pharmacologic new and emerging health care technologies that draws upon a wide range of VHA expertise as well as accepted research process for the evaluation of medical care. If it is determined that a technology should be implemented, the Agency for Healthcare Research and Quality (AHRQ) will provide funding through the Health Technology Assessment Program. OUTCOMES ITEMS USED IN THE DECISION: Available clinical efficacy/effectiveness, cost-effectiveness and safety data from the literature, regulatory status, utilization and cost analysis (UCA). RESULTS: As of 2006 evidence from heterogeneous case series demonstrated the safety and feasibility of RP. Its clinical use was limited by the number of units that could support the initial acquisition cost and the extent of the robotic infrastructure required. The Technology Assessment Advisory Group process proved feasible and effective in supporting informed and timely policy recommendations for the purchase and use of RP in a manner that enhances quality of care in a environment of cost-containment. Whether an acceptable level of robotic technology was maintained, the cost of robotic surgery is not feasible due to currently high hospital costs and poor demonstration of the technology's clinical efficacy and safety.

**CASE 4**

**NEW FINDINGS FROM INTEGRATING ADMINISTRATIVE AND FINANCIAL DATABASES TO ESTIMATE PRICE OF HOSPITALIZATIONS**

*Wong LD, Levit K, Sun YC*

**Agency for Healthcare Research and Quality, Rockville, MD, USA, 1Thomson Reuters, Washington, DC, USA, 2Thomson Reuters, Santa Barbara, CA, USA**

**DESCRIPTION:** Agency for Healthcare Research and Quality (funding organization), Thomson Reuters PROBLEM OR ISSUE ADDRESSED: Hospital administrative data have been used in “cost-effectiveness,” “cost-benefit,” and “burden-of-illness” studies because they contain large numbers of cases for specific conditions and procedures. Logistic regressions examined the factors associated with RA biologic discontinuation, and switching of Rheumatoid Arthritis (RA) biologics over a one year period following initiation of the biologic treatment in Medicaid patients with RA.

**METHODS:** The study sample consisted of Medicaid patients with RA in California, Florida and New York who had newly initiated etanercept (n = 1,359), anakinra (n = 267), or infliximab (n = 1,012) between January 1, 2000 and December 31, 2002. Adherence (proportion of days covered [PDC] ≥ 0.80), discontinuation (90-day continuous gap), and switching (initiation of second biologic within 90 days of discontinuation date of index biologic) were measured during the 12-months post-index biologic initiation. Sensitivity analyses were conducted by varying the thresholds to define these measures. Logistic regressions examined the factors associated with RA biologic adherence and discontinuation.

**RESULTS:** Anakinra users had the lowest mean PDC (0.36) and percent adherent patients (10.5%) followed by etanercept users (mean PDC 0.57; % adherent:32%) and infliximab users (mean PDC0.64; % adherent:43%). All three groups had high discontinuation rates (41% etanercept, 76% anakinra, and 41% infliximab). Few patients who discontinued the index biologic switched to another biologic (0.2% to 9%). Logistic regressions found that patients in Florida had lower odds of being adherent and higher odds of discontinuing their index biologic than patients in California. Consistent with descriptive results, Anakinra users had lower odds and infliximab users had higher odds of being adherent than etanercept users. Anakinra users had higher odds of discontinuation than etanercept users. CONCLUSIONS: This study highlights poor adherence and premature discontinuation without concurrent switching of RA biologics that should raise concern for clinicians as well as payers.

**PODium Session III: Compliance/Adherence Studies**

**CMI**

**ADHERENCE, DISCONTINUATION, AND SWITCHING OF BIOLOGIC THERAPIES IN MEDICAID ENROLLEES WITH RHEUMATOID ARTHRITIS**

*Le F, Blum MA, Feltz MV, Huffman S, Doelz JA*

**University of Pennsylvania, Philadelphia, PA, USA**

**OBJECTIVES:** Biological therapies are an expensive but important advance in the management of RA. The potential therapeutic benefits of biologics demonstrated in clinical trials may be undermined by poor adherence and early discontinuation of treatment (i.e., non-persistence) in clinical practice. This study examined adherence, discontinuation, and switching of Rheumatoid Arthritis (RA) biologics over a one year period following initiation of the biologic treatment in Medicaid patients with RA.

**METHODS:** The study sample consisted of Medicaid patients with RA in California, Florida and New York who had newly initiated etanercept (n = 1,359), anakinra (n = 267), or infliximab (n = 1,012) between January 1, 2000 and December 31, 2002. Adherence (proportion of days covered [PDC] ≥ 0.80), discontinuation (90-day continuous gap), and switching (initiation of second biologic within 90 days of discontinuation date of index biologic) were measured during the 12-months post-index biologic initiation. Sensitivity analyses were conducted by varying the thresholds to define these measures. Logistic regressions examined the factors associated with RA biologic adherence and discontinuation.

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**CM2**

**EFFECTS OF NONADHERENCE WITH ANGIOTENSIN CONVERTING ENZYME INHIBITORS/ANGIOTENSIN RECEPTOR BLOCKERS ON HOSPITALIZATION AND MORTALITY AMONG PATIENTS WITH DIABETES**

*Yice Y, Banahan BF, Pace PF*

**University of Mississippi, University, MS, USA, 1University of Mississippi, Oxford, MS, USA**

**OBJECTIVES:** The objective was to determine the effect of nonadherence to angio- tensin converting enzyme inhibitors/angiotensin receptor blockers (ACE/ARB) and subsequent diabetes-related hospitalization and mortality among patients with diabe- ties enrolled in a state Medicaid program. METHODS: This is a retrospective cohort study of patients with diabetes using Medicaid pharmacy and medical claims data.