Abstracts

A14

NDO

DIRECT HEALTH CARE AND WORKLOSS BURDEN OF CHEMOTHERAPY-ASSOCIATED PERIPHERAL NEUROPATHY IN BREAST, OVARIAN, AND HEAD AND NECK CANCER - Png C1, Birnbaum HG2, Kaufman R3, Muñehain CE4, Pohl G5, Natele R6 1Analysis Group, Inc, Boston, MA, USA; 2iipi Lily and Company, Indianapolis, IN, USA; 3Cedars Sinai Outpatient Cancer Center, Los Angeles, CA, USA

OBJECTIVES: To estimate the direct costs and workloss burden of CAPN (chemotherapy-associated peripheral neuropathy) using a cost-utility analysis. We examined the costs associated with the treatment of patients with breast, ovarian, head, and neck, or non-small cell lung cancer (NSCLC) who had evidence of CAPN.

METHODS: A cohort of 1000 patients with incident NSCLC was identified. Costs for drug and non-drug treatment related to neuropathy were estimated using a claims database. Costs for health care visits and out-of-pocket expenses were obtained from a patient survey. Costs were estimated over three years. The discount rate was 3%.

RESULTS: The average total cost per patient was $20,000. The most frequent service was pain management, followed by assessment and counseling. The average annual cost per patient was $6,667. The incremental cost-effectiveness ratio (ICER) was $20,000 per quality-adjusted life year (QALY).

CONCLUSIONS: The results of this study suggest that the costs of CAPN are substantial and may be underestimated due to the difficulty in quantifying all associated costs. The use of CAPN therapies should be carefully considered to optimize cost-effectiveness.

N4D

PRESCRIBING PATTERNS AMONG DEMENTIA PATIENTS AT THE AVERS FIREFAIRS MARYLAND HEALTH CARE SYSTEM (VAMHCS) - Rumminger GB1, Delisle S2, Onkahwa E3, Mullins CD4

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OBJECTIVES: This study aimed to analyze the prescribing patterns of dementia medications among patients at the VAMHCS.

METHODS: A retrospective review of electronic medical records was conducted for patients diagnosed with dementia in the VAMHCS between January 2019 and December 2019. Data were extracted on demographics, medications prescribed, and outcomes.

RESULTS: A total of 1,200 patients were identified, and 800 were included in the final analysis. The most common medications prescribed were donepezil (40%), rivastigmine (25%), and galantamine (15%). The mean number of medications prescribed per patient was 3.5. The most common adverse events were gastrointestinal (20%) and dizziness (15%).

CONCLUSIONS: Prescribing patterns among dementia patients at VAMHCS were complex and varied. Further research is needed to understand the reasons behind these prescribing patterns and their impact on patient outcomes.

N4S

COST-UTILITY OF INTERFERON BETA-1B IN THE TREATMENT OF PATIENTS WITH A CLINICALLY ISOLATED SYNDROME SYMPTOMATIC OF MULTIPLE SCLEROSIS: MODEL UTILIZING FIVE YEAR BENEFIT DATA - Lawanya RE, Harrow E3, Wang C4, Beckmann K5, Knappertz V5, Pohl C5, Miller JD6

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OBJECTIVES: To estimate the cost-utility of interferon-beta-1b (IFN-1b) for the treatment of patients with a clinically isolated syndrome (CIS) suggestive of multiple sclerosis (MS) using five year BENEFIT clinical trial data.

METHODS: We developed a Markov model of the epidemiology and treatment of CIS and MS. A hypothetical cohort of 1000 patients with incident CIS, with initial health states defined by Kurtzke's Expanded Disability Status Scale (EDSS), was specified. The cohort was assumed to be treated with IFN-1b (either 300 mcg or 100 mcg) for an initial demyelinating event suggestive of MS or not treated until confirmation of Posner-defined MS. Data from BENEFIT were used to model EDSS transitions and transition from CIS to MS. Relapses were estimated from BENEFIT and published natural history data. Follow-up transitions to MS, all-cause mortality, and retreatment with IFN-1b until reaching EDSS 6.5 were calculated. Direct and indirect medical costs of MS treatment and IFN-1b were estimated using published literature and pricing schedules. Patients utilities were derived from EQ-5D data from BENEFIT, supplemented by published data for EDSS 6.5. Mortality was estimated using life tables and EDSS data. Costs (2007 AUD) and outcomes were discounted at 5% per annum.

CONCLUSIONS: The cost-effectiveness of IFN-1b treatment was associated with lower EDSS and reduced relapse burden. In the base case (Australian perspective, 25-year time horizon), the incremental cost utility of IFN-1b versus no treatment was AUD 20,000 (USD 14,000) per quality-adjusted life year (QALY) gained. Findings were sensitive to time horizon, IFN-1b cost and treatment effect, and underlying rate of disease progression. This model shows that IFN-1b treatment of patients with CIS is cost-effective with a cost per QALY gained within the range of many well accepted health care interventions.

PODIUM SESSION IV: HEALTH CARE MANAGEMENT STUDIES

HM1

EFFICIENCY AND ECONOMIC BENEFITS ASSOCIATED WITH THE USE OF A PAYER-BASED ELECTRONIC HEALTH RECORD IN AN EMERGENCY DEPARTMENT AMONG A HEALTH INSURED POPULATION - Daniel GW, Evens E, Willsey V, Shirazi M, Malone DC

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OBJECTIVES: Health information exchange technologies are being implemented widespread with goals of improving efficiency and costs of care. The need for timely, accurate, and pertinent information is most critical in the emergency department (ED).

METHODS: A large urban hospital implemented a P-EHR in the ED. The P-EHR was evaluated using administrative claims and supplemental hospital data. Encounters with P-EHR use were identified from claims between September 1, 2015 and February 17, 2016. Accounting for seasonal variation, historical comparison encounters were identified from November 1, 2004 to March 31, 2005. Outcomes included ED LOS and cost for the ED encounter. Control variables included age, gender, pre-encounter six month health care utilization and costs, comorbidity burden, plan type, day of week (weekend vs weekday), primary diagnosis, triage severity scores, and ED census.

RESULTS: In total, 2288 ED encounters were analyzed (779 P-EHR/1509 comparison). ED-only P-EHR encounters were discharged 19 minutes quicker (95% CI:5–33 minutes) as compared to encounters not associated with P-EHR. Among encounters resulting in hospitalization, the P-EHR was associated with a 77 minute reduction in LOS (95% CI:28–126 minutes) as compared to non-P-EHR encounters. The use of the P-EHR was also associated with $1560 (95% CI:$435–$2910) savings in total plan expenditures for encounters resulting in hospitalization. No significant difference in costs was observed among ED-only encounters.

CONCLUSIONS: This study highlights that a P-EHR can have a meaningful impact on ED throughput and costs. These benefits may translate into improvement in the care provided to patients and their satisfaction.

HM2

USING DECISION MODELING TO MAP PHARMACISTS INTERVENTIONS TO OUTCOMES FOR PATIENTS WITH DIABETES - Pinto SL, Bechto R, Zhang Y

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OBJECTIVES: To determine the costs savings resulting from specific pharmacist inter- ventions provided to patients with diabetes and their physicians, using a decision-analysis modeling approach.

METHODS: Prospective, cohort study using Lucas County employees with diabetes enrolled in an employer-sponsored Medication Therapy Management program in Northwest Ohio. An expert (comprising of clinical pharmacists and researchers) opinion-guided clinical model pathway was developed to identify and map specific pharmacist interventions to corresponding responses and outcomes. Interventions included: 1) alerting physician of patient's abnormal A1c and/or blood sugar profile; 2) pattern management; 3) instructing on the proper use of injectables; 4) glomerator training; 5) advising patients on best way to correct hyperglycemic/hyperglycemic episodes. Data was extracted from patient charts and entered into Microsoft Excel. A 1-year decision-analytic model was constructed using The TreeAge Pro Suite 2008 to identify the cost-savings per intervention. Probabilities for the inter- ventions, responses, and outcomes were obtained from real-world data. For example,