

revealed that highest/more economic burden was found in male patients (Rs. 18018), the age group of 51-60 years (Rs. 19184), the newly diagnosed (<1year) patients (Rs. 21411), the patients who stayed for 10-13 days in the hospital (Rs. 28406), the patients with two co-morbidities (Rs. 18935), the patients with agriculture as their occupation (Rs. 22306) and the patients who bearing macrovascular complications (Rs. 7706).

## PHS29

## 12-MONTH COST OF ILLNESS ANALYSIS OF THE THYROID DISEASE IN UKRAINE

Vadziuk I, Klishch I, Markiv I

Ivan Horbachevsky Ternopil State Medical University, Ternopil, Ukraine

**OBJECTIVES:** Nowadays thyroid disease found in 50% of the adult population and 80% of the elderly population of Ukraine. However there is no information about pharmacoeconomic analysis of this pathology. **METHODS:** We conducted a retrospective analysis of medical records of 3417 patients with hypothyroidism (n=2143) and diffuse toxic goiter (DTG) (n=1274), and determined the total annual cost of illness (COI) including direct and indirect costs. **RESULTS:** 12-month COI of hypothyroidism was \$1860681.18, similar costs of DTG was \$1439632.74. Annual direct costs of treatment per patient with hypothyroidism were \$229.10, of which costs of investigations accounted for \$62.28 (27.18%), the cost of medicinal treatment of the underlying disease was \$27.96 (12.20%) and the cost of medicinal treatment of complications associated with hypothyroidism was \$138.86 (60.62%). An indirect cost of treatment per patient with hypothyroidism was \$639.16. The total 12-month COI of hypothyroidism per patient was \$868.26. The total 12-month COI of DTG per patient was \$1130.01, of which indirect costs accounted for \$746.44. Annual direct costs of treatment per patient with DTG were \$383.57, of which costs of investigations accounted for \$109.50 (28.55%), the cost of medicinal treatment of the underlying disease was \$100.45 (26.19%) and the cost of medicinal treatment of complications associated with DTG was \$173.62 (45.26%). **CONCLUSIONS:** Thus, first held in Ukraine cost of illness analysis of the thyroid disease showed that the most money spent on indirect costs.

## PHS30

## DIRECT MEDICAL COSTS FOR COMPLICATIONS AMONG ADULTS WITH TYPE 2 DIABETES IN A US COMMERCIAL PAYER SETTING

Yeaw J<sup>1</sup>, Halinan S<sup>1</sup>, Hines D<sup>1</sup>, DeLozier AM<sup>2</sup>, Perez M<sup>2</sup>, Boye ME<sup>2</sup>, Boye KS<sup>2</sup>, Blanchette C<sup>1</sup><sup>1</sup>IMS Health, Alexandria, VA, USA, <sup>2</sup>Eli Lilly and Company, Indianapolis, IN, USA

**OBJECTIVES:** The study objective was to provide current patient-level paid cost estimates for complications among adult patients with Type 2 diabetes. **METHODS:** Patients ages  $\geq 18$  with  $\geq 1$  claim for a diabetes-related complication were selected from the PharMetrics Health Plan Claims Database, a large U.S. claims database including medical and pharmacy claims for >75 million patients from 80 health plans, during 2009-2010. Patients were continuously-enrolled in the same health plan  $\geq 12$  months before and  $\geq 24$  months after the first complication claim and had a diagnosis of Type-2 DM prior to their first complication. Patients with gestational diabetes, missing cost, or Medicare Reimbursement or SCHIP coverage were excluded. Diabetes-related complications included cardiovascular events, gangrene, amputation, foot ulcer, renal disease, chronic kidney disease, eye disease and neuropathy. All direct costs in the 2-years following complications were inflated to 2011 dollars. **RESULTS:** There were 113,222 adult Type-2 DM patients identified with a mean age of 58 years and 53% male. The most frequent complications included neuropathy (27%), non-proliferative retinopathy (22%), renal disease (21%) and heart failure (14%). The most frequent treatments were oral antidiabetics (69%), antihyperlipidemics (62%), ACE-inhibitors (44%), insulins (34%) and antidepressants (29%). The mean (SD) total cost per patient was \$38,849 (\$71,253) [inpatient \$14,086 (\$45,290), outpatient \$17,319 (\$40,887), and pharmacy \$7,443 (\$12,152)]. Renal disease cost among those with renal disease averaged \$20,908 (\$80,294), foot ulcers costs among those with amputation/foot ulcers averaged \$6,358 (\$18,017) and heart failure costs among those with cardiovascular/cerebrovascular disease averaged \$5,764 (\$24,384). **CONCLUSIONS:** Patients with Type 2 DM exhibited substantial health care costs associated with medical complications. The most costly conditions are renal disease, foot ulcers/amputations and cardiovascular/cerebrovascular diseases.

## PHS31

## HEALTH CARE COSTS IN PATIENTS WITH BONE METASTASIS SECONDARY TO PROSTATE CANCER COMPARED TO PROSTATE CANCER PATIENTS WITHOUT BONE METASTASIS IN THE OPTUM ONCOLOGY RESEARCH DATABASE

Seal B<sup>1</sup>, Valderrama A<sup>2</sup>, Xia F<sup>3</sup>, Shermock KM<sup>4</sup>, Asche C<sup>5</sup><sup>1</sup>Bayer HealthCare Pharmaceuticals, Inc., Pine Brook, NJ, USA, <sup>2</sup>Bayer, Cedar Grove, NJ, USA,<sup>3</sup>Bayer, Wayne, NJ, USA, <sup>4</sup>Analysis by Design LLC, Lutherville Timonium, MD, USA, <sup>5</sup>University of Illinois, Peoria, IL, USA

**OBJECTIVES:** To compare health care costs among patients with bone metastasis secondary (BMS) to prostate cancer (PC) compared to a matched cohort of patients with PC without BM. **METHODS:** A retrospective analysis was performed using the OPTUMInsight Oncology claims database. Male patients aged  $\geq 18$  years, with BMS to PC between July 1, 2003 and December 31, 2011, who were insured by a commercial health plan were identified (first BM termed "index"). Patients were required to have > 6 months continuous eligibility prior to and > 6 months subsequent to the first PC diagnosis in the index period (January 1, 2004 - June 30, 2010). Patients with a diagnosis of BMS to PC were identified and matched 1:1 to PC patients without BM based on age, geographic region, payer type and year of study entry (index year). Patients were followed from index to death or database end. Study measures included health care costs. **RESULTS:** A total of

1900 patients with BMS to PC were matched to 1890 PC patients without BM. Among those patients with BMS to PC versus those PC patients without BM, respectively, the mean (SD) annualized total follow-up costs per patient were \$69,517 (\$77,127) and \$21,364 (\$29,994). The largest proportion of mean costs were attributable to all other medical costs in the BMS to PC cohort (29.5%), followed by outpatient visits (26.4%), inpatient hospitalizations (25.9%), and total pharmacy costs (18.1%). Among the PC patients without BM cohort the largest proportion of mean costs were inpatient hospitalizations (29.6%), followed by all other medical costs (28.9%), outpatient visits (27.6%), and total pharmacy costs (12.6%). **CONCLUSIONS:** Patients with BMS to PC had 3.25 fold more costs compared to the PC patients without BM, mainly driven by inpatient and outpatient costs. This indicates a substantial economic burden incurred by patients with BMS to PC.

## PHS32

## COSTS ASSOCIATED WITH HOSPITAL ADMISSION FOR HEART FAILURE IN TWO HOSPITALS IN THE CITY OF BOGOTA, COLOMBIA

Dennis R<sup>1</sup>, Rojas M<sup>2</sup>, Tamayo D<sup>2</sup>, Rodriguez V<sup>2</sup>, Brophy J<sup>3</sup>, Castro H<sup>2</sup><sup>1</sup>Fundacion Cardioinfantil, Bogota, Colombia, <sup>2</sup>Universidad Javeriana, Bogota, Colombia, <sup>3</sup>McGill University, Montreal, QC, Canada

**OBJECTIVES:** To describe the direct medical costs associated with management of hospital admission due to heart failure. **METHODS:** Cohort study of patients hospitalized due to heart failure during 2009 and 2010. 1426 patients with heart failure hospitalized in two tertiary care hospitals in Bogota that manage mainly patients from the Colombian contributive obligatory health care plan (workers and their families). All patients with a discharge diagnosis of heart failure during the time of the study were included. The point of view of the study was that of the third-party payer. Bills for each patient's costs of care sent and accepted by the third party payer were quantified and broken down by cost source. Costs were adjusted to Colombian pesos of 2011 (US\$1= COL \$1,794). **RESULTS:** The hospital bills of 1426 discharged patients (352 in one hospital and 1074 in the second hospital) were analyzed. The mean costs associated with an event of hospitalization, adjusted to 2011, was COL\$ 10,400,213 (SD COL\$ 22,552,954; median 3,171,129; IQ Range: 1,506,654-6,802,384). Out of this total cost, 32.8% (SD 20.9%) corresponded to medication costs; 26.1% (SD 15.5%) to hospital stay; 13.1% (SD 12.9%) to medical fees; 12.5% (SD 9.8%) to laboratory tests, and 18.7% (SD 13.4%) to other costs. **CONCLUSIONS:** Hospitalizations costs in Colombia due to heart failure are substantial and highly variable, when compared with those for other conditions. The main driver of these costs is medication use. This study should set the basis for the estimation of the cost-effectiveness of interventions that decrease the rate of hospitalization or the length of stay of these patients.

## PHS33

## RESOURCE USE PATTERNS AND COSTS ASSOCIATED WITH THE TREATMENT OF MYELOFIBROSIS, POLYCYTHEMIA VERA AND ESSENTIAL TROMBOCYTHEMIA IN THE BRAZILIAN PUBLIC HEALTH CARE SYSTEM

Alves MR<sup>1</sup>, Teich V<sup>2</sup>, Fahham L<sup>3</sup><sup>1</sup>Novartis Pharmaceuticals, São Paulo, São Paulo, Brazil, <sup>2</sup>Medinsight, São Paulo, São Paulo, Brazil, <sup>3</sup>Medinsight, São Paulo, Brazil

**OBJECTIVES:** To evaluate the resource use and associated costs of patients treated for polycythemia vera (PV), myelofibrosis (MF) and essential thrombocythemia (ET) in the Brazilian public health care system. **METHODS:** DATASUS is a Brazilian comprehensive database that reports all outpatient and inpatient services provided by the Brazilian public health care system. Patients identified with the diagnosis of PV (ICD 10 D45), MF (D47.1) and ET (D47.3) in the Datasus database between January 2010 and December 2010 were included in the analysis, irrespective of the date of diagnosis. Patients' profile was defined based on age, sex and geographical region. Costs and resource use patterns were analyzed for the year 2010 and characterized by the percentage of patients using each health resource, the average quantity per patient and the total associated cost. Analyses were segmented by outpatient (drugs and transport) and inpatient (hospitalization) costs. **RESULTS:** The number of patients identified with the diagnosis of PV, MF and ET were 1533, 2130 and 2413, respectively. Their average age was 65, 63 and 63 years, and the percentage of females equaled 55%, 55% and 66%, respectively. The majority of patients live in the southeast region of Brazil. The three diseases present a similar treatment pattern. The majority of outpatient costs are associated to first line and second line chemotherapy treatment (21.9% and 77.5% for PV; 12.6% and 86.9% for MF; 12.6% and 87.2% for ET, respectively). The average annual outpatient and inpatient costs per patient were: R\$2,581.27 and R\$15.27 for PV; R\$3,341.02 and R\$45.22 for MF; R\$ 4,070.28 and R\$15.92 for ET (1 USD = R\$2.04). **CONCLUSIONS:** The current treatment for PV, MF and ET in the Brazilian public health care system relies basically on the use of first and second line chemotherapy. These items are responsible for more than 90% of the annual treatment cost.

## PHS35

## COST-EFFECTIVENESS OF LIFESTYLE INTERVENTION AMONG ADULTS AT A HIGH RISK FOR HYPERTENSION AND DIABETES: A HEALTH PLAN PERSPECTIVE

Zhao X, Zhang P

Centers for Disease Control and Prevention, Atlanta, GA, USA

**OBJECTIVES:** Lifestyle intervention is effective in reducing the risk of hypertension and diabetes. Previous studies suggested such an intervention, if targeted to persons with prediabetes alone (defined by HbA1c of 5.7-6.3% or fasting plasma glucose of 110-125 mg/dL), was cost-saving but would take more than 20 years to recoup the intervention costs. Health plans typically have much shorter planning horizons. Therefore, a more selective population might be