

## PIN34

**HEALTH CARE UTILIZATION AND COSTS ASSOCIATED WITH CHRONIC HEPATITIS C IN A MANAGED CARE POPULATION**Mitra D<sup>1</sup>, Davis KL<sup>1</sup>, Medjedovic J<sup>2</sup>, Beam C<sup>3</sup>, Rustgi V<sup>4</sup><sup>1</sup>RTI Health Solutions, Research Triangle Park, NC, USA, <sup>2</sup>Novartis Pharma AG, Basel, Switzerland, <sup>3</sup>Human Genome Sciences, Inc, Rockville, MD, USA, <sup>4</sup>Georgetown University Medical Center, Fairfax, VA, USA

**OBJECTIVE:** Hepatitis C virus (HCV) is one of the most common blood-borne infections in the US. Although it carries a potentially high economic burden for managed care systems, HCV-related medical costs have not been widely investigated using administrative data. Our objective was to analyze retrospective insurance claims to document resource utilization and costs associated with chronic HCV among managed care enrollees. **METHODS:** A large US claims database was analyzed from 1/1/2002 through 12/31/2006. Inclusion criteria were:  $\geq 1$  diagnosis of chronic HCV (ICD-9 070.44, 070.54, 070.70, or 070.71); no evidence of hepatitis B;  $\geq 12$  months of continuous plan enrollment post-diagnosis. Per patient use and costs of HCV-specific medical services and prescriptions were assessed over 12 months post-diagnosis. HCV-specific encounters were identified as claims on which HCV was a coded diagnosis. Encounters were stratified by setting of care (e.g. office visits, hospitalizations). HCV-specific pharmacy utilization included prescriptions for combination peginterferon or interferon with ribavirin, peginterferon and interferon monotherapies, and consensus interferon. **RESULTS:** 20,662 patients met all inclusion criteria. Mean age was 49 years and 61% were male. Total HCV-specific treatment costs were \$6864 per patient. Patients had, on average, 14 HCV-specific encounters. Nearly 65% had an HCV-related office visit, with 3 visits on average. Over 48% had an HCV-specific laboratory test, with 5 tests on average and total costs of \$281. More than 14% of patients had an HCV-related hospitalization, with average costs of \$2078 per patient and 5 inpatient days. 19% of patients had an HCV-specific prescription with prescription costs (\$3433) accounting for nearly half of the total costs. HCV-specific home visits, skilled nursing stays, and ER visits were seen in <5% of patients. **CONCLUSION:** Chronic HCV is a costly condition. Pharmacy and inpatient services are primary drivers of HCV-related expenditures. Expanded efforts in HCV treatment may result in cost savings for managed care systems.

## PIN35

**RESOURCE UTILIZATION IN UNITED KINGDOM DIAGNOSED HCV PATIENTS**

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**OBJECTIVE:** Chronic hepatitis C (CHC) is a life threatening disease with long term consequences although the early stage is considered 'asymptomatic'. This study is to explore if higher resource utilization occurs for early-stage CHC patients (case) than non-CHC (control) subjects. **METHODS:** A large longitudinal database, Health Improvement Network (THIN), was retrospectively analyzed. THIN contains medical records of over 2.2 million anonymous subjects representing UK population. Cases were defined with confirmed CHC diagnosis and no records related to fibrosis, cirrhosis, decompensated liver conditions, and liver transplantation. Propensity matching techniques were applied to identify controls who did not have CHC diagnosis but matched cases on CHC propensity based on age, weight, height, gender, smoking, and alcohol consumption. Resource utilization patterns based on the retrieved medical records were compared between two groups. Odds ratios (OR) and 95% confidence

intervals (CI) were derived from logistic regression models controlling for follow-up duration; 95%CI excluding 1 is considered statistically significant. **RESULTS:** The case group (N = 1576) and the control group (N = 5234) matched on all demographic factors. On average, case subjects were 45.0 (13.3) years old, 64.7% male, and were followed 4.21 years after CHC diagnosis in the database. Compared to the control, case subjects had 69% greater chance of having specialist referral/visits (OR: 1.69, 95%CI: 1.50–1.91), and 70% higher probability of hospitalization and emergency/accident visits (OR: 1.70; 1.46–1.98). Case subjects also had 90% more chance using additional tests/procedures (OR: 1.90; 1.68–2.15) with key drivers from endoscopy (OR: 3.56; 2.39–5.31), MRI (OR: 1.93; 1.23–3.03), and ultrasound (OR: 1.73; 1.17–2.57). Among CHC subjects, age 50–60 (N = 265) and >60 groups (N = 180) recorded significantly more health care resource uses than age < 40 (N = 545) and 40–50 (N = 586) group. **CONCLUSION:** CHC subjects consumed more health care resources than matching non-CHC controls in UK even at the early stage of this serious liver disease.

## PIN36

**BASELINE CHARACTERISTICS ASSOCIATED WITH HOSPITAL LENGTH OF STAY (LOS) FOR PATIENTS WITH STAPHYLOCOCCUS AUREUS SKIN INFECTIONS IN THE 1996–2005 NATIONAL HOSPITAL DISCHARGE SURVEY (NHDS)**

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**OBJECTIVE:** *S. aureus* skin infections are a common cause of hospitalization. Though rarely lethal, these infections impose great morbidity on health care systems. Head-to-head therapeutic studies commonly use LOS as an outcome, but rarely account for differences in baseline characteristics. This study aims to identify baseline characteristics associated with LOS among patients with *S. aureus* skin infections. **METHODS:** Data were extracted from the 1996–2005 NHDS. Data included age, gender, race, geographic region, admission location, days of care, insurance status, discharge status, and location. Patients were included if they had both an ICD-9 code for skin infection (680–684) and *S. aureus* (041.11). Patients were excluded if they were <18 yrs, left against medical advice, transferred to a skilled nursing facility, died, transferred from another hospital or had a LOS <1 day. Each characteristic was individually tested for significance with a Cox regression model. Significant variables were entered into a multivariable Cox regression model to identify independent predictors of LOS. **RESULTS:** Overall, 7094 patients met inclusion criteria and 5354 remained after exclusions. Patients had a median (25th–75th percentile) LOS of 5 (4–8) days, age of 52 (40–69) years, 56% were male and 53% were White. The following characteristics were associated with longer LOS: advanced age ( $p < 0.0001$ ), earlier survey year ( $p < 0.001$ ), female gender ( $p = 0.0003$ ), widower ( $p = 0.0001$ ), Northeast geographic region ( $p < 0.0001$ ), African American/Black ( $p = 0.04$ ), and Medicare ( $p < 0.0001$ ). In contrast, small hospital size was associated with a decreased LOS. In the multivariable regression model, advanced age, Medicare, earlier survey year, and Northeast geographic region were independently associated with an increased LOS while small hospital size was independently associated with a decreased LOS (all  $p$ -values were <0.0001). **CONCLUSION:** Five baseline characteristics were independent predictors of LOS. These factors should be considered in comparative retrospective evaluations of patients with *S. aureus* skin infections.