recent recommendations for epilepsy care in the elderly. Research is needed to identify why new patients receive phenobarbital. The vast use of phenytoin suggests research evaluating the impact of phenytoin and other AEDs on the elderly in actual practice may be needed to facilitate adoption of recent clinical recommendations.

**EMPLOYER PERSPECTIVES**

**THE IMPACT OF AN ALLERGY MANAGEMENT PROGRAM ON LOST PRODUCTIVE TIME AT WORK**

**Maurer R1, Armstrong DS2**

1St. Joseph Heritage Healthcare, La Mirada, CA, USA; 2Integrated Therapeutics Group, La Verne, CA, USA;

**OBJECTIVES:** Allergies and many sedating over-the-counter (OTC) allergy medications have been shown to have a significant and negative impact on lost productive time at work. We examine the impact of an allergy program designed to reduce sedating allergy medication use and its impact on employee-reported lost productivity within a large southern California medical group.

**METHODS:** A baseline questionnaire designed to measure allergy symptoms, severity, treatment strategies, and disease burden was distributed to 712 employees in November 2001 with a follow-up questionnaire sent in November 2002. We calculated change from merged baseline and follow-up data. Interventions included recommended treatment guidelines that were developed and distributed to all physicians and clinics. Employees were encouraged to discuss their allergies and treatment strategies with their physicians and were provided access to a corporate Intranet site for additional allergy-specific information.

**RESULTS:** Response rates of 85% and 58% were achieved at baseline and 1-year follow-up. In addition, 59% of allergic employees participated in the program with 44% reporting visiting a doctor and 28% using the Intranet. Sedating OTC medication use dropped from 38% to 21% (p < .0001). Allergy specific average monthly hours missed decreased due to work absenteeism (7.2 hours; p < .0001) and overall (5.5 hours; p = .0076) per allergic employee. Average monthly hours missed increased due to full days (1.1 hour) and partial days (.06 hour) but were not statistically significant. **CONCLUSIONS:** While allergies account for a significant number of lost productive work hours, an allergy program can successfully reduce sedating medication use, consequent disease burden, and lost productive work time. Projected annually, appropriate treatment of allergy symptoms resulted in cost savings of approximately $1254 per allergic employee.

**COST ANALYSIS OF HEPATITIS C VIRUS (HCV) INFECTION: AN EMPLOYER’S PERSPECTIVE**

**Duh MS1, Moyneur É2, Van Audenrode M3, Mody SH4, Piech CT4**

1Analysis Group/Economics, Boston, MA, USA; 2Analysis Group/Economics, Montreal, QC, Canada; 3Université Laval, Québec, QC, Canada; 4Ortho Biotech Products, LP, Bridgewater, NJ, USA

**OBJECTIVE:** With improvements in therapy, HCV disease progression can be better controlled and a greater number of infected patients are able to remain in the workforce. This analysis quantifies the incremental direct (medical, drugs) and indirect (absenteeism, disability) costs of HCV from an employer’s perspective.

**METHODS:** Based on eligibility, medical, pharmacy and disability claims data from seven major US employers covering January 1, 1998 through June 30, 2001, we identified 833 HCV infected patients having at least 2 claims with a HCV ICD-9 diagnosis code less than 90 days apart, ribavirin and interferon combination therapy, a confirmatory HCV lab test followed by a HCV diagnosis, or a HCV diagnosis coupled with non-alcoholic cirrhosis, hepatocarcinoma, liver transplantation, or cryoglobulinemia. A 10% random sample of 148,166 uninfected individuals was chosen as controls. Employer costs resulted from direct medical costs and employee productivity loss. A tobit regression, which corrects for non-normality of costs, included controls for age, gender, health plan, location, alcohol abuse, HIV status, and illicit drug use.

**RESULTS:** The unadjusted ratio of mean direct costs for HCV infected patients compared to uninfected patients was 7.9:1 ($857.4 vs. $108.1 per patient-month, p < .01). The ratio for indirect costs was 4.0:1 ($88.7 vs. $22.3 per patient-month, p < .01). After controlling for confounding factors, the ratios were 5.6:1 (95% CI: 5.6–5.7) for direct costs, and 8.1:1 (95% CI: 7.9–8.4) for indirect costs. Regressions on sub-categories yielded costs ratios for inpatient care, outpatient care, prescription drugs, absenteeism, and disability (short and long-term) of 5.3:1 (95% CI: 5.2–5.4), 5.0:1 (95% CI: 5.0–5.1), 7.5:1 (95% CI: 7.4–7.5), 5.5:1 (95% CI: 5.4–5.7), and 10.0:1 (95% CI: 9.2–10.8), respectively.

**CONCLUSION:** Both the unadjusted and adjusted cost ratios for HCV infected patients compared to uninfected patients indicate that infection results in statistically significant increases in both direct and indirect costs to the employers.

**WORK LOSS AND HEALTHCARE UTILIZATION AMONG U.S. EMPLOYEES WITH CHRONIC NON-CANCER PAIN**

**Pizzi LT1, Carter CT2, Johnson NE1, Howell JB1, Vallow SM2, Frank ED3**

1Thomas Jefferson University, Philadelphia, PA, USA; 2Jansen Pharmaceutica, Titusville, NJ, USA; 3Outcomes Research & Design, Inc, Spring, TX, USA
OBJECTIVE: Chronic non-cancer pain (CNCP) is a condition that may result in high healthcare costs and reduced workplace productivity. The objective of this study was to quantify work loss and pain-related healthcare utilization among employees with CNCP.

METHODS: A retrospective analysis was conducted using the MEDSTAT Health and Productivity Management database, which includes absences, worker’s compensation and short-term disability claims for employees from six large U.S. corporations along with inpatient, outpatient, and pharmacy claims from 1997–1999. Presence of CNCP was defined as 90+ days supply of opioids within the study period and a pain-related diagnosis. Workdays lost (absences plus short-term disability) were converted to dollars ($US1998) using location-specific wage rates from the US Bureau of Labor Statistics. Healthcare utilization included opioid usage, pain-related outpatient medical visits, and pain-related inpatient hospitalizations.

RESULTS: From the original outpatient data file of 236,736 employees, 2,459 had CNCP and were eligible to have work loss data reported, of which 1,512 experienced sickness absence(s) and/or short-term disability days. Those with work loss experienced a longer median duration of pain than those without work loss (887 vs. 934.5 days). Pain-related direct costs were $5378 per employee per year. Indirect costs (wages lost due to disability) were $5339–$7475, based on sensitivity analyses. The total impact of CNCP for employers was $5378 per employee per year. The findings demonstrate that CNCP is associated with significant resource consumption and lost workdays, and suggest a need for employer-sponsored pain management programs.

CONCLUSIONS: CNCP is associated with significant resource consumption and lost workdays, and suggests a need for employer-sponsored pain management programs.