

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 per employee per year) were \$5339–\$7475, based on sensitivity analyses. The total impact of CNCP for employees whose work loss was recorded was at least \$2.1 million per employer per year. **CONCLUSIONS:** Few data have been compiled to examine the economic impact of CNCP specifically to employers. The findings demonstrate that CNCP is associated with significant resource consumption and lost workdays, and suggest a need for employer-sponsored pain management programs.

EP4

ALLERGY PREVALENCE, COST, AND PRODUCTIVITY LOSS IN AN INSURED EMPLOYEE POPULATION

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OBJECTIVES: This analysis quantifies the prevalence, health benefits cost, and real productivity loss experienced by employees as a result of allergies. Healthcare claims and employee population data are used to quantify the prevalence of respiratory system allergies. Additionally, demographic, health benefits, and output-based productivity data are used to compare the health benefits cost and productivity of employees with and without allergies. **METHODS:** Using data from October 2000 to September 2002, this study examines 86,000 geographically-disperse employees. An employee was defined to have an allergy diagnosis if the employee had a healthcare claim with a primary ICD9 code of 477.xx or 493.0x. Logistic regression was used to determine the

demographic factors that were associated with the likelihood of filing an allergy claim. In addition, tobit and linear regression models were used to determine the isolated impact of an allergy diagnosis on an employee's health benefits cost and productivity output. **RESULTS:** Of the employee population examined, 17.3% were diagnosed with allergies during the 2-year period. An allergy diagnosis was associated with a subsequent isolated increase of \$106 per month ($p < 0.001$) in the employee's total benefits cost (including healthcare, prescription drug, sick leave, short- and long-term disability, and workers' compensation). Similarly, an allergy diagnosis was associated with a subsequent isolated decrease in productivity (units processed per hour) of 2.7% ($p < 0.001$). **CONCLUSIONS:** Nearly one in six employees were diagnosed with allergies during the study period, resulting in significantly higher costs to the employer and significantly lower productivity. Employers will use this information to more accurately assess the benefits of supporting effective allergy study and treatment.

SESSION III**ADHERENCE****ADI**

NON-PROCUREMENT OF PRESCRIPTION MEDICATIONS DUE TO COST IN MEDICARE BENEFICIARIES: RESULTS FROM THE HEALTH AND RETIREMENT STUDY

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OBJECTIVES: Recently reported rates of Medicare beneficiaries restricting prescription medication use because of cost ranges from 1.6 to 22%. A reliable estimate of prescription non-procurement due to cost and an understanding of this behavior is essential to appropriate policy development. **METHODS:** The 2000 Health and Retirement Study, nationally representative of Americans born before 1947, provides cross-sectional data regarding respondent insurance coverage and prescription non-procurement. All non-institutionalized, Medicare beneficiaries age 65 and older were identified. Weighted bivariate analysis and multivariate stepwise logistic regression modeling determined the association and independent predictive value of several risk factors, including total health insurance coverage, on prescription non-procurement. **RESULTS:** Data for 9771 respondents were identified. Prescription non-procurement due to cost was reported in 4.5%, 8.5%, and 9.8% of respondents with Medicare plus private insurance, Medicare only, and Medicare plus Medicaid, respectively. Bivariate analysis revealed similar risk factor-related trends both within and between health insurance categories. The final regression model included several significant factors ($p < 0.0001$) predictive of non-procurement, the most notable being income, number of symptoms, and total prescription