Comparison of Direct Medical Costs and Services by Point of Service and Prescription Cost for Persons with Hepatitis-C with and without Treatment

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Abstract

Objectives: To compare the direct medical costs and services by point of service (PoS) and the prescription drug (Rx) costs and services for persons with hepatitis-C (HCV) who are treated (HCV-Tx) and not treated (HCV-noTx).

Methods: A retrospective analysis using the HCMS Research Reference database, which represents multiple US-based employers and contains employee data from 2001-2Q2007. This analysis compared the annual direct medical costs and services for healthcare by PoS, and Rx costs and services for HCV employees with and without Tx. ICD-9-Codes were used to identify employees with HCV. All subjects were required to have 61 month of eligibility. The first claims, disenrollment or pregnancy from the HCV-Tx cohort's index date. The HCV-noTx cohort's index date was assigned the average index date (by company) of the HCV-Tx cohort. Two regression models were used to compare the cohorts adjusting for demographics, job-related variables, eligibility months, and Charlon Comorbidity index. PoS Locations include: doctors office (MD), inpatient hospital (IN), outpatient hospital or clinic (OUT), emergency department (ED), laboratory (LAB), and other. Annual Rx costs and services were also calculated. All costs were inflated to 2010 US$.

Results: Data were available for 900 employees (HCV-Tx=216; HCV-noTx=684). The cohorts differed in the sex of employees, race, and insurance. The HCV-Tx cohort included 103 (47.3%), 331 (56.1%), and OUT (646), while the HCV-noTx cohort included 71 (49.3%), 317 (50.8%), and OUT (684). Overall, HCV-Tx direct medical costs were $3,556 (mean=1946), which were lower than the HCMS $4,234 (median=2,927), and other variables. The HCV-noTx cohort had 27.84 prescriptions (884), and the HCV-Tx cohort had 15.84 prescriptions (588). The analysis compared the annual direct medical costs and services for healthcare by PoS, and Rx costs and services for HCV employees with and without treatment.

The Adjusted Annual Services Received by Point of Service are shown in Table 3 and the incremental costs are presented in Figure 1. Those undergoing treatment had significantly higher prescription drug costs ($21,316) compared with those who did not ($4,234), with significantly (all P<0.0001) higher costs at the Doctor's office ($424) and Laboratory ($42). The cost differences were significant for both direct medical and prescription drug costs.

Conclusions: Higher costs associated with HCV treatment in the doctor's office were offset by lower costs from hospitalizations and the use of outpatient clinic.

References


Figure 1. Incremental Direct Medical and Prescription Costs (Treated minus Untreated)

Table 1 Descriptive Statistics

Table 2 Adjusted Annual Direct Medical Costs by Point of Service

Table 3 Adjusted Annual Services Received by Point of Service

Figure 2. Incremental Direct Medical Services and Prescriptions (Treated minus Untreated)