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## Healthcare Cost of Hepatitis C-infected Members in a Managed Care Organization (MCO)

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It is estimated that 1.8% of Americans have Hepatitis C antibodies and that about 74% of these individuals have chronic infection.<sup>1</sup> These prevalence rates correlate with 3.9 million and 2.7 million Americans, respectively. Hepatitis C will cause cirrhosis in about 25% of patients with chronic infection, of whom 2% to 5% will develop hepatocellular cancer each year.<sup>2</sup> Chronic Hepatitis C results in approximately 8,000 to 10,000 deaths per year in the United States.<sup>3,4</sup> This number is projected to triple by the year 2010.<sup>5</sup>

Recently, Hepatitis C has moved to the forefront of concerns within many managed care organizations. The potential future healthcare burden of Hepatitis C is alarming. Much of the available literature provides cost estimates of Hepatitis C extrapolated from actuarial data. This is likely not reflective of the "true" cost of healthcare for this population.

An analysis was conducted to identify all medical and pharmacy costs accrued during 1999 by members with Hepatitis C in a Philadelphia Medicaid managed care organization (MCO). Hepatitis C-infected patients were identified from a database of continuously enrolled members using ICD-9 codes indicative of Hepatitis C. Medical and pharmacy claims for these identified members during the study period were obtained and analyzed. Costs were reported as reimbursements paid for medical claims and pharmacy claims. The analysis was not adjusted for disease severity. It was approved by the IRB, and patient identifiers were blinded to assure patient confidentiality.

From a cohort of 73,869 members, 395 members (0.535%) met inclusion criteria for Hepatitis C. The mean age was 46.5 years (SD= 9.5, range= 4 - 81) and 213 (53.9%) were male. The 395 members had medical claims totaling \$4,075,082. Inpatient hospital services accounted for 48% of these costs. Further analysis showed that patients with either a history of a transplant or a transplant procedure (=12) performed in 1999 had medical claims that totaled \$600,445. Inpatient claims for this group accounted for \$497,594 of the total medical claims. In addition, there was one significant patient outlier that had total medical costs of \$881,933. The majority of these costs were related to home care. These 13 patients accounted for 36% of all medical costs for Hepatitis C members.

The following comorbid diagnoses accounted for a large number of the medical claims among all identified Hepatitis C members: chronic renal failure (28 patients), congestive heart failure (38 patients), human immunodeficiency virus (45 patients) and pneumonia (44 patients). The total cost for claims for each of these diagnoses is as follows: chronic renal failure (\$330,882), congestive heart failure (\$281,839), human immunodeficiency virus (\$153,406) and pneumonia (\$138,871).

Pharmacy claims for all Hepatitis C members totaled \$1,495,096. Based on number of claims, the most common therapeutic areas prescribed included behavioral health, cardiovascular and respiratory medications. Sixty patients had pharmacy claims for combination therapy with ribavirin/interferon alfa-2b, and 25 patients had claims for interferon monotherapy. Ten patients in this population had claims for both

monotherapy and combination therapy during 1999. Pharmacy claims related to treatment for Hepatitis C totaled \$437,735.

Total healthcare costs (combined medical and pharmacy claims) to this Medicaid MCO during 1999 for the 395 members identified with Hepatitis C exceeded \$5.5 million. Additionally, Hepatitis C patients often have comorbid conditions, including chronic renal failure or human immunodeficiency virus, or may undergo organ transplantation, all of which can contribute to drastic increases in healthcare cost. In conclusion, as the number of persons with Hepatitis C is expected to increase, the overall cost of healthcare for these patients is likely to be significant.

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