

Health Care Costs and Resource Use Associated with Sequelae and Comorbidities in Patients with Chronic HCV

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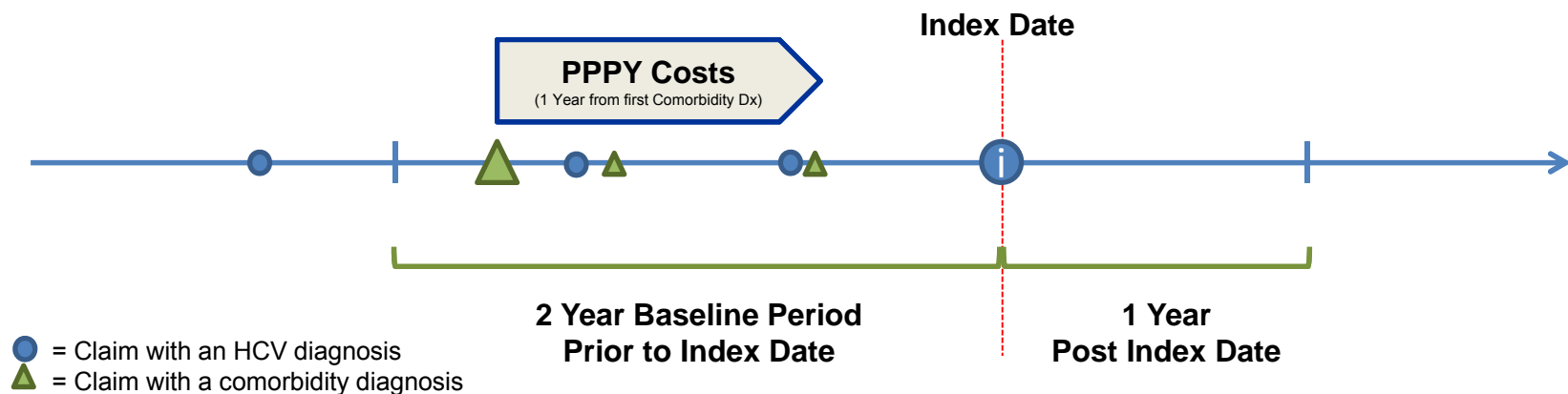
Background and Methods

Background

- Patients with chronic HCV incur substantial health care utilization and costs due to sequelae from the virus as well as from conditions other than HCV
- Understanding costs and resource use associated with sequelae and comorbidities may help to inform treatment and health care coverage decisions
- The purpose of this study was to determine the financial impact of sequelae and comorbidities in patients with chronic HCV

Methods

- A retrospective cohort analysis using 2 large commercially paid claims databases covering 212,000,000 lives with data from 2006-2013 was used to measure per patient per year (PPPY) costs by comorbidity status during the baseline period



Results

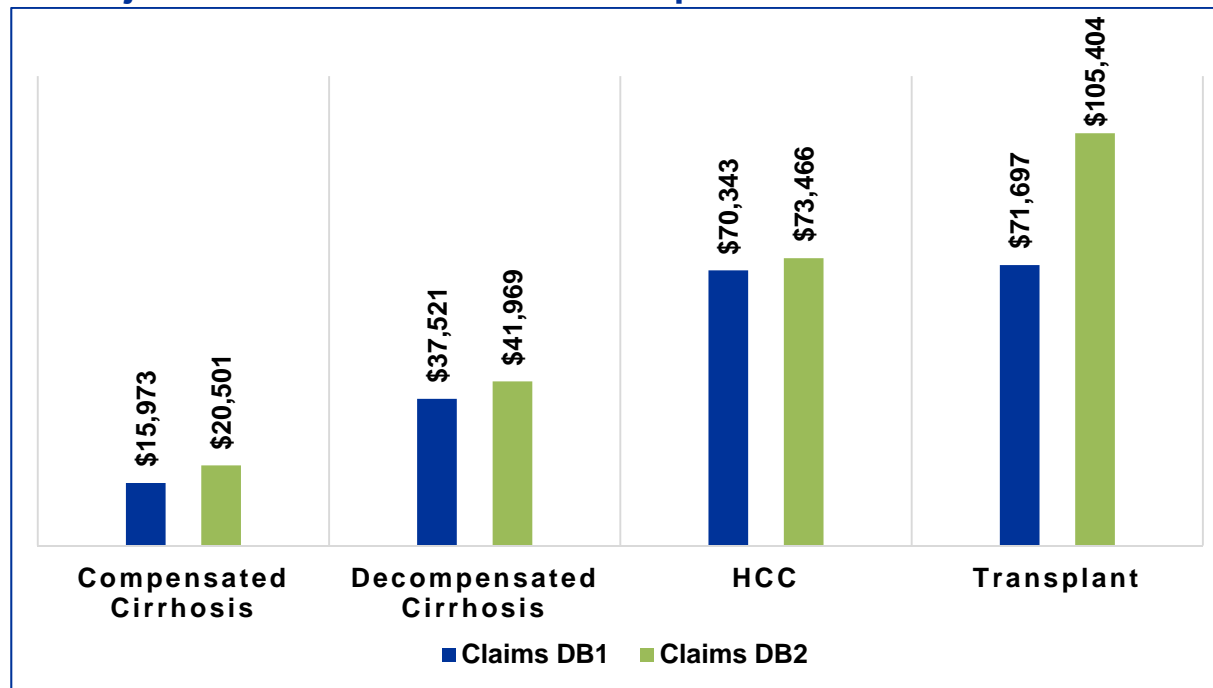
- Results from the two databases representing more than 212,000,000 covered lives yielded information for 97,935 patients with chronic HCV
- More than half of patients were male, and the average age was 52-53 years

	Claims DB1 (n = 46,384)	Claims DB2 (n = 51,551)
Treatment experienced, n (%)	2,770 (6.0)	3,272 (6.4)
Cirrhosis, n (%)*		
Compensated	2,355 (5.1)	2,771 (5.4)
Decompensated	2,048 (4.4)	2,529 (4.9)
HCC, n (%)	648 (1.4)	707 (1.4)
Transplant, n (%)*	928 (2.0)	430 (0.8)
HIV, n (%)	1,050 (2.3)	1,148 (2.2)
Diabetes, n (%)	7,653 (16.5)	7,967 (15.5)
CVD, n (%)	22,025 (47.5)	24,750 (48)
Mental disease, n (%)	9,451 (20.4)	11,986 (23.3)
Renal disease, n (%)	4,101 (8.8)	4,519 (8.8)

Results

- Overall unadjusted PPPY costs (regardless of comorbidity status) were approximately \$13,200 per year for all chronic HCV patients
- When HCV sequelae were evaluated, transplant patients incurred the highest PPPY costs
- HCC costs were similar to transplant costs in Claims DB1, while compensated cirrhosis costs were the lowest across databases

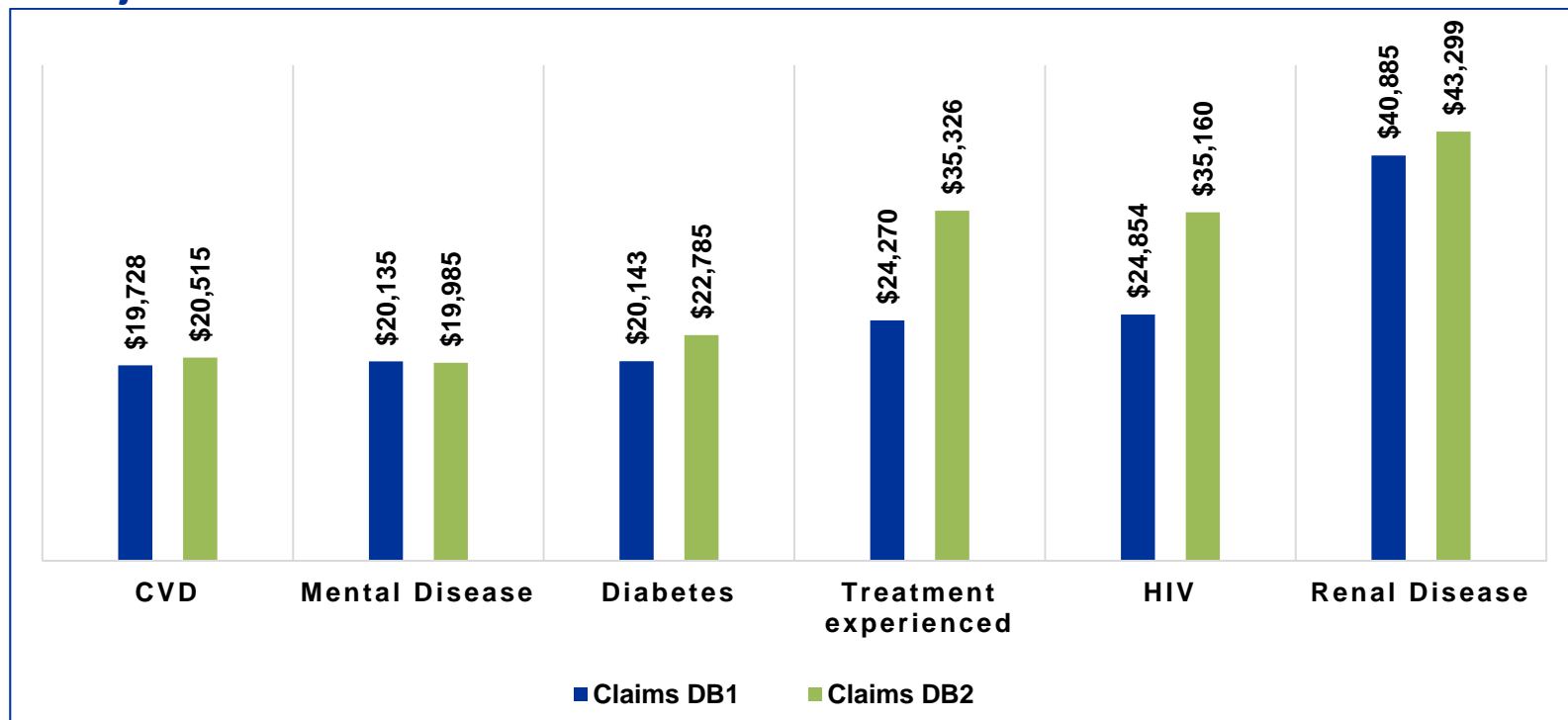
Unadjusted PPPY Costs for HCV Sequelae



Results

- Though almost half of patients had a CVD diagnosis, this group accounted for the lowest unadjusted PPPY costs
- Renal disease accounted for the highest costs among other comorbidities evaluated, but were still lower than costs in patients with HCC or transplant

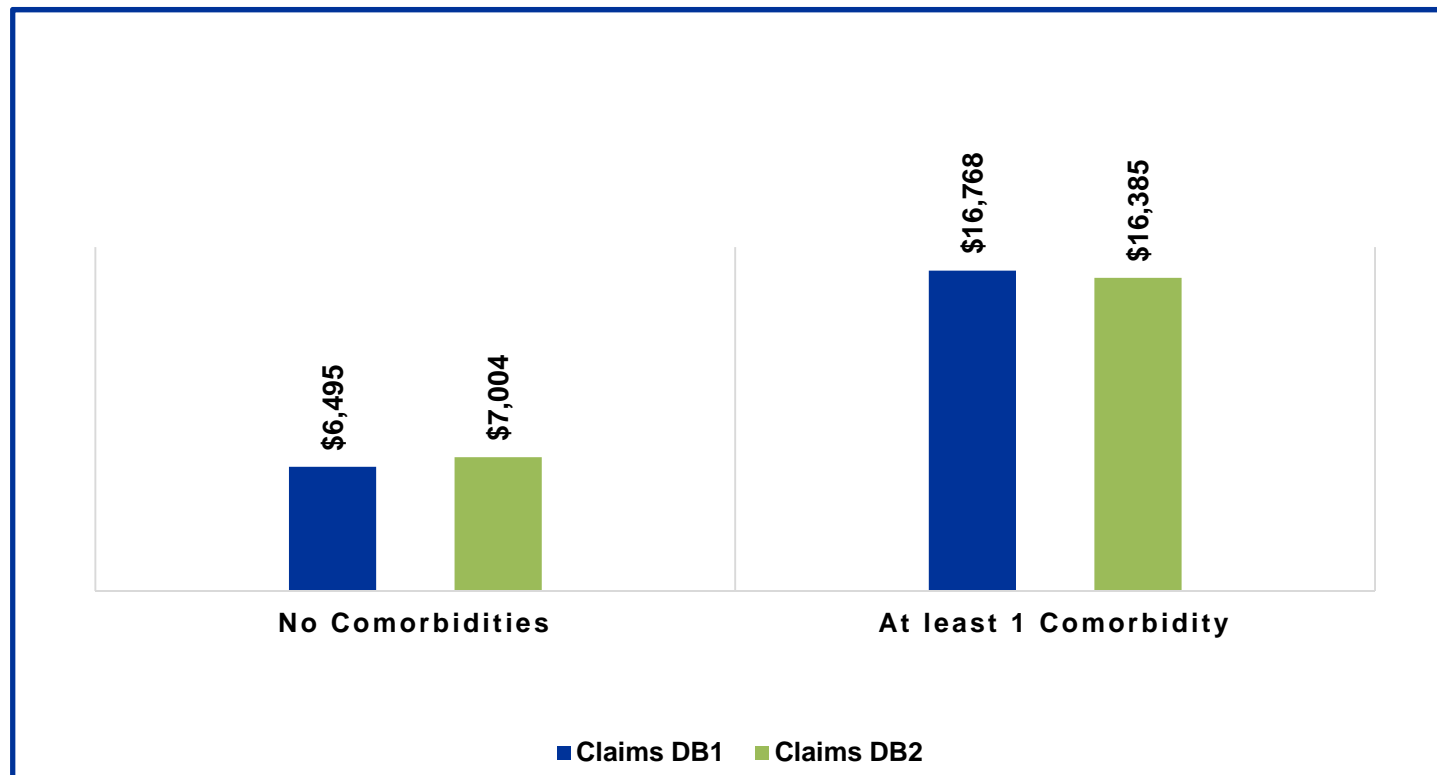
Unadjusted PPPY Costs for Other Comorbidities



Results

- When costs were adjusted using a GLM approach, patients with at least 1 comorbidity incurred more than twice the amount of costs incurred by patients without a comorbidity, illustrating the financial impact that comorbidities have on patients with HCV

Adjusted PPPY Overall Costs by Comorbidity Status



Discussion and Conclusions

Discussion

- Results from this study represent real-world data from two large claims databases. This information can be used health care professionals and payers in making treatment and care decisions for patients with chronic HCV
- Patient characteristics from this study align with the CDC recommendations for birth cohort testing for HCV for persons born from 1945-1965¹
- Prevalence estimates from this study were lower than those reported nationally (0.046% vs 1.1%²) which could be a reflection of the inherent limitations of this type of analysis
 - Limitations: As with all database studies, results are subject to the accuracy and coding of the claims. Sequelae such as cirrhosis and liver transplants are likely to be underestimated in claims data. Additionally, information regarding the severity of sequelae/comorbidities is not possible to assess
 - Data from this study precede the advent of newer therapies for HCV. Costs associated with these therapies are not reflected in the results of this study

Conclusions

- Health care resource utilization and associated costs for patients with chronic HCV are substantial and vary considerably by associated sequelae/comorbidities
- HCV sequelae and other comorbidities contribute heavily to the economic burden associated with HCV. Understanding and quantifying the contributions of these conditions on the health care system may help inform decision makers
- Further research evaluating the impact of newer therapies for HCV is warranted to better understand the short-term and long-term implications of therapy on resource utilization and costs in a chronic HCV patient population

1. Centers for Disease Control and Prevention. CDC Recommendations for the Identification of Chronic Hepatitis C Virus Infection among Persons Born During 1945-1965. Available at: <http://www.cdc.gov/hepatitis/HCV/1945-1965.htm> . Last accessed: May 25, 2015.

2. Denniston MM, et al. Chronic hepatitis C virus infection in the United States, National Health and Nutrition Examination Survey 2003 to 2010. Ann Intern Med. 2014;160:293-300.