Predictors of Hepatitis C Treatment Initiation

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Abstract

OBJECTIVES: Chronic hepatitis C, in its early stages, is commonly asymptomatic and many patients do not seek treatment. The current study characterizes the population of hepatitis C patients who have initiated treatment for hepatitis C.

METHODS: This study is based on data from the 2009 and 2010 waves of the US National Health and Wellness Survey (NHWS; N=1279), a cross-sectional database representative of the adult US population. Patients who reported being diagnosed with hepatitis C by a physician were included for analysis (n=1279). Patients currently, or ever, taking a prescription medication for hepatitis C (n=579) were compared with patients who never took a prescription for hepatitis C (n=700). Group membership was predicted with a logistic regression model, which included age, gender, ethnicity, marital status, educational attainment, household income, employment status, insurance possession, body mass index, exercise, smoking habits, alcohol use, HIV/AIDS and hepatitis B status.

RESULTS: There was a difference in the mean age of patients who had initiated treatment (51.31 yrs, SD=11.35), and those who had not (52.02 yrs, SD=11.50). Patients who were married (OR=1.43, p=0.0036), in possession of insurance (OR=1.56, p=0.0028), or were diagnosed with AIDS or HIV (OR=1.60, p=0.0497) were more likely to have initiated hepatitis C treatment than patients without these characteristics. No other significant differences were found.

CONCLUSIONS: Causal inferences cannot be drawn from this data, due to the cross-sectional nature. Yet, the current findings suggest a lack of insurance and social support from a partner may be a barrier to treatment for hepatitis C. Patients treated for hepatitis C may be more informed about their HIV/AIDS status. Conversely, patients with AIDS/HIV may be more likely to initiate therapy to avoid liver-related immunodeficiency complications. Further investigation is warranted.

Introduction

Chronic hepatitis C virus (HCV) is a blood-borne illness, which affects at least 2.7 million patients in the United States (US), where it is the major risk factor for hepatocellular carcinoma. Five to twenty percent of patients who are chronically infected will develop liver cirrhosis. Patients who develop cirrhosis are at 1% to 2% risk of developing hepatocellular carcinoma per year.

However, due to the high incidence of HIV-related depression4, and other complications associated with HCV treatment initiation, guideline-recommend physicians initiate treatment in a case-by-case basis.

Due to the interventional nature of studies with randomized samples and certain sample characteristics of observational studies, few have been able to assess which patient characteristics are associated with treatment initiation in a US nationally representative sample.

Objective

The current study seeks to characterize the population of hepatitis C patients who have initiated treatment for hepatitis C.

Methods

Data Source

The study is based on data from the 2009 and 2010 waves of the US National Health and Wellness Survey (NHWS; n=1279). (NHWS). – A cross-sectional, self-administered, Internet survey. – Identified through an Internet-based panel, a stratified random sampling procedure was implemented so the NHWS sample mimics the general US population. – Comparisons between the NHWS and the US census has been made elsewhere2. – Only patients who reported being diagnosed with hepatitis C (by a physician) were included in the analyses.

Measures

HCV treatment initiation: patients who reported ever taking a prescription for their HCV infection were regarded as having initiated HCV treatment (n=579) and were compared with all HCV patients who had not initiated HCV treatment previously (n=700).

Demographics: age, gender, ethnicity, marital status, educational attainment, household income, employment status, insurance possession, health history: body mass index, exercise and smoking habits, alcohol use, HIV/AIDS and hepatitis B status.

Analyses

Patient demographics and health data were summarized descriptively for the overall HCV sample.

Bivariate analyses compared demographic differences and health history:
- Chi-square tests were conducted for categorical variables;
- One-way ANOVA tests were conducted for continuous variables.
- Logistic regression models were conducted to assess differences between the treatment groups on demographics and health history.
- All analyses were tested at the 5% significance level (p < 0.05).
- Analyses were conducted using SAS 9.1 (Cary, NC).

Bivariate analyses compared differences in health and demographic history:
- One-way ANOVA tests were conducted for continuous variables.

Analyses were conducted using SAS 9.1 (Cary, NC).

Conclusions

Causal inferences cannot be drawn from this data, due to the cross-sectional nature.

However, the current findings suggest that a lack of insurance and social support from a partner may be a barrier to treatment for hepatitis C. Patients treated for hepatitis C may be more informed about their HIV/AIDS status. Conversely, patients with AIDS/HIV may be more likely to initiate therapy to avoid comorbidity-related complications.

Further investigation is warranted.

References


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