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ORIGINAL ARTICLE

Patient health utility, work productivity, and lifestyle impairment in chronic hepatitis C patients in France

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Summary
Background: France has a high prevalence of patients with chronic hepatitis C virus (HCV). Clinical consequences of HCV are well-recognized, while health-related quality of life (HRQoL) and productivity impacts remain less understood. This study evaluates how HCV disease severity and HCV treatment outcomes impact HRQoL and productivity among patients in France.
Methods: From October 2012 to January 2013, physicians treating HCV patients in France completed Patient Record Forms, which included information on patient demographics, disease stage, and treatment status. Subsequently, these HCV patients completed the EQ-5D-3L health-state instrument and the HCV-specific Work Productivity and Activity Impairment (WPAI:HepC) Questionnaire. Results are reported in descriptive and stratified analyses by disease stage and treatment status. Linear regression analyses were performed to determine independent associations between disease severity and treatment status with EQ-5D and WPAI:HepC.
Results: There were 297 matched physician and patient response forms completed. Mean EQ-5D Index score was 0.764, and mean EQ-VAS score was 65.85. Regression analyses showed that older age and worse disease severity were significantly associated with lower EQ-5D Index and EQ-VAS scores. Stratification of EQ-5D Index and EQ-VAS scores showed significantly better scores for HCV treatment responders compared to non-responders. Stratification of WPAI:HepC questions by disease stage revealed greater productivity impact on HCV patients with more severe disease.
Conclusions: In a cross-sectional sample of HCV patients in France, worsening HRQoL and productivity/activity impairment was significantly associated with disease progression and increasing age. This information provides insight into the benefits of treating HCV patients and preventing disease progression.

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Introduction

Chronic hepatitis C (HCV) is a growing public health concern, with up to 3% of the population infected and an estimated 360,000 HCV-related deaths each year, worldwide [1]. Within the World Health Organization (WHO) European region, approximately nine million people are chronically infected with HCV [2]. In France, HCV prevalence is estimated at 0.84% (approximately 550,000 citizens) [3], and HCV is responsible for approximately 11.5 deaths per 100,000 residents annually [4]. HCV disease progression can occur over a 20—50-year period [5]; long-term sequelae of chronic infection may include cirrhosis, liver decompensation, hepatocellular carcinoma (HCC), and the need for liver transplantation [6,7]. In France, cases of cirrhosis and its complications are increasing and are predicted to peak in 2021 [8].

HCV infection causes fatigue, muscle and joint pain, depression, and other psychological disorders, which reduce patient health-related quality of life (HRQoL) and health utility [9,10]. The decrements in health utility have been linked to severity of liver disease, with the lowest scores seen in patients with decompensated cirrhosis or HCC [9,11—13]. HCV treatment is also associated with decreased HRQoL [14]. Despite some advances in the treatment of HCV, interferon (IFN) is still a component of therapy. Administration of current IFN-containing regimens for treatment of chronic HCV infection is challenging due to side effects such as anaemia, depression, flu-like symptoms, neuropsychiatric disorders, neutropenia, and rash, which negatively impact HRQoL and health utility of patients on treatment [15—17]. Sustained virologic response (SVR) with IFN-based therapy may result in improvements in HRQoL and health utility after treatment is completed [17,18].

Direct costs associated with HCV are substantial [19]. Additionally, indirect economic and humanistic costs are significant and arise from the reduction of HRQoL owing to both the disease and current HCV treatments; this impacts patient work, daily activities, and lifestyle [15,20,21].

To fully characterize the impact of HCV and the burden of disease progression, the negative effects of HCV on worker productivity and patients' lifestyle need to be understood. In France, there is a lack of studies quantifying HCV patient health utility, worker productivity decrement, and lifestyle impairment. Such data can be used to identify the real costs and benefits of treating HCV patients and preventing disease progression, and are important for accurately capturing the true burden of HCV disease. This information will help define future economic implications associated with HCV and inform public health strategy in France.

The primary objectives of this study were to evaluate HCV patient-reported health utility, defined as a measure of a patient's preference for a specific level of health status, and worker productivity (absenteeism, presenteeism, overall work productivity and activity impairment) in France by disease stage and treatment status. The secondary objectives were to determine the characteristics associated with lower health utility and reduced productivity among HCV patients in France and understand the effects of HCV on lifestyle.

Methods

Data collection

Data were obtained from the Adelphi Real World Hepatitis C Disease Specific Programme® (DSP) in France. This was part of a cross-sectional, multi-sponsor survey developed to collect marketing and health outcomes information from the United States and 5 European markets (France, Germany, Italy, Spain and the United Kingdom). The study was run according to EphMRA Market Research Guidelines. Ethical approval was not necessary; however, patient consent to take part was required as information was directly requested. Accordingly, each patient provided informed consent to participate in the study via a 'check box' agreement after receiving an explanation of the tasks to be undertaken and that all data were to be analysed at the aggregated and anonymised level.

Adelphi worked with external fieldwork partners with significant prior knowledge and experience of HCV to target and recruit physicians from public lists of healthcare professionals in a brief telephone screening process. This involved telephone contact from a central location or from a local recruiter. Physicians were eligible to participate if they were hepatologists, gastroenterologists, or infectious disease specialists who obtained their medical degree between 1977 and 2007, were responsible for HCV treatment decisions, were seeing 4 or more patients per week being treated for HCV infection, and consented to participate. Physicians treating HCV patients in France who met the established criteria were invited to participate in the Adelphi Hepatitis C DSP between October 2012 and January 2013. Once recruited, physicians were personally visited and provided with all materials for the study and instructed regarding their completion. Participating physicians were asked to complete physician demographic information and detailed Patient Record Forms (PRFs) for the next 10 consecutive patients that they saw for HCV management. The PRFs included questions on patient demographics, HCV genotype, liver disease stage, and HCV treatment history. Physicians asked all patients for whom a PRF was completed whether they were willing to complete a patient self-completion form (PSC). The PSC forms included questions on demographics, HCV treatment, effect of HCV on lifestyle, and standardized patient-reported measures of health-state utility (the EQ-5D-3L Index and EQ-Visual Analog Scale [VAS]) and work productivity (the work productivity and impairment: Hepatitis C [WPAI:HepC] Questionnaire). The 297 patients who provided informed consent and completed a PSC were included in this study.

All information was quality controlled at data entry and checked again through numerous logic checks prior to analyses being run from the database. All responses were anonymised to preserve patient confidentiality, which also avoids bias at the data collection and analysis phases. The data were collected according to market research guidelines; hence, no source validation was possible or required. Patient and doctor identities were not known to Adelphi. Local recruiting agencies knew the physician identities. There were no identifiers recorded for the patients themselves. Patient and physician forms for the same 'matched'