



Assessment of Viral Genotype Impact to the Cost-Effectiveness and Overall Costs of Care for Peg-Interferon-2 α + Ribavirine Treated Chronic Hepatitis C Patients

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ABSTRACT

Background: Pegylated interferon alfa plus ribavirin protocol is currently considered the most efficient hepatitis C treatment. However, no evidence of costs comparison among common viral genotypes has been published.

Objectives: We aimed to assess core drivers of hepatitis C medical care costs and compare cost effectiveness of this treatment among patients infected by hepatitis C virus with genotypes 1 or 4 (group I), and 2 or 3 (group II).

Patients and Materials: Prospective bottom-up cost-effectiveness analysis from societal perspective was conducted at Infectious Diseases Clinic, University Clinic Kragujevac, Serbia, from 2007 to 2010. There were 81 participants with hepatitis C infection, treated with peg alpha-2a interferon plus ribavirin for 48 or 24 weeks. Economic data acquired were direct inpatient medical costs, outpatient drug acquisition costs, and indirect costs calculated through human capital approach.

Results: Total costs were significantly higher ($P = 0.035$) in group I (mean \pm SD: 12,751.54 \pm 5,588.06) compared to group II (mean \pm SD: 10,580.57 \pm 3,973.02). In addition, both direct ($P = 0.039$) and indirect ($P < 0.001$) costs separately were significantly higher in group I compared to group II. Separate comparison within direct costs revealed higher total cost of medical care ($P = 0.024$) in first compared to second genotype group, while the similar tendency was observed for total drug acquisition ($P = 0.072$).

Conclusion: HCV genotypes 1 and 4 cause more severe clinical course require more care and thus incur higher expenses compared to HCV 2 and 3 genotypes. Policy makers should consider willingness to pay threshold differentially depending upon HCV viral genotype detected.

Keywords: Cost-Benefit Analysis; Interferons; Ribavirin; Hepatitis C, Chronic

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►Article type: Research Article; Received: 11 Jun 2012; Revised: 31 Jan 2013; Accepted: 15 Apr 2013; Epub: 19 Jun 2013

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