OBJECTIVES: Despite available treatment options, chronic infection of individuals with the hepatitis C virus (HCV), together with associated chronic liver diseases, remains a significant public health burden in England and Wales. Fewer than half of patients with genotype 1 chronic hepatitis C (CHC) achieve sustained virologic response (SVR) following the current standard treatment with peginterferon alfa and ribavirin. The aim of this analysis was to evaluate the cost-effectiveness of boceprevir as part of a new triple-therapy standard of care for patients with genotype 1 CHC who have treatment-naïve and previously treated patients with genotype 1 CHC in England and Wales.

METHODS: Specific treatment strategies for boceprevir have been outlined in the UK licence for different patient groups. A Markov model was developed to evaluate these strategies. For boceprevir treatment-naive patients, a comparator is a standard treatment with peginterferon alfa and ribavirin, compared to peginterferon alfa and ribavirin alone, among treatment naïve and previously treated patients with genotype 1 CHC in England and Wales.

RESULTS: A cost-effectiveness analysis of boceprevir was conducted using data from the phase III trial of boceprevir. A Markov model was used to simulate the treatment of chronic hepatitis C patients in the UK, with treatment-naïve and pretreated patients. The model was calibrated using data from a 1000 cohorts were also conducted to test the robustness of the results. A cost-effectiveness analysis was conducted using a Markov model with a treatment-naïve population.

CONCLUSIONS: The study provides evidence that boceprevir is a cost-effective treatment for chronic hepatitis C patients in the UK. The model is robust and can be used to inform clinical and policy decisions.