THE OPTIMAL STRATEGY OF HEPATITIS C THERAPY IN GENOTYPE 1B TREATMENT-NAÏVE PATIENTS WHO INJECT DRUGS IN CHINA: A DECISION AND COST-EFFECTIVENESS ANALYSIS

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Background: To determine the cost-effectiveness of treating hepatitis c virus (HCV) and the optimal treating timing for genotype 1b treatment-naïve patients who inject drugs (PWID), under daclatasvir (DCV) plus asunaprevir (ASV)and pegylated interferon plus ribavirin (PR) regimen, respectively.

Intervention: A decision analytical Markov model was conducted. Seven HCV treatment strategies were compared: (i) no treatment; (ii) treat at fibrosis stages F3 (numerous septa without cirrhosis) and F4 (compensated cirrhosis) using DCV +ASV regimen; (iii) treat all chronic patients using DCV+ASV regimen; (iv) treat all patients including those at acute phase using DCV+ASV regimen; (v) treat at fibrosis stages F3 and F4 using PR regimen; (vi) treat all chronic patients using PR regimen; (vii) treat all patients using PR regimen. Costs included all direct medical costs from the societal perspective, health-outcomes were measured using quality-adjusted life-years (QALYs). Incremental cost-effectiveness ratios (ICERs) of treating F3 and F4 *vs* no treatment, treating all chronic *vs* treating F3 and F4, and treating all patients *vs* treating chronic under DCV+ASV and PR regimen, were analyzed.

Effectiveness: For DCV+ASV regimen, the corresponding ICER of treating F3 and F4 *vs* no treatment, treating all chronic *vs* treating F3 and F4, and treating all patients *vs* treating chronic was US$-1116.06/QALY, US$ 341.80/QALY and US$-35429.23/QALY, respectively. For PR regimen, the corresponding ICER was US$-1671.44/QALY, US$1213.21/QALY and US$1492.01/QALY, respectively. Probabilistic sensitivity analysis showed treating all patients using DCV+ASV regimen has a high probability (99.8%) of being cost-effectiveness under a willingness-to-pay threshold of 1-time per capita GDP (US $9765).

Conclusion and next steps: Earlier treatment for HCV is more cost-effective for genotype 1b PWID. Future studies will continue to focus on other genotypes for clinical decision making.

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