

## **OPTIMAL HEPATITIS C TREATMENT ADHERENCE PATTERNS AND SUSTAINED VIROLOGIC RESPONSE AMONG PEOPLE WHO INJECT DRUGS: THE HERO STUDY**

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### **Background:**

Direct-acting antiviral (DAA) medications are highly effective for treating Hepatitis C virus (HCV) infection even among people who inject drugs (PWID), resulting in sustained virologic response (SVR), or HCV cure. Yet, little is known about patients' adherence patterns and association with SVR rates.

### **Methods:**

Electronic blister packs were used to objectively measure daily adherence to once a day sofosbuvir/velpatasvir during the 12-week treatment period among active PWID recruited in the US-nationwide pragmatic randomized HERO trial. The blister pack data were available for 593 out of 623 participants who initiated DAA. Adherence was summarized in multiple patterns, including, e.g., total adherent doses, consecutive adherent and missed doses, and early discontinuations. Thresholds for adherence patterns associated with >90% SVR rates were also determined.

### **Results:**

All adherence patterns indicating greater adherence were significantly associated with achieving SVR. Taking more than 59/84 (70.2%) total medication doses, having more than 23 consecutive adherent doses, and having less than 6 consecutive missed doses were associated with >90% SVR. When adherence was stratified by <50% versus  $\geq$  50%, only among those who had <50% adherence, greater total doses, shorter duration of missed doses, and no early discontinuation were significantly associated with improved SVR. First month discontinuation and >2 weeks of missed doses were associated with very low SVR.

### **Conclusions:**

Adequate adherence to DAA medications throughout the 12-week treatment period is critical for ensuring SVR among active PWID with HCV. However, suboptimal adherence can also lead to high SVR rates among this difficult-to-adhere population. Encouraging patients to take as much medication as possible, with <2 weeks consecutive misses, and without early discontinuation, appears important for achieving SVR.

### **Disclosure of Interest Statement:**

Dr. Mehta has received speaker fees from Gilead Sciences. Dr. Taylor has received UpToDate Royalties for peer review of viral hepatitis topics. Dr. Kim has served on advisory boards for Biomarin. Dr. Litwin received research grant support from Gilead and Merck, and has served on advisory boards for Gilead Sciences and Merck Pharmaceuticals and received research funding from Gilead Sciences. All other authors declare no competing interests.