ESTIMATING THE COST OF HEPATITIS C TREATMENT IN A RURAL APPALACHIAN COUNTY (KEY TREAT STUDY)

Authors:
Niyomsri S[1], Havens JR[2], Willams B[2], Fraser H[1], Vickerman P[1], Walker J[1]

[1]Population Health Sciences, Bristol Medical School, University of Bristol, Bristol, UK
[2]Behavioral Science, University of Kentucky College of Medicine, Lexington, Kentucky, USA

Background:
Kentucky has some of the highest hepatitis C virus (HCV) prevalence rates in the US., with cases in rural Perry County driven by the opioid/HCV syndemic. Despite the availability of direct-acting antivirals (DAAs), treatment uptake remains low among people who use and inject drugs (PWUD/PWID). KeY Treat evaluates the impact of removing barriers to DAAs uptake and treatment outcomes in a rural setting. This study estimates the cost of diagnosing and treating of HCV in this setting.

Methods:
KeY Treat enrolled 380 adults (≥18 years) with confirmed HCV viraemia in Perry County, recruited through syringe service programmes (SSPs), physician referrals, opioid use disorder (OUD) clinics, epidemiological study referrals, and word-of-mouth. Real-world patient-level micro-costing analysis was performed using 2022-2024 data, capturing screening, medication, visit costs, incentives, reinfection management, and follow-ups, excluding research-specific costs. Full economic costs from the healthcare provider perspective are presented in 2023 USD and by patient subgroup based on treatment outcomes and OUD medication (MOUD) use.

Results:
Total 763 patients were screened, with 380 diagnosed with HCV. Total programme was $5.12 million, with $72,576 allocated to screening and $4.4 million to treatment. Cost per screened negative patient was $104, while per initiated treatment was $13,839, with 85.7% spent on DAAs. Among treatment-related expenses, laboratory costs were 5.9%, and incentives and travel assistance accounted for 2.3%. Cost patient achieving SVR at first treatment was $15,857, rising to $26,556 for those requiring retreatment. MOUD patients had higher costs than non-MOUD patients ($14,115 vs. $12,821) due to additional MOUD treatment cost.

Conclusion:
KeY Treat successfully screened and treated PWID with HCV in Perry County at relatively low cost, despite the need for transport assistance and monetary incentives, and many requiring treatment restarts or retreatment. These costs will be used in an upcoming cost-effectiveness analysis of the intervention.

Disclosure of Interest Statement: ***I, Siwaporn Niyomsri, have no conflicts of interest to declare***