EVALUATING THE DBS TEST-AND-TREAT MODEL (DBS-TaT): RAPID ACCESS TO LOW BARRIER HEPATITIS C TREATMENT WITHOUT PHLEBOTOMY OR IMAGING

Seaman A,[1,3] Takallou A,[2] Reder L,[3] Shah A,[3] Spencer H[1]

[1] Department of Medicine, Section of Addiction Medicine, Oregon Health & Science University, [2] School of Medicine and Public Health, Oregon Health & Science University – Portland State University, [3] Hepatitis C Elimination Program, Central City Concern, Portland, Oregon, USA;

Background: Models utilizing point-of-care (PoC) or dried blood spot (DBS) RNA testing improve access to hepatitis C (HCV) treatment, but limited access to hepatitis B (HBV) testing and fibrosis assessment impede widespread implementation. A history-based fibrosis risk stratification tool (Decompensated Cirrhosis in Hepatitis C Evaluation Questionnaire; DCHEQ) rules out decompensated cirrhosis among people with HCV with high discrimination (DCHEQ≤8; Area-under-the-curve=0.99). The DBS test-and-treat (DBS-TaT) model combines the DCHEQ and DBS to permit HCV treatment initiation (TI) without phlebotomy or imaging.

Model of Care:
DBS TaT was implemented in an urban HCV elimination program in Portland, Oregon, recruiting from community health centres, supportive housing, street outreach, and opioid treatment programs. Participants completed DCHEQ and DBS testing (HCV RNA, HBV surface antigen/core antibody). HCV viremic individuals with DCHEQ scores ≤ 8 underwent TI without further pretreatment evaluation; those with DCHEQ ≥ 9 completed phlebotomy-based fibrosis assessment before TI. Primary evaluation was TI within 6 months of DBS RNA positivity. Secondary evaluation included TI stratified by DCHEQ (≤8 versus ≥9), time-to-treatment-initiation (TTI), and SVR12.

Effectiveness:
From January 2023—February 2024, 1,190 participants were screened. We analyzed 198 cases with DBS RNA viremia and documented DCHEQ scores. Mean age was 43.6 [95% CI 42.2,45.1]. Majority were male (58%), White (73%), used substances within 6 months (53%; alcohol/opioids/methamphetamines/benzodiazepines), and had a DCHEQ ≤8 (92%). Treatment initiation at 6 months was 93% (184/198) with a mean TTI of 58.7 days [95% CI 42.2,75.1]. TI was 92% (168/182) with DCHEQ ≤8 versus 100% (16/16) with DCHEQ ≥9. SVR12 data anticipated April 2025.

Conclusion and next steps:
DBS-TaT – the first HCV treatment approach to demonstrate HCV RNA and HBV serology testing and fibrosis stratification without phlebotomy or imaging – delivered high treatment initiation rates. Elements DBS-TaT could facilitate implementation of HCV RNA PoC models and low-barrier treatment in resource-limited settings.

Disclosure of Interest: This model of care implementation was supported in part by investigator-initiated research funding from Abbvie, Inc; model design, analytic strategy, and analysis were independently completed by the authors. Dr. Seaman has also received investigator initiated-research academic consulting funding from Abbvie, Inc and investigator-initiated research funding from the Gilead FOCUS Foundation and the National Institute on Drug Abuse. All other authors have nothing to disclose.