

Dried Blood Spot Test-and-Treat (DBS TaT) in Peer-Assisted Telemedicine for Hepatitis C: A Cluster Randomized Controlled Trial

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Background:

Peer-assisted telemedicine for hepatitis C (HCV) treatment improves treatment initiation in rural people who use drugs (PWUD) in both trials (Seaman et al., 2024) and state-wide implementation in Oregon, United States (US) (Spencer et al., 2024). However, pre-treatment testing, (ie: phlebotomy-based HCV diagnosis and fibrosis assessment) remains a barrier to HCV treatment initiation in the rural US, where access to point-of-care HCV diagnosis and transient elastography are limited. We designed Dried Blood Spot Test-and-Treat (DBS TaT) to enable phlebotomy-free HCV treatment initiation in participants with low risk of hepatic fibrosis. We hypothesized that sites trained in DBS TaT have increased HCV treatment initiation versus waitlisted sites.

Methods:

This is an open-label, cluster randomized superiority trial with 1:1 allocation and parallel assignment (NCT06409169). We recruited non-pregnant adults with detectable HCV RNA within 18 sites that engage rural PWUD in the peer-assisted telemedicine program. At DBS TaT sites, peer-collected DBS samples diagnosed HCV and participants were screened for hepatic fibrosis with a novel fibrosis risk assessment tool (Spencer et al., 2026); those with low risk of fibrosis started HCV treatment immediately. At waitlisted sites, participants completed phlebotomy to diagnose HCV and complete fibrosis assessment before treatment initiation. The primary outcome was the incidence rate ratio (IRR) at DBS TaT sites versus waitlist sites.

Results:

Participants (n=50) were 50% female, frequently homeless (40%), and predominantly heterosexual (94%) and white (88%). 37 participants (74%) started HCV treatment. The treatment initiation rate was not different in DBS TaT sites versus waitlisted sites (IRR=1.03; 95% CI=0.67-1.59).

Conclusion:

Peer-assisted telemedicine demonstrated high treatment initiation rates in a population of rural PWUD with frequent homelessness. DBS and phlebotomy-based pre-treatment testing obtained similar rates of treatment initiation. DBS TaT could feasibly be implemented at sites where local conditions add increased burden to acquiring phlebotomy.

Disclosure of Interest Statement:

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