UTILIZING SELF-COLLECTION DRIED BLOOD SPOT TO INCREASE ACCESSIBILITY TO HEPATITIS C, HEPATITIS B AND COVID-19 TESTING

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Background:
People who use drugs face barriers accessing healthcare, which can limit diagnosis of hepatitis C virus (HCV) and hepatitis B virus (HBV). However, the use of dried blood spot (DBS) testing has decreased challenges in sample collection for HBV and HCV and can be used for multiple infections. At present, it is not known whether self-collection is non-inferior to trained collection, an important consideration to expand testing. This study evaluated a contactless strategy using mail-based self-collection DBS testing.

Methods:
Individuals seropositive for HCV, HBV, and COVID-19, and unknown serostatus were recruited and mailed a collection kit, paper instructions/QR-code for video instructions, a demographic/acceptability questionnaire, and a prepaid return envelope for the DBS card and questionnaire.

Results:
Of 388 recruited participants, 39.9% completed the study. Results were analyzed for a subset of 77 participants (33F, mean age 54): 7 HCV antibody positives, 16 HBsAg positives, and 54 with unknown serostatus. HBsAg detection occurred in all known positive samples (n=16), with no false positive results (n=61); sensitivity 100% (95% CI 79.4-100.0) and specificity 100% (95% CI 94.1-100.0). Of those who tested HCV antibody positive in serum, sensitivity for 7 samples was 85.7% (95% CI 42.1-99.6) with 1 false negative, that resulted from a very low signal-to-cut-off ratio observed in serum. The specificity for 70 known negative samples was 97.1% (95% 90.0-99.7) with 2 false positives. There was 100% concordance between serum and self-collection DBS COVID-19 antibody results. Participants highly recommended mail-based testing (n=72, 96.0%); most rated the process as excellent/good (n=69, 95.5%); 52.0% (n=39) reported collection as very easy/easy, and 81.9% (946/1155) of DBS spots were correctly completed.

Conclusion:
This method allows for collection of samples for HCV, HBV, and COVID-19 remotely. The high concordance and acceptability among participants indicate that this strategy offers a viable approach for increasing testing.

Disclosure of Interest Statement:
No disclosures.