

Rapid point of care (POC) Hepatitis C Virus (HCV) RNA results at a Medically Supervised Injecting Room (MSIR) in Melbourne, Australia, are reliable and highly concordant with serum venepuncture (VP) HCV RNA in a real-world setting.

Bradley Whitton¹, Jenine Anderson², Dylan Vella-Horne², Michael Maclsaac¹, John Furler², Matthew Penn², Shelley Cogger², Laura Potts², Jem Light², Sarah Renton², Becca Sellan², Jessica Murray², Alexander Thompson¹, Jacinta A Holmes¹.

¹ Department of Gastroenterology, St Vincent's Hospital Melbourne, Fitzroy, Australia, ² Medically Supervised Injecting Room/North Richmond Community Health, North Richmond, Australia.

Background: To achieve HCV elimination, streamlined models-of-care for high-risk individuals are required; POC testing is paramount for rapid diagnosis. The POC HCV RNA test (Cepheid®) uses capillary blood, providing HCV RNA results within 60 minutes. POC HCV RNA testing commenced at the MSIR in November 2020. Clients are also offered serum VP HCV RNA testing. We previously reported concordance of POC and VP HCV RNA testing in the initial clinician led-model-of-care. We evaluate the concordance of POC and VP HCV RNA results and ease of POC testing in the nurse, harm-reduction practitioner led-model-of-care.

Analysis: Retrospective analysis of 976 individuals undergoing POC HCV RNA testing (May 2022 to December 2023). We compared paired POC and VP HCV RNA results to determine concordance rate and evaluated ease of POC testing (number and type of errors/no result).

Results: 976 clients had POC HCV RNA testing; 155/976 (16%) had VP HCV RNA performed in parallel. 148 returned positive POC results (HCV RNA positive rate 15%); 79 had VP. 76/79 (96%) had a concordant VP HCV RNA. 3/79 (4%) had discordant results (POC HCV positive but VP HCV negative); all had POC HCV RNA <100IU/mL (<lower limit of quantification of POC assay, false positives). Additionally, one was POC HCV RNA negative but VP HCV RNA positive (false negative); this client had a very low VP HCV viral load <50IU/mL and was POC HCV RNA positive on subsequent testing. There were 51 (5%) errors/no result: (59%) were sample volume errors related to minivet underfilling. Other reasons for result failure were unspecified (n=12), probe issue (n=2), temperature issue (n=2), plunger failure (n=2), cartridge issue (n=2) and abnormal amplification curve (n=1).

Conclusion: Our data demonstrates that rapid POC HCV testing for high-risk individuals is highly accurate with low error rates in a streamlined real-world nurse, harm-reduction practitioner led-model-of-care.

Disclosure of Interest Statement: N/A. No funding was received for this paper. This manuscript, including the related data has not been previously published and is not under considerations elsewhere.