

Standardised point-of-care operator training is associated with embedded skills post implementation

Markus C^{1,2}, Kahl, L¹, Silk D², Tu E², Comben S², Martinez M², Whitford B¹, Smart K², Davey S², Abbott J², Hosseini Hooshyar S², Cunningham E², Cabuang L³, Cunningham P^{2,4}, Shephard M¹, Grebely J², Matthews S¹

¹ Flinders University International Centre for Point-of-Care Testing, Flinders Health and Medical Research Institute, Flinders University,

² The Kirby Institute, UNSW Sydney

³ National Serology Reference Laboratory, Australia

⁴ St. Vincent's Hospital, Sydney

Background: A critical component to point-of-care testing scale-up are quality assurance frameworks to minimise the risks of patient harm. As part of continual quality improvement, this study evaluated changes in self-reported confidence and competency related to point-of-care testing for hepatitis C virus (HCV) infection among operators participating in a standardised training program.

Methods: Standardised training for the Xpress HCV VL Fingerstick assay on the Cepheid GeneXpert platform was developed and delivered to staff enrolled at participating services within the Australian HCV POC Testing Program. Longitudinal point-of-care operator confidence and competency was self-assessed with 5-part Likert scale surveys and categorised as below average (≤ 2) or average/above average (≥ 3), after each training stage. Paired responses at baseline and six-months post program implementation were evaluated covering four key areas.

Results: Longitudinal survey data was extracted for a three-year period ending February 2025. In total, 351 operators were enrolled (60% nurses, 7% peer workers and 33% other health professionals) at various stages of training. Available for quality improvement evaluation were 117 paired responses at baseline and 6-months post implementation. Post implementation competency improved for specimen collection (68% vs. 98%, $P < 0.01$), quality control (63% vs. 98%, $P < 0.01$), performing point-of-care HCV RNA testing (47% vs. 98%, $P < 0.01$) and result interpretation (54% vs. 98%, $P < 0.01$). Longitudinal analysis of non-paired responses at each stage of the training program revealed a significant increasing linear trend ($P < 0.001$) in self-reported confidence and competence.

Conclusion: Point-of-care operators recognise the importance of robust training, standardised operating procedures and ongoing skill acquisition for GeneXpert competency. Standardised operator training with competency assessment is associated with embedded skill sets at six-months post program implementation.

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