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Bloodborne virus screening in a prison and drug misuse centre using dried blood spot testing (DBST) with the implementation of an opt-out strategy

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Background: In response to an increase in the prevalence of blood borne viruses (BBVs) particularly Hepatitis C, the introduction of opt-out testing is being implemented in secure services. Public Health England (PHE), NHS England and the National Offender Management Service (NOMS) aim to achieve this in 2017.

Conventional screening can prove problematic in difficult to bleed patients or when there is inadequate access to phlebotomy services. Due to the rapid turnover of prisoners, a simple and convenient approach is required to screen quickly but at the same time minimising the risks of sharps injuries.

Here we demonstrate how screening BBVs using DBST, has improved uptake and present prevalence data from a local HMP prison and from a drug misuse centre.

Material/methods: Training sessions for health care assistants, nurses and doctors was provided to both units by local laboratory trained staff, which included practical demonstrations of correct sample collection techniques. Dried blood spots were collected from each patient using a unique 'in-house' device.

A single 6mm disc was eluted and analysed on the Abbott Architect® iSR200 for the presence of HIV antigen/antibody, Hepatitis B surface antigen and Hepatitis C antibody using HIV Ag/Ab Combo, HBsAg Qualitative II and anti-HCV assays respectively.

Results: Between October 2015 and 2016, a total of 877 patient samples were received from the HMP prison. The number of samples testing reactive for HIV Ag/Ab, HBsAg and antiHCV were 2 (0.2%), 19 (2.2%) and 103 (11.7%) respectively.

From the drug misuse centre, 165 samples were collected over the same time period. There were no reactive samples to HIV Ag/Ab but 5 (3.0%) and 25 (15.2%) testing reactive for HBsAg and antiHCV respectively.

Conclusions: A recent BBV bulletin published by Public Health England suggests that the impact of the 'opt-out' BBV programme has identified more undiagnosed BBVs in 50% of those prisons adapting this approach. The report concludes by recommending that to improve uptake, healthcare teams need to adopt DBST as the primary means of testing.

Since implementing the bloodspot service in to these two units, the number of BBV screens received by our laboratory has increased. Uptake has also improved and patients appear to be more willing to be tested using DBST as compared to venous sampling. We can conclude that ease of use and time savings of using DBST has directly contributed to this.

Undiagnosed Hepatitis C prevalence in the HMP prison and misuse centre is 11.7% and 15.2% respectively, showing slightly higher figures than national data suggests.

There is still room to increase future testing by improving awareness and training amongst all staff at all levels within these facilities