

Hepatitis C Virus Testing and Diagnosis in Lothian

The majority of the 39,000 patients in Scotland thought to be chronically infected with Hepatitis C Virus (HCV) are, or have been, injecting drug users (IDU). The majority of individuals with Hepatitis C are unaware that they are infected. Only a minority of patients with Hepatitis C are being treated, despite treatment success rates of up to 80%.

Drug users, particularly those who have ever injected, are at significant risk of blood borne virus (BBV) infections, including HCV. In Lothian over 4,000 patients are cared for in Primary Care under the Drug Users National Enhanced Service (NES) contract. To Feb 2011, 63% reported having ever injected drugs, while a further 15% said they had injected drugs in the previous 12 months..

As part of the Scottish Government's Hepatitis C Action Plan Lothian introduced the Blood Borne Virus Local Enhanced Service (BBV LES) contract in 2009 to promote interventions aimed at reducing BBV infection including; increasing rates of BBV testing, increasing rates of repeat BBV testing for those at ongoing risk, and increasing numbers of patients being treated for active HCV infection.

Figures from NES and BBV LES show that:

- Lothian GPs had discussed BBV risk with 96% of patients.
- 81% of patients had ever been offered HCV testing - 68% had a test result recorded.
- Of those who reported they had injected within the last year, 45% had been offered testing in 2010 - 38% had a test result recorded.

How to improve testing rates

- Use EScro clinical recording screens
- Explain the significant risk of HCV infection amongst those who inject, or previously injected, drugs.
- Explain the benefits of testing- e.g. access to potentially successful treatment, ability to reduce risk to others.
- Offer the test in the same consultation as discussing it – patients may not turn up if referred on to have the test done
- Offer dried blood spot testing to those patients with poor venous access - kits available from Hepatitis C MCN free of charge – for more details see

<http://intranet.lothian.scot.nhs.uk/NHSLothian/Healthcare/UsefulResources/Pages/BloodBorneViruses.aspx>

New test and change in blood tubes

The first blood test for HCV remains a test for HCV antibodies. A positive antibody test shows exposure to the virus but not whether there is active infection. The **initial blood sample** should now be submitted in a **7.5 ml brown cap serum gel tube** - white capped tubes are being withdrawn from use in Primary Care and brown capped tubes should now be used for all serology tests including HIV, hepatitis B and C viruses, helicobacter pylori, rubella, syphilis, and other infections.

From 1st April 2011, a new test for HCV antigen has been introduced to detect **active** HCV infection. This assay will replace **PCR (viral load)** testing as the test performed on samples that are found to be HCV antibody positive. The HCV antigen test indicates whether HCV infection is active or not and has a shorter turn around time for results (around 2-3 days) than the PCR test.

- A **positive HCV antigen test** indicates active infection and PCR testing will not be carried out on these samples. Patients with a positive HCV antigen test should be referred for hepatitis C treatment and psychosocial support.
- A small number of patients may have a positive HCV antibody test with a **negative HCV antigen test**. The lab will then request a **7.5 ml red cap anticoagulated EDTA blood tube sample for HCV PCR testing**. If the PCR test is positive, this indicates active infection and the need for referral. . A negative PCR test confirms that there is no active HCV infection. The follow up PCR test is required as cases with a very low viral load will not be detected by the antigen test because it is slightly less sensitive than the PCR assay. It is **very** rare for a patient to be antigen negative and PCR positive as there is usually a very high viral load during active HCV infection.
- **Confirmation of results** will still be required for all samples which are positive for HCV antigen. This confirmatory sample should be submitted in a **7.5 ml red cap anticoagulated EDTA blood tube**. Usually, this sample will be sent by the specialist unit after referral but if the patient does not attend this will need to be done in Primary Care.

Window period

It may take up to six months after exposure to HCV for antibodies to appear in blood – retest your patient if there is a possibility they have been at risk less than six months before the initial antibody test. This period is 3 months for HIV, and 6 months for hepatitis B virus.

No immunity

There are no confirmed instances where HCV antibody-positive patients have developed immunity to HCV re-infection. Therefore, HCV antibody-positive individuals are at ongoing risk of HCV infection in the context of BBV risk factors and require repeat testing (6-12 monthly) for HCV antigen. Please clearly detail on the request form that you are requesting antigen testing because of ongoing risk

Recording results

BBV results for all NES/LES patients should be recorded using the EScro care management screens. Coding of BBV results can become complicated and results entered using these screens will result in accurate recording.