

HIV testing in primary care will help improve early diagnosis

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FIGURE 1

Seroconversion rash. Seroconversion illness occurs in around 80% of patients, typically 2–4 weeks after HIV infection



HIV IS NOW A TREATABLE MEDICAL CONDITION AND THE MAJORITY OF THOSE DIAGNOSED WITH THE

virus remain fit and well on treatment. In all, 77,000 people are known to be infected with HIV in the UK. However, 28% are unaware of their infection and are therefore unable to access treatment.¹ They are also at risk of unwittingly passing the virus on to others.

Late diagnosis is the most important factor associated with HIV-related morbidity and mortality in the UK.² Many patients who present late to care

have been to see their GP in the months or years leading up to their diagnosis but have never been tested for HIV.^{3,4}

National guidelines on HIV testing have recently been published by the RCP to help improve provision and uptake of HIV testing in both primary and secondary care settings.⁵ These guidelines have been developed with input from various royal colleges, including the RCGP, specialist societies and the GMC, and have been adopted by the Department of Health.

Which patients should be offered an HIV test?

When is a repeat test required?

What are the symptoms of HIV infection?

WHO SHOULD BE TESTED?

The guidelines recommend that GPs should offer an HIV test (see box 1, p29) to patients:

- from communities or geographical locations where HIV is common
- who present with a medical condition in which HIV might be implicated.⁵
- with a medical condition compatible with AIDS or with any HIV indicator disease (see table 1, p28).

Offering testing to patients with these conditions should lead to fewer missed late diagnoses. For patients to benefit from optimally timed intervention with antiretroviral therapy they must be diagnosed before they fall ill. »

SPECIAL REPORT

HIV TESTING IN PRIMARY CARE

Table 1
Clinical indicator diseases for adult HIV infection

	AIDS-defining conditions	Other conditions where HIV testing should be offered
Respiratory	tuberculosis pneumocystis	bacterial pneumonia aspergillosis
Neurology	cerebral toxoplasmosis primary cerebral lymphoma cryptococcal meningitis progressive multifocal leucoencephalopathy	aseptic meningitis/encephalitis cerebral abscess space-occupying lesion of unknown cause Guillain-Barré syndrome transverse myelitis peripheral neuropathy dementia leucoencephalopathy
Dermatology	Kaposi's sarcoma	severe or recalcitrant seborrhoeic dermatitis severe or recalcitrant psoriasis multidermatomal or recurrent herpes zoster
Gastroenterology	persistent cryptosporidiosis	oral candidiasis oral hairy leukoplakia chronic diarrhoea of unknown cause weight loss of unknown cause salmonella, shigella or campylobacter hepatitis B infection hepatitis C infection
Oncology	non-Hodgkin's lymphoma	anal cancer or anal intraepithelial dysplasia lung cancer seminoma head and neck cancer Hodgkin's lymphoma Castleman's disease
Gynaecology	cervical cancer	vaginal intraepithelial neoplasia cervical intraepithelial neoplasia (grade 2 or above)
Haematology		any unexplained blood dyscrasia including: ● thrombocytopaenia ● neutropaenia ● lymphopaenia
Ophthalmology	cytomegalovirus retinitis	infective retinal diseases including herpes viruses and toxoplasma any unexplained retinopathy
Ear, nose and throat		lymphadenopathy of unknown cause chronic parotitis lymphoepithelial parotid cysts
Other		mononucleosis-like syndrome (primary HIV Infection) pyrexia of unknown origin any lymphadenopathy of unknown cause any sexually transmitted infection

Table 2
Patients who should be offered an HIV test whenever they present to their GP

- All patients where HIV, including primary HIV infection, enters the differential diagnosis
- All patients diagnosed with a sexually transmitted infection
- All sexual partners of men and women known to be HIV-positive
- All men who have disclosed sexual contact with other men
- All female sexual contacts of men who have sex with men
- All patients reporting a history of injecting drug use
- All men and women known to be from a country of high HIV prevalence (>1%)
- All men and women who report sexual contact abroad or in the UK with individuals from countries of high HIV prevalence

The guidelines recommend that HIV testing should be routinely offered to certain groups of patients whenever they present in primary care, see table 2, p28.

NEW PATIENTS

GPs should also consider offering an HIV test to new patients who register with the practice in areas where diagnosed HIV prevalence in the local population (PCT/LA) exceeds 2 in 1,000 population (see local PCT data). This population-based screening approach is currently being evaluated in several sites in a pilot scheme funded by the DH.

Although the most modern HIV tests can detect HIV infection much earlier than previously, in very recent infection – when patients may be most symptomatic – the tests may be negative. In this situation, if primary HIV infection (PHI) is suspected, either urgent referral to specialist services (a GU clinic or HIV service) or a repeat test in seven days is recommended.

HIV viral load testing can be used, but it is recommended that this is only performed with specialist input.

PRE-TEST DISCUSSION

The main purpose of pre-test discussions is to establish informed consent for HIV testing. Lengthy, pre-test HIV counselling is not usually necessary unless a patient requests or needs this. You are likely to do more harm by not testing than by testing. The essential elements that the pre-test discussion should cover are:

- an explanation of why the test is recommended e.g. routine or clinically indicated
- the benefits of testing to the individual
- details of how the result will be given (who, when and where).
- confidentiality. Emphasise confidentiality and answer any questions that the patient may have
- informed consent. Once this has been obtained you should record it in the notes.

A simple explanation such as ‘an HIV test is now part of the routine care of all patients with your condition in order not to overlook this treatable medical condition’ may be helpful. This approach has been successful in GU and antenatal clinics and is generally acceptable with uptake rates of over 95%.¹

If a patient refuses a test the reasons should be explored to ensure that their decision has not been based on erroneous beliefs about the virus or the consequences of testing. If implications for either insurance or criminal prosecution for transmission are raised

Box 1

The HIV test

The HIV test is an antibody test and a positive result indicates infection with HIV. Antibodies may take up to three months to become detectable after HIV infection and repeat testing may be required if the patient has been at risk during that time before the test.

HIV testing generally requires a single white (plain) blood sample to be sent to the local virology laboratory. The lab may use a special HIV test request form; you will need to find out about your local protocol. Samples and forms should be labelled with high-risk stickers. Requests for hepatitis B and C tests can usually be performed on the same sample.

All HIV-positive patients require urgent referral for confirmatory testing and further specialist tests to determine the state of their immune system.

by the individual as reasons for not testing these should be further explored and any factual inaccuracies corrected.

Life assurance and mortgage issues should not be a deterrent to testing as negative test results should have no impact and should not be supplied to insurance companies.⁶ It is important to be vigilant for computer-generated medical reports that may contain this information.

Certain groups of patients e.g. children, people with learning disability or mental health problems may require additional support and referral for full counselling before testing. However, these patients are the exception not the rule.

REPEAT TESTING

The need for a repeat HIV test, if the patient is still within the window after a specific exposure, should be discussed. Although modern fourth-generation tests shorten the time from exposure to seroconversion a repeat test at 3 months is still recommended to exclude HIV infection definitively.

Occasionally, HIV results are reported as reactive or equivocal. These patients may be seroconverting (see below) and management of re-testing may be complex. These individuals should be promptly referred to specialist care.

POST-TEST DISCUSSIONS

HIV-positive patients

As in any situation where bad news is being given, the result should be presented clearly, face to face, in a confidential environment. It is essential to find out about local specialist services and to have established a clear pathway for onward referral before giving the patient their results.

National standards recommend that all patients should be seen by a specialist within two weeks, however, in

practice most centres will fit a newly diagnosed patient into the next clinic and they will be seen within 48 hours.

More detailed post-test discussions (including assessment of disease stage, consideration of treatment, and partner notification) will be performed by the GUM/HIV specialist team.

‘For patients to benefit from optimally timed intervention with antiretroviral therapy they must be diagnosed before they fall ill’

HIV-negative patients

The need for a repeat HIV test, if the patient is still within the window after a specific exposure, should be discussed. Although tests have improved greatly a repeat test at 3 months is still recommended to exclude HIV infection.

Equivocal results

Occasionally HIV results are reported as reactive or equivocal. These patients may be seroconverting (see section on primary HIV infection, below) and management of re-testing may be complex. These individuals should be promptly referred to specialist care.

GPs should consider offering a repeat HIV test to anyone who remains at continuing risk of infection particularly

key points

SELECTED BY

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HIV is now a treatable medical condition and the majority of those diagnosed with the virus remain fit and well on treatment. Patients living with HIV may well now have a near-normal life expectancy with antiretroviral treatment. In all, 77,000 people are known to be infected with HIV in the UK. However, 28% are unaware of their infection and are therefore unable to access treatment. Late diagnosis is the most important factor associated with HIV-related morbidity and mortality in the UK.

The guidelines recommend that GPs should offer an HIV test to patients: from communities or geographical locations where HIV is common; who present with a medical condition in which HIV might be implicated; with a medical condition compatible with AIDS or with any HIV indicator disease. GPs should also consider offering an HIV test to new patients who register with the practice in areas where diagnosed HIV prevalence in the local population (PCT/LA) exceeds 2 in 1,000.

Although the most modern HIV tests can detect HIV infection much earlier than previously, in very recent infection – when patients may be most symptomatic – the tests may be negative. The essential elements that the pre-test discussion should cover are: an explanation of why the test is recommended; the benefits of testing to the individual; details of how the result will be given; confidentiality and informed consent. A simple explanation such as 'an HIV test is now part of the routine care of all patients with your condition in order not to overlook this treatable medical condition' may be helpful.

If a patient refuses a test the reasons should be explored to ensure that their decision has not been based on erroneous beliefs about the virus or the consequences of testing. Life assurance and mortgage issues should not be a deterrent to testing as negative results should have no impact and should not be supplied to insurance companies.

The need for a repeat HIV test, if the patient is still within the window after a specific exposure, should be discussed. Although modern fourth-generation tests shorten the time from exposure to seroconversion a repeat test at 3 months is still recommended to exclude HIV infection definitively. Primary HIV Infection (PHI) or seroconversion illness occurs in approximately 80% of individuals, typically 2–4 weeks after infection.

Useful information

The Medical Foundation for AIDS and Sexual Health has produced a resource pack *Tackling HIV Testing* and an information sheet for patients. Further information can be obtained by emailing rfleet@medflash.bma.org.uk or phone 020 7383 6801

www.medflash.org.uk/Projects/Tackling%20HIV%20testing/THIVTHome.htm

annual testing of men who have sex with men and use testing as an opportunity to give advice on prevention of future risk.

PRIMARY HIV INFECTION

PHI or seroconversion illness occurs in around 80% of individuals, typically 2–4 weeks after infection. It is well recognised that this represents a unique opportunity to prevent onward transmission as an individual is considerably more infectious at this stage. Furthermore, this may be the only clinical opportunity to detect HIV before advanced immunosuppression many years later.

It is known that the features of PHI are non-specific and that individuals often present to primary care but frequently the diagnosis is missed or not suspected.⁷

The typical symptoms include a combination of any of the following:

- fever
- rash (maculopapular)
- myalgia
- pharyngitis
- headache/septic meningitis.

These symptoms will resolve spontaneously within 2–3 weeks.

Therefore, if PHI is suspected, this needs to be investigated at the time of presentation and not deferred.

HIV testing should be considered in any patient with these symptoms perceived to be at risk of infection. In primary care details of an individual's sexual risk may be difficult to ascertain, but a low threshold for offering a test should remain.

LONG-TERM FOLLOW-UP

Patients living with HIV may well now have a near-normal life expectancy with antiretroviral treatment. It is important to remember potential drug interactions when they present with other unrelated medical conditions. Good communication between hospital specialists and primary care is essential.

REFERENCES

- 1 Health Protection Agency. HIV in the United Kingdom: 2008 report. London. HPA. 2008 www.hpa.org.uk
- 2 Lucas SB, Curtis H, Johnson MA. National review of deaths among HIV-infected adults. *Clin Med* 2008; 8: 250–2
- 3 Burns FM, Johnson AM, Nazroo JY et al. on behalf of the SONHIA collaboration group. Missed opportunities for earlier HIV diagnosis and prevention within primary and secondary health care settings in the UK; lessons from an African cohort. *AIDS* 2008; 22: 115–122
- 4 Roberts J, Ottewill M, Alifrangis C, et al. Diagnosing HIV: Better late than never... but better never late BHIVA conference 2006 abstract 30 www.bhiva.org/files/file1030758.pdf
- 5 Palfreman A, Fisher M and Ong E on behalf of the HIV Testing Guidelines Writing Committee Testing for HIV: concise guidance *Clin Med* 2009; 9, 5: 471–6
- 6 Association of British Insurers (2004). Statement of best practice on HIV and insurance. www.abi.org.uk
- 7 Sudarshi D, Pao D, Murphy G et al. Missed opportunities for diagnosing primary HIV infection. *Sex Transm Inf* 2008; 84: 14–1