

Testing for HIV: concise guidance

Adrian Palfreeman, Martin Fisher and Ed Ong on behalf of the HIV Testing Guidelines Writing Committee*

ABSTRACT – HIV is now a treatable medical condition and the majority of those living with the virus remain fit and well on treatment. Despite this a significant number of people in the UK are unaware of their HIV infection and remain at risk to their own health and of passing their virus unwittingly on to others. Late diagnosis is the most important factor associated with HIV-related morbidity and mortality in the UK. Testing for HIV infection is often not performed due to misconceptions held by healthcare workers even when it is clinically indicated and this contributes to missed or late diagnosis. This article summarises the recommendations from the UK national guidelines for HIV testing 2008. The guidelines provide the information needed to enable any clinician to perform an HIV test within good clinical practice and encourage 'normalisation' of HIV testing. The full version is available at www.bhiva.org/cms1222621.asp

KEY WORDS: clinical indicator diseases, HIV guidelines, HIV testing, pre-test discussion

Introduction

The UK national guidelines for HIV testing 2008 are intended to facilitate an increase in HIV testing in all healthcare settings as recommended by the UK's Chief Medical Officers and Chief Nursing Officers in order to reduce the proportion of individuals with undiagnosed HIV infection, with the aim of benefiting both individual and public health.^{1–5} The guidelines provide the information needed to enable any clinician to perform an HIV test within good clinical practice and encourage 'normalisation' of HIV testing.

The guidance refers to both diagnostic testing of individuals presenting with 'clinical indicator diseases' (ie where HIV infection enters the differential diagnosis) and opportunistic screening of populations where this is indicated on the basis of prevalence data. It must be emphasised that in the UK, HIV testing remains voluntary and confidential. This is entirely possible within any healthcare setting if these guidelines are followed.

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*This guidance was prepared on behalf of the HIV Testing Guidelines Writing Committee. For membership of the committee, please see the end of the paper.

Rationale

While the availability of highly active antiretroviral therapy (HAART) has transformed the outcome for individuals with HIV infection, there continues to be significant and avoidable morbidity and mortality relating to the virus in the UK.

- National audit data have shown that, of deaths occurring among HIV-positive adults in the UK in 2006, 24% were directly attributable to the diagnosis of HIV being made too late for effective treatment.⁶ Many of these 'late presenters' had been seen in the recent past by healthcare professionals without the diagnosis having been made.⁷
- National surveillance data show that approximately one third of all HIV infections in adults in the UK remain undiagnosed and that approximately 25% of newly diagnosed individuals have a CD4 count of less than 200 (an accepted marker of 'late' diagnosis).⁸
- Late diagnosis of HIV infection has been associated with increased mortality and morbidity,⁸ impaired response to HAART,⁹ and increased cost to healthcare services.¹⁰
- Furthermore, from a public health perspective, knowledge of HIV status is associated with a reduction in risk behaviour¹¹ and therefore it is anticipated that earlier diagnosis will result in reduced onward transmission.¹²
- Modelling has suggested that over 50% of new infections in the USA occur through transmission from individuals in whom HIV has not been diagnosed, and that routine screening for HIV infection is cost effective and comparable to costs of other routinely offered screening where the prevalence of HIV exceeds 2 in 1,000.¹³
- Research suggests that uptake of testing is increased where universal routine ('optout') strategies have been adopted¹⁴ – ie where all individuals attending specified settings are offered and recommended an HIV test as part of routine care but an individual has the option to refuse a test.
- For this new approach to testing to be beneficial and ethically acceptable, it is imperative that following a positive HIV diagnosis, a newly diagnosed individual is immediately linked into appropriate HIV treatment and care.

Suspected primary HIV infection

Primary HIV infection (PHI), or seroconversion, illness occurs in approximately 80% of individuals, typically two to four weeks after infection. 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

The guidelines

Section 1: Recommendations for testing

Grade of evidence

1 Who can test?

It should be within the competence of any doctor, midwife, nurse or trained healthcare worker to obtain consent for and conduct an HIV test.

2 Who should be offered a test?

A Universal HIV testing is recommended in all of the following settings:

B

- genitourinary medicine (GUM) or sexual health clinics
- antenatal services
- termination of pregnancy services
- drug dependency programmes
- healthcare services for those diagnosed with tuberculosis, hepatitis B, hepatitis C and lymphoma.

B An HIV test should be considered in the following settings where diagnosed HIV prevalence in the local population exceeds 2 in 1,000 population*:

C

- all men and women registering in general practice
- all general medical admissions.

The introduction of universal HIV testing in these settings should be thoroughly evaluated for acceptability and feasibility, and the resultant data made available to better inform the ongoing implementation of these guidelines.

C HIV testing should be also routinely offered and recommended to the following patients:

D

- all patients presenting for healthcare where HIV (including primary HIV infection), enters the differential diagnosis (see Table 1 for indicator diseases and a section on primary HIV infection)
- 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.**

D Repeat testing should be provided for the following groups:

D

- all individuals who have tested HIV negative, but where a possible exposure has occurred within the window period
- men who have sex with men – annually, or more frequently if clinical symptoms are suggestive of seroconversion or ongoing high-risk exposure
- injecting drug users – annually or more frequently if clinical symptoms are suggestive of seroconversion (see section on primary HIV infection)
- antenatal care – women who refuse an HIV test at booking should be re-offered a test, and should they decline again a third offer of a test should be made at 36 weeks:
 - women presenting to services for the first time in labour should be offered a point of care test (POCT)
 - a POCT may also be considered for the infant of a woman who refuses testing antenatally.

In areas of higher seroprevalence, or where there are other risk factors, women who are HIV negative at booking may be offered a routine second test at 34–36 weeks' gestation as recommended in the BHIVA pregnancy guidelines.¹⁶

Evidence was graded using the Scottish Intercollegiate Guidelines Network system www.bmj.com/cgi/content/full/336/7657/1367

*A diagnosed prevalence exceeding 2 in 1,000, in those aged between 15 and 59, is a proxy for an undiagnosed prevalence exceeding 1 in 1,000, the threshold at which routine testing is assumed to be cost effective based on the US data.¹⁵ Local prevalence information is available on the Health Protection Agency website: www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1201767906579

**For an up-to-date list see www.unaids.org/en/KnowledgeCentre/HIVData/Epidemiology/latestEpiData.asp

The guidelines

Section 2: Pre- and post-test discussions (all Grade D)

1 Pre-test discussion

The primary purpose of a pre-test discussion is to establish informed consent for HIV testing.

A The essential elements that the pre-test discussion should cover are:

- the benefits of testing to the individual
- details of how the result will be given.

Lengthy pre-test HIV counselling is not a requirement, unless a patient requests or needs this.²⁻⁵ Some situations where more detailed discussion may be required are outlined in Box 1.

B Documentation

The offer of an HIV test should be documented in the patient's case record together with any relevant discussion:

- if the patient refuses a test the reasons for this should be documented
- usually, written consent is unnecessary and may discourage HIV testing by exceptionalising it.*

C Confidentiality

The result of an HIV test (if positive) should be given directly by the testing clinician (or team) to the patient and not via any third party (including relatives or other clinical teams) unless the patient has specifically agreed to this.

2 Post-test discussion

Clear procedures must be established as to how the patient will receive the result, especially where this is positive.

A Arrangements for communicating the results should always be discussed and agreed with the patient at the time of testing (particularly if the test is being performed in an outpatient or emergency care setting.)

B Face-to-face provision of HIV test results is strongly encouraged for:

- ward-based patients
- patients more likely to have an HIV-positive result
- those with mental health issues or risk of suicide
- those for whom English is a second language
- young people under 16 years
- those who may be highly anxious or vulnerable.

C Post-test discussion for individuals who test HIV negative:

- for individuals still within the window period after a specific exposure, the need for a repeat HIV test at three months to definitively exclude HIV infection should be discussed
- specialist advice/referral to GUM/HIV services should be sought in the following situations:
- individuals at higher risk of repeat exposure to HIV infection who may require advice around risk reduction or behaviour change including discussion relating to post-exposure prophylaxis
- where HIV results are reported as reactive or equivocal. (These patients may be seroconverting and management of re-testing may be complex requiring prompt referral to specialist care.)

D Post-test discussion for individuals who test HIV positive:

- as in any situation where bad news is being conveyed, the result should be given face to face in a confidential environment and in a clear and direct manner
- if a patient's first language is not English, the use of an appropriate confidential translation service should be considered
- if a positive result is being given by a non-GUM/HIV specialist, prior to giving the result, it is essential to have identified local specialist services and have established a clear pathway for onward referral
- any individual testing HIV positive for the first time should be seen by a specialist (HIV clinician, specialist nurse or sexual health advisor or voluntary sector counsellor) at the earliest possible opportunity, preferably within 48 hours and certainly within two weeks of receiving the result¹⁷
- more detailed post-test discussion (including assessment of disease stage, consideration of treatment, and partner notification) will be performed by the GUM/HIV specialist team.

*This advice is consistent with the General Medical Council's guidance.¹⁷

Table 1. Clinical indicator diseases for adult HIV infection. A similar list for paediatric conditions is included in the full guidelines.¹

	AIDS-defining condition	Other conditions where HIV testing should be offered
Respiratory	Tuberculosis	Bacterial pneumonia
	Pneumocystis	Aspergillosis
Neurology	Cerebral toxoplasmosis	Aseptic meningitis/encephalitis
	Primary cerebral lymphoma	Cerebral abscess
	Cryptococcal meningitis	Space occupying lesion of unknown cause
	Progressive multifocal leucoencephalopathy	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:
		• neutropenia • thrombocytopenia • lymphopenia
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		Pyrexia of unknown origin
		Any lymphadenopathy of unknown cause
		Mononucleosis-like syndrome (primary HIV Infection)
		Any sexually transmitted infection

detect HIV before advanced immunosuppression many years later. The features of PHI are non-specific, so that although individuals usually do present to medical services (primary or emergency care), the diagnosis is frequently missed or not suspected.

The typical symptoms of primary HIV infection include a combination of any of the following:

- fever
- rash (maculopapular)
- myalgia

- pharyngitis
- headache/aseptic meningitis.

These resolve spontaneously within two to three weeks and therefore if PHI is suspected, this needs to be investigated at the time of presentation and not deferred. Consideration should be given to HIV testing in any person with these symptoms perceived to be at risk of infection. Although with fourth generation tests infection can be detected much earlier than previously, in very recent infection – when patients may be most symptomatic – the test may be negative. In this scenario, if PHI

Box 1. Pre-test discussion: situations where more detailed discussion may be required.

This universal approach outlined has been successful in genitourinary and antenatal clinics. (Grade A) For some patients raising the issue of HIV testing in other scenarios might require more explanation as to why testing is being recommended:

- as with any other medical investigation, the discussion should address any other issues which may be raised by the patient. It is important that they are given the opportunity to make a decision with adequate information about the test and the virus
- if a patient refuses a test, the reasons why they have made that choice should be explored to ensure that these are not due to incorrect beliefs about the virus or the consequences of testing
- if implications for either insurance or criminal prosecution for transmission are raised by the individual as reasons for not testing these should be further explored and any factual inaccuracies corrected (see online FAQs sheet)
- some patients may need additional help to make a decision, for example, because English is not their first language:
 - it is essential to ensure that they have understood what is proposed, and why
 - it is also important to establish that they understand what a positive and a negative HIV result means, as some patients could interpret 'positive' as good news.
- children and young people, and those with learning difficulties or mental health problems, may need additional support and time to understand what is proposed and to make a decision. (See full guidelines for further information about testing patients who lack the capacity to consent.)

is suspected, either urgent referral to specialist services (genitourinary clinic or HIV service) or a repeat test in seven days is recommended. HIV viral load testing can be used in this clinical setting, but it is recommended that this is only performed with specialist input.

Guideline development methodology

A summary of the methodology for development of these guidelines may be found on the Royal College of Physicians (RCP) website (<http://rcp-sa-shar03:29137/clinical-standards/organisation/Guidelines/concise-guidelines/Pages/HIV-testing.aspx>).

Implications for implementation

The principle requirements for implementation of these guidelines relate to staff training. A list of frequently asked questions is also available on the RCP website (<http://rcp-sa-shar03:29137/clinical-standards/organisation/Guidelines/concise-guidelines/Pages/HIV-testing.aspx>).

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