HIV Indicator Conditions:

Guidance for Implementing HIV Testing in Adults in Health Care Settings

Content

Abbreviations and acronyms

AIDS
acquired immune deficiency syndrome

ART
anti-retroviral therapy

CDC
Centers for Disease Control and Prevention

CITC
client-initiated HIV testing and counselling

ECDC
European Centre for Disease Prevention and Control

HIDES
HIV Indicator Diseases across Europe Study

HIV
human immunodeficiency virus

HiE
HIV in Europe

IDU
injecting drug use

MSM
men who have sex with men

PITC
provider-initiated HIV testing and counselling

PLHIV
people living with HIV

PWID
people who inject drugs

STI
sexually transmitted infection

TB
tuberculosis

VCT
voluntary counselling and testing

WHO
World Health Organization

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This guidance was coordinated by the HIV in Europe Secretariat. More information can be found at: www.hiveurope.eu.

HIV in Europe is a pan-European initiative with the aim of improving earlier diagnosis and care of HIV across Europe.

Executive Summary

Of the approximately 2.3 million people living with HIV in the European region, it is estimated that one in three are unaware of their HIV status, resulting in significant levels of late diagnosis and transmission across the region. In Western Europe, 45-50% of newly diagnosed HIV-positive individuals are diagnosed and enter care late (i.e. with a CD_4 count <350 cells/μL). Late diagnosis is associated with increased HIV-related morbidity and mortality, poorer response to treatment, increased healthcare costs and increased transmission rates. Therefore, there are many benefits of diagnosing HIV at an early stage, and this is why early diagnosis should be a key public health strategy. Earlier diagnosis requires innovative approaches to improve testing among those most likely to be infected with HIV and who present late for care.

This guidance focuses on individuals who attend health care settings, including medical specialties where HIV testing may not be undertaken as part of the standard medical care for individual patients with certain medical conditions. This proposed novel approach, *indicator condition-guided HIV testing*, should be an additional element of an overall national, comprehensive HIV testing strategy. The guidance has been developed by a panel with representatives from various European clinical specialty societies, with intellectual input from WHO Regional Office for Europe and the European Centre for Disease Prevention and Control. The intended audience of the guidance is all healthcare providers in the relevant specialties and settings as well as personnel responsible for overseeing HIV testing programmes. The guidance in part builds on the methodology developed through the HIDES study (HIV Indicator Diseases Across Europe Study), which documented indicator conditions with more than 0.1% undetected HIV prevalence. Recent studies demonstrate the feasibility and acceptability of introducing HIV indicator condition guided HIV testing as a part of routine care, but also examine challenges in its implementation, which this guidance seeks to address.

The objectives of the guidance are to:

- Encourage and support the inclusion of indicator condition-guided HIV testing in national HIV testing strategies, taking into account the local HIV prevalence, ongoing testing programmes and the local healthcare setting;
- Recommend approaches and practical tools for education and training of healthcare professionals on overcoming barriers to recommending an HIV test.

HIV indicator conditions can be divided into 3 categories:

1. Conditions which are AIDS defining among PLHIV;
2. Conditions associated with an undiagnosed HIV prevalence of >0.1%;
3. Conditions where not identifying the presence of HIV infection may have significant adverse implications for the individual's clinical management.

There is a large body of evidence from randomised controlled trials on the consequences of not treating people living with HIV who have AIDS defining conditions. Not recommending a test in these circumstances would not be considered good clinical practice. Routine testing for conditions with an HIV prevalence of ≥0.1% has been reported to be cost-effective and has the potential to increase earlier diagnosis of HIV, and thus lead to earlier opportunities for care and treatment.

Recommendations:

- Any person (without an HIV-positive test in the patient's medical record) presenting with potentially **AIDS defining conditions** should be **strongly recommended HIV testing**.
- Any person presenting with a **condition with an undiagnosed HIV prevalence of >0.1%** should be **strongly recommended HIV testing**.
- For indicator conditions where **expert opinion considers HIV prevalence likely to be >0.1%**, but awaiting further evidence, it is recommended to **offer testing**.
- For conditions where **not identifying the presence of HIV infection may have significant adverse implications** for the individual's clinical management, **testing should be offered** to avoid further immune suppression with potentially serious adverse outcomes for the individual, and to maximize the potential response to the treatment of the indicator condition **(despite that the estimated prevalence** of HIV is most likely lower than 0.1%).

Introduction

Effective treatment for HIV has been available in Europe since the mid-1990s and has led to a dramatic reduction in the incidence of AIDS events and HIV-related deaths. Many people are living with HIV now as a chronic condition rather than an inevitably fatal illness. However, of the approximately 2.3 million HIV-infected individuals living in the European region, it is estimated that one in three are unaware of their HIV status (i.e. 700,000-900,000 individuals) [1;2;3], resulting in significant levels of late diagnosis and transmission across the region. In Western Europe, 45-50% of newly diagnosed HIV-positive individuals are diagnosed and enter care late (i.e. with a CD4 count <350 cells/μL) [4;5;6;7;8;9;10;11], poorer response to treatment [12;13], increased healthcare costs [14] and increased rates of transmission [15]. Based on US modeling data, half of new infections in the US derive from PLHIV that are not yet diagnosed and therefore unaware of the possible risk of transmitting the virus [15;16]. There are, therefore, many significant benefits of diagnosing HIV at an early stage, and early diagnosis should be a key public health strategy. Earlier diagnosis requires innovative approaches to better target testing for those most likely to be infected with HIV and who present late for care.

This guidance focuses on the approach to introduce indicator condition-guided HIV testing within all healthcare systems, as an element of national testing strategies, with the aim of increasing HIV diagnosis at an earlier stage of the disease and decreasing the level of undiagnosed infection. The guidance in part builds on the HIDES study (HIV Indicator Diseases Across Europe Study), a study which is investigating HIV prevalence within possible indicator conditions across Europe [17].

In an indicator condition guided HIV testing strategy, all patients presenting to any health care setting with specific indicator conditions, would be routinely recommended an HIV test. HIV test uptake has been shown to increase in settings where it is presented as part of routine care, such as antenatal services and sexual health clinics [18]. Testing strategies targeting only populations at higher risk for HIV (e.g., men who have sex with men (MSM), sex workers, people who inject drugs (PWID) have largely been ineffective in preventing new HIV infections in Europe. However, it is critical to continue recommending HIV testing among populations at higher risk as is recommended by WHO and ECDC (2007, 2010, 2011) and WHO recommends regular intervals for re-testing among persons at on-going risk (2010).

In Eastern Europe and Central Asia the epidemic is expanding, and in some settings appears to be bridging into the general population [3]. This is likely a combination of the inability or unwillingness of the clinician to identify and recommend people at higher risk and individuals not considering themselves to be at risk [19].

The current approach in the US of routine testing among all adults aged 13-64 [20] is considered by European stakeholders not best suited to the majority of the European setting [21;22]. Additional healthcare professional related barriers associated with a broad testing approach are concerned mostly with time limitations, perception of HIV as exceptional in regard to the consent process, and lack of training [23]. It is recognized that all healthcare professionals should be competent to discuss consent for HIV testing [24]. Therefore, to extend HIV testing to a wide variety of healthcare settings, quality assurance and quality improvement protocols tailored for site-specific needs are required to ensure testing is delivered in a standard, efficient and ethical manner [25]. Such normalization of making testing a routine component of medical care would contribute to current efforts to de-stigmatise HIV and testing [26].

1.1 Aim, objectives and intended audience for this guidance

The overall aim of this guidance is to address missed opportunities to increase timely HIV testing in all healthcare settings by introducing indicator condition-guided HIV testing as part of an overall healthcare HIV testing strategy thereby facilitating early entrance into care.

The objectives of the guidance are to:

- Encourage and support the inclusion of indicator condition-guided HIV testing in national HIV testing approaches, taking into account the local HIV prevalence, ongoing testing programmes and the local healthcare set-up.
- Recommend approaches and practical tools for education and training of healthcare professionals in order to overcome barriers to recommending an HIV test.
- Present practical considerations which should be taken into account when implementing HIV testing in healthcare settings where it is not already included as part of routine care. This should enable any clinician to perform an HIV test as part of good clinical practice, encourage the normalization of HIV testing, ensure good results, governance, and timely transfer to treatment and care for those newly identified with HIV within these programmes.

HIV testing has historically been made exceptional and treated differently when seeking consent compared to testing for other serious medical conditions [27]. This was largely due to lack of effective treatments and an incomplete understanding of HIV epidemiology, compounded by intolerant attitudes towards populations at higher risk of acquiring HIV (e.g., MSM, sex workers, PWID). Although these hurdles have been addressed, at least to some extent, in many settings, such factors still require serious consideration in many regions. However, the remnants of "HIV exceptionalism" continue to impact on both the provider's willingness to routinely recommend HIV testing, and the individual's interest in seeking testing, ultimately impacting testing, care and treatment uptake [28].

One of the advantages of indicator condition guided HIV testing is that it reduces the need for individual pre-test risk assessment by making indicator conditions a trigger for the provider to recommend HIV testing. For a number of individuals who may not realize that they have been at risk, or who may not be able to request a test or for busy providers, such testing helps to 'normalize' HIV testing. The vast majority of patients seen even in higher prevalence settings will be negative.

For newly identified individuals with HIV, the prognosis for individuals testing positive is now better than many other serious illnesses for which clinicians routinely test [24]. The largest single individual benefit of HIV testing is access to treatment. Providing universal access to treatment and care, prevention and support services, along with integration of screening and management of common co-morbidities, with clear referral pathways, must be a cornerstone of national HIV testing strategies [29].

The intended audience of the guidance is:

- Healthcare providers in all relevant specialties and settings (see table 2)
- Personnel or policy makers responsible for overseeing HIV testing programmes, both at a National and local level.

WHO and ECDC guidelines already exist to expand HIV testing in healthcare settings to address the need to improve rates of earlier diagnosis. Such guidance already calls for recommending testing among those with STIs and "clinical findings suggestive of HIV". This guidance is in line with and meant to complement existing national testing guidelines and recommendations as well as European testing guidelines by the ECDC [29] and the WHO Regional Office for Europe [29]. In their latest testing guidance both agencies recommend scaling up HIV testing.

Novel guidance based on evidence that identifies specific indicator conditions is required to complement existing provider initiated strategies. For general aspects of HIV testing and specific recommendations towards other priority groups, existing European guidelines should be consulted.


HIV

Background

International guidance currently focuses on recommending HIV testing to be organized and offered in specific settings (both community and health care), where people are seen for healthcare and in community settings where individuals actively seek an HIV test [30]. Recent reports examining delays in diagnosis after infection suggest that the latter, sometimes referred to as "client-initiated HIV testing and counseling (CITC), or voluntary counseling and testing (VCT)" has not been sufficiently successful to identify people living with HIV early enough in the course of the infection. As a consequence the individual does not get the full benefit of early treatment and may unknowingly contribute to further transmission of the infection, feeding the epidemic. While such approaches are a valuable component of any HIV testing strategy, one approach is not sufficient to address the current European HIV epidemic.

Routinely recommending testing to women in antenatal care has been part of the standard of care in Europe for more than a decade and can be considered as a form of indicator condition-guided HIV testing. In some European countries, screening individuals suspected of having a STI was launched 5-7 years ago. However, this has not been uniformly adopted in all European countries. The suggestion to include other conditions to guide HIV testing was first made in 2007 [21], although it was realized at the time that data were lacking to differentiate exactly which conditions were to be recommended for routine HIV testing. Significant advances have been made since then, allowing for a better evidenced-based approach to implement indicator condition-guided HIV testing, here included the HIDES study [17].

Barriers to actively seeking an HIV test have been described and include: a low perception of being at risk, a lack of desire to seek regular testing by those at risk, difficulties for individuals attending healthcare settings to disclose their underlying risks proactively (due to fear of stigma, discrimination or prosecution), a lack of perceived incentives to offer HIV tests by health professionals without evidence of underlying risk factors and a failure by health professionals to obtain this information [31; 32].

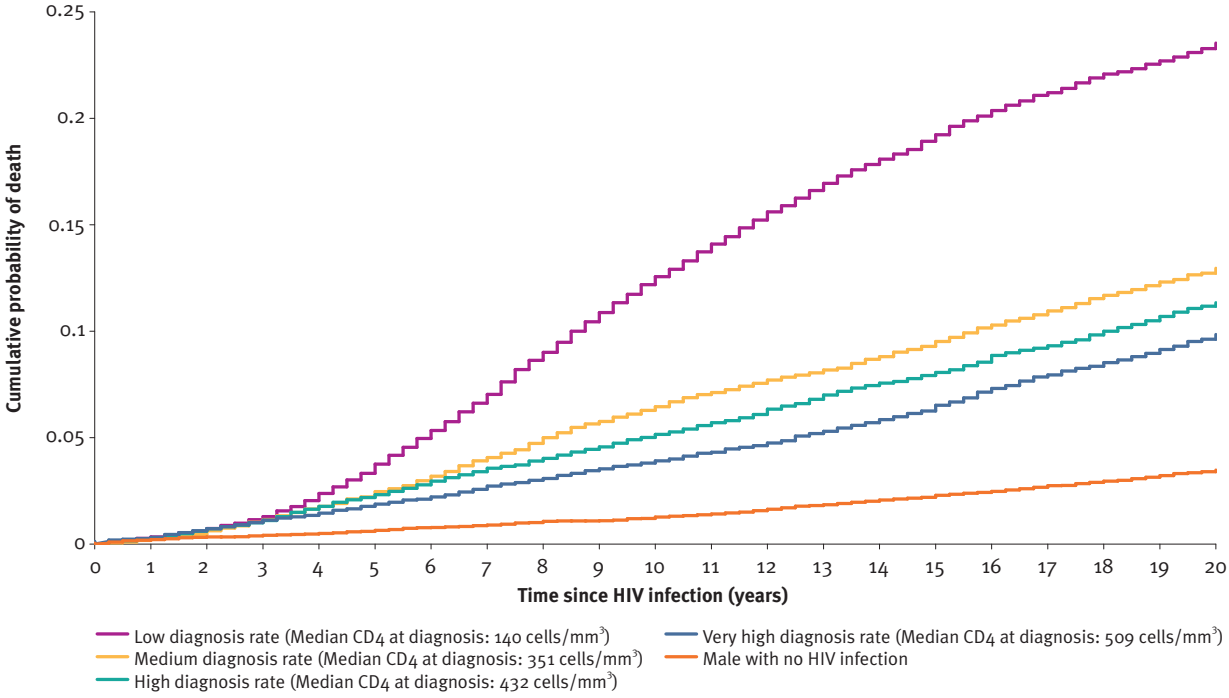
Alternative testing strategies include either routinely offering testing to all persons coming into contact with the health system (universal screening) in non-generalized epidemic settings as has been implemented in the US [20] or identifying/defining specific conditions where uniform routine testing can improve HIV detection rates. In low level or concentrated epidemics, routine universal screening among the general population has a poor cost-benefit ratio as a public health intervention due to expected low prevalence. Instead, an approach using certain conditions linked with an excess risk of being HIV-positive as an indication for routinely recommending testing (indicator condition-guided HIV testing) could provide a sufficiently high cost-benefit ratio both for the individual and from a public health perspective to justify wide implementation. Recent studies, including HIDES, have shown that several medical conditions are associated with a high HIV prevalence.

2.1 Late Presenters across Europe and benefits of earlier diagnosis

Surveillance data from the ECDC/WHO-Europe shows that approximately half of newly diagnosed individuals across Europe presented late for care (i.e. with a CD4 count below 350 cells/µL) in 2010[1]. Data on demographic characteristics for late presenters suggest that individuals who are older, with origins from regions other than Europe and where the transmission route is not a result of behaviors associated with MSM are more likely to present late [33].

A significant proportion of late presenters have been in contact with the healthcare system prior to being diagnosed. Some present during their sero-conversion illness which remains undiagnosed, others with symptoms and conditions related to impairment of immune function (e.g. herpes zoster, oral candidiasis, chronic diarhoea).

Figure 1: Projected life expectancy of people with HIV according to timing of diagnosis [8]



[1] Data on the CD4 count at time of diagnosis is missing for a large proportion of newly diagnosed persons. Data from cohort studies across Western Europe confirm the approximate proportion of newly diagnosed persons presenting late. The situation in Eastern Europe is not well documented but the percentage of persons presenting late for care in this region is likely to exceed the situation elsewhere.

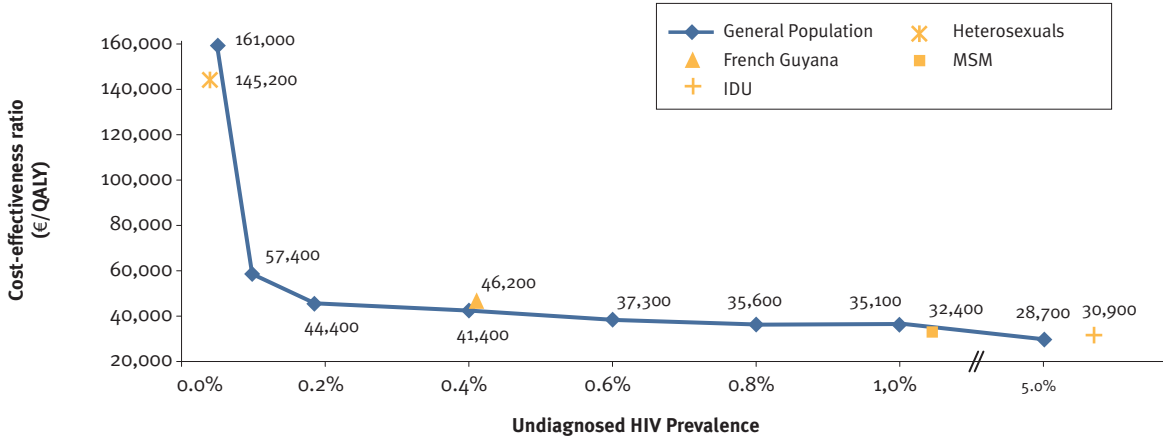
If a person is diagnosed and HIV treatment (*antiretroviral treatment or ART)* is introduced earlier in the course of infection, before severe impairment of the immune system has occurred, life-expectancy may approach that of the general population [18]. High levels of access to HIV treatment in Europe has resulted in a situation where HIV-related morbidity and mortality are increasingly concentrated among those who are diagnosed late. The obvious benefit of treatment requires that HIV-infected people are diagnosed early and appropriately started on ART [18].

Furthermore, antiretroviral treatment reduces viral replication making the individual less infectious. There is an ongoing debate as to if antiretroviral treatment should be introduced earlier than what is recommended today (CD4 350) as a public health intervention with the purpose of preventing transmission. Whether this is beneficial to the HIV-positive patient in regard to improving health outcomes is currently being investigated [34] Individuals diagnosed with HIV have been shown to alter their behavior in the direction of safer sexual activity which will itself have public health benefits by preventing onward transmission [35].

2.3 Cost-effectiveness of HIV testing

The degree to which HIV screening is cost effective can vary with type, frequency and context; improving with increased undiagnosed HIV prevalence in the population being screened. Studies from the US and France suggest that HIV testing remains cost-effective as long as the undiagnosed HIV prevalence is above 0.1% [36; 37; 38; 39; 40; 41; 42; 43; 44]. Below this threshold, consideration should be given to testing only in circumstances where the added cost of performing a test can be justified. Justifications include potentially adverse consequences if the HIV infection is not identified. Of note, the cost-effectiveness analyses assume that individuals diagnosed with HIV enter care and have access to antiretroviral therapy, and hence will benefit from treatment.

Cost-effectiveness of HIV testing in France according to undiagnosed HIV prevalence [45]



Clinical indicator conditions for HIV testing

3.1 Categories of indicator conditions

Conditions that are considered indicators for recommending HIV testing can be divided into 3 categories (Table 1). The justification for their inclusion varies as does the level of recommendation to perform an HIV test in those presenting with the listed indicator conditions.

***1. Conditions which are AIDS defining* among PLHIV** *(table 1, column 1)*. An AIDS-defining event is a condition or disease which occurs when the immune system is sufficiently impaired, indicating that the HIV infection has progressed to AIDS. If the HIV infection remains undiagnosed and the first event is successfully treated, other AIDS-defining events will follow as the underlying immune deficiency is not treated. Recognition of the HIV-infection for timely introduction of ART (within the first 1-2 weeks after the diagnosis of the AIDS-defining event) is essential to avoid further progression of HIV and leads to improved survival. It further improves the response to the treatment of many of the conditions.

Guidance: Any person (not known to be HIV-positive) presenting with a potentially AIDS defining event - irrespective of the HIV prevalence in the setting where the condition is managed – should be strongly recommended HIV testing.

Justification: There is a large body of evidence from randomised controlled trials of the consequences of not treating HIV positive individuals with AIDS defining events. Not recommending a test in these circumstances cannot be considered good clinicial practice.

2. Conditions associated with an undiagnosed HIV prevalence of >0.1% *(table 1, column 2a)*. HIV testing is recommended for any individual presenting with any of these conditions, as testing with >0.1% HIV prevalence has been shown to be cost-effective. These conditions may occur more frequently in HIV-positive persons either because they share a common mode of transmission or because their occurrence is facilitated by the characteristic immune deficiency associated with HIV infection. Conversely, it should not be assumed that any condition seen more frequently in the HIV-positive population fulfills this definition; only those conditions where there is documented ≥0.1% HIV prevalence in previously undiagnosed populations should be considered as indicator conditions. Of note, certain age restrictions may be imposed, as most of the current prevalence data is for adults aged 16 to 65 years. Currently, there is a paucity of evidence to robustly identify this category of indicator conditions; the list will need to be continuously revised and updated as new data allows identification of those conditions which meet these criteria (see appendix 2 and 3).

Guidance: Any person presenting with a condition associated with an undiagnosed HIV prevalence of >0.1% should be strongly recommended HIV testing.

Justification: Routine testing within conditions with an HIV prevalence of ≥0.1% is cost-effective. It has the potential to increase earlier diagnosis of HIV.

Guidance: Any person presenting with a condition that expert opinion considers likely to have an HIV prevalence of ≥0.1% should be offered HIV testing until further evidence is available.

Justification: Potential conditions that expert opinion considers likely to have a prevalence of ≥0.1% are listed in table 1, column 2b and should be recommended testing until further evidence is available. In appendix 3 the methodology to identify HIV prevalence in potential indicator conditions is described.

3. Conditions where not identifying the presence of HIV infection may have significant adverse implications for the individual's clinical management *(table 1, column 3)*. Immunosuppressive therapy may further impair an HIV infected individual's immune system with negative consequences; this can often be minimized by effective HIV treatment. Furthermore, untreated HIV may negatively impact an individual's response to the specific treatment for the indicator condition. Such medications are diversely used across healthcare systems, and for multiple indications such as treatment of malignancies, auto-immune diseases and in transplant recipients.

Guidance: It is recommended to offer an HIV test as a safety measure prior to the initiation of iatrogenic immunosuppressive medication, irrespective of HIV prevalence in the setting where the condition is managed.

Justification: Testing should be offered for such conditions to avoid further immune suppression with potentially serious adverse outcomes for the individual, and to maximize the potential response to the treatment of the indicator condition (despite that the estimated prevalence of HIV is most likely lower than 0.1%).

Table 1: Definitions of indicator conditions and recommendations for HIV testing

1. Conditions which are AIDS defining among PLHIV*

Strongly recommend testing:

Neoplasms:
- Cervical cancer
- Non-Hodgkin lymphoma
- Kaposi's sarcoma

Bacterial infections
- Mycobacterium Tuberculosis, pulmonary or extrapulmunary
- Mycobacterium avium complex (MAC) or Mycobacterium kansasii, disseminated or extrapulmonary
- Mycobacterium, other species or unidentified species, disseminated or extrapulmunary
- Pneumonia, recurrent (2 or more episodes in 12 months)
- Salmonella septicaemia, recurrent

Viral infections
- Cytomegalovirus retinitis
- Cytomegalovirus, other (except liver, spleen, glands)
- Herpes simplex, ulcer(s) >I month/bronchitis/pneumonitis
- Progressive multifocal leucoencephalopathy

Parasitic infections
- Cerebral toxoplasmosis
- Cryptosporidiosis diarrhoea, >1 month
- Isosporiasis, >1 month
- Atypical disseminated leismaniasis
- Reactivation of American trypanosomiasis (meningoencephalitis or myocarditis)

Fungal infections
- Pneumocystis carinii pneumonia
- Candidiasis, oesophageal
- Candidiasis, bronchial/ tracheal/ lungs
- Cryptococcosis, extra-pulmonary
- Histoplasmosis, disseminated/ extra pulmonary
- Coccidiodomycosis, disseminated/ extra pulmonary
- Penicilliosis, disseminated

2a. Conditions associated with an undiagnosed HIV prevalence of >0.1 %**

Strongly recommend testing:

- Sexually transmitted infections
- Malignant lymphoma
- Anal cancer/dysplasia
- Cervical dysplasia
- Herpes zoster
- Hepatitis B or C (acute or chronic)
- Mononucleosis-like illness
- Unexplained leukocytopenia/ thrombocytopenia lasting >4 weeks
- Seborrheic dermatitis/exanthema
- Invasive pneumococcal disease
- Unexplained fever
- Candidaemia
- Visceral leishmaniasis
- Pregnancy (implications for the unborn child)

2b. Other conditions considered likely to have an undiagnosed HIV prevalence of >0.1%

Offer testing:

- Primary lung cancer
- Lymphocytic meningitis
- Oral hairy leukoplakia
- Severe or atypical psoriasis
- Guillain–Barré syndrome
- Mononeuritis
- Subcortical dementia
- Multiplesclerosis-like disease
- Peripheral neuropathy
- Unexplained weightloss
- Unexplained lymphadenopathy
- Unexplained oral candidiasis
- Unexplained chronic diarrhoea
- Unexplained chronic renal impairment
- Hepatitis A
- Community-acquired pneumonia
- Candidiasis

3. Conditions where not identifying the presence of HIV infection may have significant adverse implications for the individual's clinical management despite that the estimated prevalence of HIV is most likely lower than 0.1%

Offer testing:

- Conditions requiring aggressive immuno-suppressive therapy:
  - Cancer
  - Transplantation
  - Auto-immune disease treated with immunosuppressive therapy
- Primary space occupying lesion of the brain.
- Idiopatic/Thrombotic thrombocytopenic purpura

* Based on CDC and WHO classification system [46]
** References in appendix 2

Updates to the table based on future evidence of HIV prevalence in indicator conditions under 2b can be found at www.hiveurope.eu

3.2 Specialties and indicator conditions

People with undiagnosed HIV may potentially present to any hospital, clinic or primary care/general practice setting. HIV testing should be considered during any clinical contact when a person presents with an indicator condition. Multiple medical specialties are involved in the care of individuals presenting with the conditions outlined in table 1. Table 2 categorizes the indicator conditions based on the specialty most likely to be involved in their care by categorizing clinical conditions for each specialty.

Table 2: Indicator conditions and specialties involved

Specialty: Respiratory/Pulmonology

Tuberculosis
Pneumocystis carinii pneumonia
Pneumonia, recurrent
MAC lung disease
Histoplasmosis, disseminated/extra pulmonary
Herpes simplex bronchitis/pneumonitis
Candidiasis bronchial/lungs
Community-acquired pneumonia

Specialty: Neurology and neurosurgery

Cerebral toxoplasmosis
Cryptococcosis, extrapulmonary
Progressive multifocal leucoencephalopathy
Reactivation of American trypanosomiasis (meningoencephalitis or myo-carditis)
Guillain–Barré syndrome
Mononeuritis
Subcortical dementia
Multiple sclerosis-like disease
Peripheral neuropathy
Primary space occupying lesion of the brain

Specialty: Dermatology/dermatovenereology/ genitourinary medicine

Kaposi's sarcoma
Herpes Simplex ulcer(s)
Atypical disseminated leishmaniasis
Penicilliosis, disseminated
Seborrheic dermatitis/exanthema
Herpes zoster
Sexually transmitted infections
Hepatitis B or C (acute or chronic)
Severe or recalcitrant psoriasis
Candidaemia
Candidiasis

Specialty: Gastroenterology/hepatology

Cryptosporidiosis diarrhoea, >1 month
Microsporidiosis, >1 month
Isosporiasis, >1 month
Candidiasis, oesophageal
Hepatitis B or C (acute or chronic)
Unexplained chronic diarrhoea

Specialty: Oncology

Lymphoma, non-Hodgkin
Kaposi's sarcoma
Primary lung cancer
Anal cancer/dysplasia
Cancer requiring aggressive immuno-suppressive therapy

Specialty: Gynecology/ Obstetrics

- Cervical cancer
- Sexually transmitted infections
- Hepatitis B or C (acute or chronic)
- Pregnancy (implications for the unborn child)
- Cervical dysplasia

Specialty: Hematology

- Lymphoma, non-Hodgkin
- Malignant lymphoma
- Unexplained leukocytopenia/thrombocytopenia lasting >4 weeks
- Thrombotic thrombocytopenic purpura

Specialty: Infectious Diseases/Internal medicine

- Tuberculosis
- Mycobacterium Tuberculosis, pulmonary or extrapulmunary
- Mycobacterium avium complex (MAC) or Mycobacterium kansasii, disseminated or extrapulmonary
- Mycobacterium, other species or unidentified species, disseminated or extrapulmunary
- Pneumonia, recurrent (2 or more episodes in 12 months)
- Pneumocystis carinii pneumonia
- Cryptococcosis, extrapulmonary
- Salmonella septicaemia
- Cytomegalovirus, other (except liver, spleen, glands)
- Herpes Simplex ulcer(s) >1 month/ bronchitis/pneumonitis
- Candidiasis bronchial/tracheal/lungs
  Candidiasis, oesophageal
- Histoplasmosis, disseminated/ extrapulmonary
- Coccidiodomycosis, disseminated/extra pulmonary
- Atypical disseminated leismaniasis
- Reactivation of American trypanosomiasis (meningoencephalitis or myocarditis)
- Penicilliosis, disseminated
- Sexually transmitted infection
- Hepatitis B or C (acute or chronic)
- Mononucleosis-like illness

Specialty: Infectious Diseases/Internal medicine

- Invasive pneumococcal disease
- Herpes zoster
- Lymphocytic meningitis
- Visceral leishmaniasis
- Unexplained weightloss
- Unexplained fever
- Unexplained chronic diarrhoea
- Unexplained lymphadenopathy
- Unexplained leukocytopenia/thrombocytopenia lasting >4 weeks

Specialty: Rheumatology

- Auto-immune disease treated with aggressive immuno-suppressive therapy

Specialty: Ophthalmology

- Cytomegalovirus retinitis

Specialty: Ear Nose Throat

- Candidiasis tracheal/oesophageal
- Mononucleosis-like illness

Specialty: Nephrology

- Unexplained chronic renal impairment

Specialty: General practice

Symptomatology fitting any of the listed conditions

Specialty: Emergency medicine

Symptomatology fitting any of the listed conditions

Specialty: Dentistry

- Oral hairy leukoplakia
- Candidiasis, oral and oesophageal
- Kaposi's sarcoma

How to implement indicator condition guided HIV testing in a health care setting

All healthcare settings planning to implement indicator condition-guided HIV testing should have procedures in place covering the operational aspects of delivering testing to the individual and governance of results. Clear documented patient care pathways into treatment and care should be agreed with the local specialty HIV services [47]. The outline below can be used as the foundation for such programmes; local adaptation may be required.

4.1 Steps to consider before introducing indicator condition guided HIV Testing

Step 1: HIV tests. Where the health care facility has regular access to analytical diagnostic testing services provided by a clinical microbiological laboratory (either on site or through subcontracting), regular HIV tests are likely to be included in those services. However, the availability and turnaround time should be verified prior to starting an indicator condition targeted HIV testing programme. For some settings, point-of-care (POC) tests may be a preferred option but require more preparation and training of personnel on site as well as a clear algorithm for laboratory based confirmation of all reactive results. Negative POC results do not need secondary or confirmatory testing but may be delivered immediately. Laboratory based reactive test results should always be confirmed before delivery to the health care facility. Only CE–certified and marked POC tests may be used for diagnostic purposes within the EU/EEA region and national requirements/regulations on the conditions of their use vary but need to be taken into consideration. Participation in a QA/QC scheme is highly recommended if POC testing is implemented. More details can be found in appendix 1.

Step 2: Education and Training. Identify and address concerns of healthcare professionals affiliated with the healthcare setting. Existing experience from HIV testing in healthcare settings has shown that healthcare professionals who do not routinely offer HIV tests may feel uncomfortable or have concerns doing so. These concerns should be handled proactively, and it is the responsibility of the leaders of the healthcare setting to address this issue. Open discussions at staff meetings and access to training and information materials is required (see appendix 1). It should be within the competence of any doctor, midwife, nurse or trained healthcare worker to seek consent for and request an HIV test, as with any other diagnostic test. If point-of-care tests will be used, training in their use and proper interpretation of results should be a pre-requisite prior to implementation.

Step 3: Test offer. Consider how to offer the test and seek informed consent. The offer should be done in an environment which respects the privacy of the person. Be explicit in the standardized language to be used when doing this. A reasonable example would be to say: “You have been diagnosed with [name the condition], and we routinely perform a diagnostic work-up that includes an HIV test for everyone with this condition in this clinic/department. Is that OK?” Information should be provided regarding the need for re-testing and the time interval for re-testing, if relevant. Consideration can be given to provide most

of this advance information in written form, which the individual can retain. The pre-test discussion should include opportunity for the patient to ask questions and information about how the results will be delivered.

In case of an individual declining the recommendation of an HIV test, the potential risks in terms of complications for the primary condition should be explained in more detail. The individual should not be pressured into test acceptance or refused treatment if he or she does not accept testing, but should be re-offered the test at the next attendance and consideration given to referral for more in depth discussion and support by sexual health or HIV specialists to address specific areas of concern, if relevant. Where point-of-care tests are used, it should be explained in the pre-test discussion that a negative test result is definitive (within the bounds of the test's window period) but that reactive results can only be considered preliminary and need to be confirmed from a second blood sample within the regulations of the national testing algorithm. For FAQ, please see appendix 1.

Step 4: Post-test discussion. The approach to the post-test discussion and the level of detailed counseling depends on the test results (see appendix 1).

If the HIV test is negative, one of several options can be considered depending on the circumstances and the training of the staff. This is an opportunity for health promotion to maintain an individual's negative status; written material should be available, or directions to where the person can seek additional information (e.g. a website or referral to another healthcare setting specialized in providing such information).

If the HIV test is positive, it is imperative that the healthcare setting has clear, agreed written policies on managing a positive HIV diagnosis. Issues to consider include how the test result is communicated to the person – a positive HIV test result (like any important health-related communication) should be handled with empathy, together with a plan on what will happen next. It is recommended to deliver the results in a face-to-face situation rather than by phone or mail, unless the individual has indicated this is their preferred option.

The healthcare setting needs to have clear documented agreed patient care pathways, according to national guidelines, and if necessary, be able to contact the HIV clinic immediately to ensure a swift and comprehensive transfer (as would be the case for any type of significant health care problem). The individual should be informed of the necessity to take precautions to protect current and future sexual and/or needle-sharing partners, and partner notification should be initiated.

If point-of-care HIV tests are used, further consideration on how to communicate results is needed, as negative results can be delivered immediately, but reactive results will need to be confirmed with a laboratory based confirmatory test prior to final delivery of results to the patient. Thus clear written policies should exist on how to communicate the preliminary positive result and the need for a secondary blood sample for laboratory confirmation to the patient. This could include language such as, "The preliminary result of the screening test is reactive, which means that you may have HIV. However, this is not definitive, and we need to do further blood tests. Until the results become available (which will take approximately [insert local turnaround time] day(s)) you need to take precautions to protect your sexual and/or needle sharing partners(s) from potential infection."

For extensive explanations of the general principles of HIV testing, several HIV testing guideline documents exist:

- ECDC Guidance: HIV testing: increasing uptake and effectiveness in the European Union (2010) [29]
- ECDC Guidance: Prevention and control of infectious diseases among people who inject drugs (2011) [48]
- BHIVA testing guidelines (2008) [24]
- WHO guidance (2010) [28]
- EMCDDA: Guidelines for testing HIV, viral hepatitis and other infections in injecting drug users (2010)[49]

See also annex 1 for further resources and training materials.

4.2 Requirements of the leadership of the specialty

All healthcare settings are affiliated with a network which guides the development of care within the specialty – usually a scientific society. Training, collegial discussions, support and encouragement by the leadership of such networks and specialty guidelines are all important. Ideally, training should be delivered by professionals already working within the specialty, possibly in collaboration with colleagues with specific expertise in HIV.

The HIV in Europe Initiative (http://www.hiveurope.eu/) can provide contact to HIV specialists, training material and be used as a liaison if healthcare systems anywhere would like to collaborate on conducting additional surveys and audits along the lines described in appendix 2.

E-mail to: hiveurope@cphiv.dk; or call +45 3545 5757.

4.3 Requirements of the healthcare system

The healthcare system in which the healthcare setting is organizationally affiliated should adopt the guidance and communicate this decision to the relevant persons within the system. It is also encouraged to communicate with the leadership of the specialties to coordinate the process outlined above. The healthcare system is strongly encouraged to coordinate the performance of surveys, as well as the implementation of monitoring/auditing and evaluation of implemented HIV testing guidelines within their healthcare system to further enhance the quality and direction of HIV indicator condition-guided HIV testing.

4.4 Other indications for recommending an HIV test

Individuals should be recommended HIV testing in any health care settings if they are, or have:

1. Sexual partners of individuals known to be HIV positive
2. Men having sex with men
3. A history of injecting drug use
4. A history of sex work
5. From a country of high HIV prevalence (>1% in the general population)[50] (See UNAIDS list on estimated prevalence) [51]
6. Pregnant women
7. Infants born to HIV-infected women
8. Requesting an HIV test
9. A STI
10. Had a needlestick or percutaneous exposure (see WHO guidelines)

An effective national approach to HIV testing will rely on having an understanding of the epidemic at a local and national level. Testing programmes should aim to reach those at risk of infection and to prioritize those at highest risk. Surveillance and other relevant data should be reviewed, including information on undiagnosed HIV and late diagnosis, to build an understanding of the epidemic and time trends at regional and national level. Subpopulations (such as those listed above) and/or their risk are often hidden and stigmatized. Special surveys will need to be conducted to define the levels of HIV among these groups, their rates of HIV testing, and relevant knowledge, attitudes and behaviour in order to inform interventions to increase their uptake of HIV testing. Supplementary data on other STIs, sexual and drug injecting behaviours in the general populations, as well as in groups at risk of HIV, should also be reviewed.

More frequent testing is advisable for people who have ongoing risk behaviour. For example, some countries recommend that MSM should test at least annually or more often depending on sexual behaviour. Current guidance from the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) recommends regular offering of tests to injecting drug users at least once every six to 12 months. WHO recommends re-testing to people at ongoing risk at least annually. Persons who identified as HIV positive should be counselled on issues related to HIV disclosure: partner referral for HIV testing, partner notification in line with national policies and procedures, and couples HIV testing and counselling.

Appendixes

Appendix 1: Practical implementation support tool

Appendix 1 is meant to provide practical tools in the implementation of indicator condition guided HIV testing. It provides links to different examples of methods to adapt locally and use in the implementation of the testing strategy.

Information required for informed consent

Below different examples of how information on HIV testing and its benefits can be provided, through leaflets, posters and videos.

Patient information leaflet: Example from colposcopy department – appendix 4

Poster: Example from Emergency Department:
http://www.aidsetc.org/aidsetc?page=etres-display&resource=etres-434

Video: ECDC HIV testing: Know, treat, prevent: http://ecdc.europa.eu/en/healthtopics/spotlight/spotlight_aids/Pages/index.aspx

Other resources:

AETC, Supporting HIV Education for Health Care Professionals, www.aidsetc.org. Includes articles, posters, curricula, fact sheets and manuals, tools and slide sets.

HIV Testing in Emergency Departments: A practical Guide http://www.edhivtestguide.org/

Care pathways

The below resources includes practical guides to aspects around linkage to care that needs to be consideres when introducing indicator condition guided HIV testing.

HIV Web Study: http://depts.washington.edu/hivaids/index.html. Interactive teaching module on Routine HIV Screening in Health Care Settings, including sections on potential barrier to routine HIV screening and Diagnostic Tests, Counseling and Linking to Care.

Getting started: HIV Integration Checklist: http://www.aidsetc.org/aidsetc?page=etres-display&resource=etres-570

HIV Testing in Emergency Departments: A practical Guide http://www.edhivtestguide.org/. Linking to Care.

Patient questions

Below are listed some examples of frequently asked questions. Questions should be adapted to the local context and setting as appropriate.

FAQ:
Q1: *Do you believe I am infected with HIV?* A1: I do not know. We routinely recommend a test to everyone with this condition.

Q2: I am not at risk of HIV – why do I need a test? A2: Most adults are potentially at risk from HIV without realizing it; unless you have tested recently we recommend everyone with this condition has an HIV test.

Q3: Who will know that I have been HIV tested? A3: The HIV test, like all the other investigations you are having, is confidential. This means that only you and the clinical team caring for you will know you have had a test and the result. (Need to check this is true across regions)

If a patient declines a test, reasons should be explored within a reasonable degree to ensure that the choice is not based on incorrect beliefs about the virus or the consequences of testing. The potential risks in terms of complications for the primary condition can be explained, but the individual should not be pressured into test acceptance or refused treatment if he or she does not accept testing. Declining the test should be documented.

Confidentiality laws may vary by local context, so it is important for providers to be aware of any risks and benefits associated with mandatory disclosure of HIV status, in settings where this may be applicable.

Other resources:
CDC HIV Testing in Health Care Settings: http://www.cdc.gov/hiv/topics/testing/healthcare/index.htm#resource Includes questions and answers for professionals and for the general public.

Types of tests and sampling methods

Different types of tests exist which needs to be considered.
Factors influencing choice of test:

- Setting – time pressures, space, planned phlebotomy as part of care
- Staff – competency/time
- Cost
- Sensitivity/specificity
- Need for 4th generation if testing mononucleosis OR retest at appropriate time interval
- Different 'window periods' for different tests
- 'risk' of lost to follow-up
- Urgency of result –ie need to recall if planned follow up not for some time

Other resources:
HIV Testing in Emergency Departments: A practical Guide http://www.edhivtestguide.org/. Choosing a test.

Dissemination of the Guidance

It is recommended that this guidance is disseminated to relevant European/national clinical societies. This can be done by:

- Sharing the guidance for publication in clinical journals – template draft letter to the editor – appendix 6
- Identifying a national champion to disseminate information on national level
- Presentations at conferences in clinical societies – example of presentation – appendix 5

The executive summary and relevant tables are available in French, German, Spanish and Russian.

For assistance contact: hiveurope@cphiv.dk.

Other resources with education materials and European guidelines on HIV testing:
AETC, Supporting HIV Education for Health Care Professionals: www.aidsetc.org.
Includes articles, posters, curricula, fact sheets and manuals, tools and slide sets

Handbook for improving HIV testing and counselling services:
http://www.who.int/hiv/pub/vct/9789241500463/en/index.html

HIV Rapid Testing training package: http://wwwn.cdc.gov/dls/ila/hivtraining/
CDC HIV rapid test guidelines:
http://wwwn.cdc.gov/dls/ila/documents/HIVRapidTest%20Guidelines%20(Final-Sept%202005).pdf

WHO guidelines for rapid HIV testing in resource constrained settings: http://www.who.int/hiv/pub/vct/rapidhivtests/en/

WHO re-testing guidance: http://www.who.int/hiv/pub/vct/hiv_re_testing/en/index.html
Couples HIV testing and counselling training curriculum:
http://www.cdc.gov/globalaids/Resources/prevention/chct.html

ECDC HIV testing: Know, treat, prevent: http://ecdc.europa.eu/en/healthtopics/spotlight/spotlight_aids/Pages/index.aspx
Guidance document and videos on improving HIV testing in Europe

Couples counselling/testing training: http://www.cdc.gov/globalaids/Resources/prevention/chct.html

WHO Handbook for improving HIV testing and counselling services:
http://www.who.int/hiv/pub/vct/9789241500463/en/index.html

Appendix 2: References for HIV prevalence in patients with clinical indicator conditions in Europe

A systematic review was done. Searches were undertaken on Pubmed/MEDLINE using the search terms "X AND HIV AND prevalence OR testing OR diagnosis" and combinations thereof (where X = indicator condition of interest). Records were limited to those published after 01 January 1985, and in English only. Abstracts were reviewed for all records retrieved and the full text of all references cited below retrieved and reviewed. Where available, the abstracts submitted to the clinical conferences of the British HIV Association and European AIDS Clinical Society were also systematically reviewed (usually since 2005) for relevant data.

Indicator Conditions for Routine HIV testing	HIV Prevalence	References
Sexually transmitted infections	4.06%	[17]
Malignant lymphoma	0.29 – 2.9%	[17; 52; 53]
Anal/cervical cancer/dysplasia	0.37 – 1.6%	[17; 54; 55; 56; 57]
Herpes zoster	2.89%	[17; 58; 59]
Hepatitis B or C (acute or chronic)	0.36 – 5.7%	[17; 60]
Hepatitis C	8-59%	[44; 61]
Mononucleosis-like illness	3.85% 7 %	[17; 62; 63; 64]
Unexplained leukocytopenia/thrombocytopenia lasting >4 weeks	3.19%	[17]
Seborrheic dermatitis/exanthema_	2.06%	[17]
Invasive pneumococcal disease	2.4 - 4%	[65; 66]
Community-acquired pneumonia (CAP)	0.76%	[67]
Candidaemia	6-23%	[68; 69]
Unexplained fever	3%	[70]
Visceral Leishmaniasis		[71; 72]
Psoriasis		[73]
Guillain Barre syndrome/AIDP		[74; 75; 76]
Primary lung cancer		No data
Lymphocytic meningitis		No data
Oral hairy leukoplakia		
Mononeuritis multiplex		No data
Subcortial dementia		No data
Multiple sclerosis like illness		No data
Peripheral neuropathy		No data
Unexplained weightloss		No data

Indicator Conditions for Routine HIV testing	HIV Prevalence	References
Unexplained oral candidiasis		No data
Unexplained chronic diarrhea		No data
Unexplained chronic renal impairment		No data
Hepatitis A		[77]
Pregnancy:		
France	0.34%	[78]
Greece	0.1%	[78]
Italy	0.1–0.3%	[78]
Netherlands	0.3%	[79]
Romania	0.2%	[80]
Scotland	0.2%	[78]
UK	0.01–0.26%	[78]

Appendix 3: Audit and reporting tool

Methods used to identify conditions suitable as indicators for HIV testing

As described above there is little evidence on HIV prevalence within conditions thought to have a high prevalence of undiagnosed HIV infection. In order to identify conditions in this category, HIV prevalence surveys in patients not yet known to be HIV positive need to be widely implemented throughout Europe. Through the HIDES study (the HIV Indicator Diseases across Europe study), a number of the conditions listed in table 1, column 2 above have been identified with an HIV prevalence ≥0.1%, complemented by other sources.

To further inform which conditions have an HIV prevalence of >0.1%, there is a need to expand the number and size of surveys to be conducted in the future and for audits to be conducted for conditions considered to be indicators to ensure a consistently high positivity rate within a given healthcare system.

Updated experience from across Europe will be collected as part of the HIV in Europe Initiative and displayed on their web site (http://www.hiveurope.eu/), and the recommendations in table 1 will be modified based on the results of future surveys.

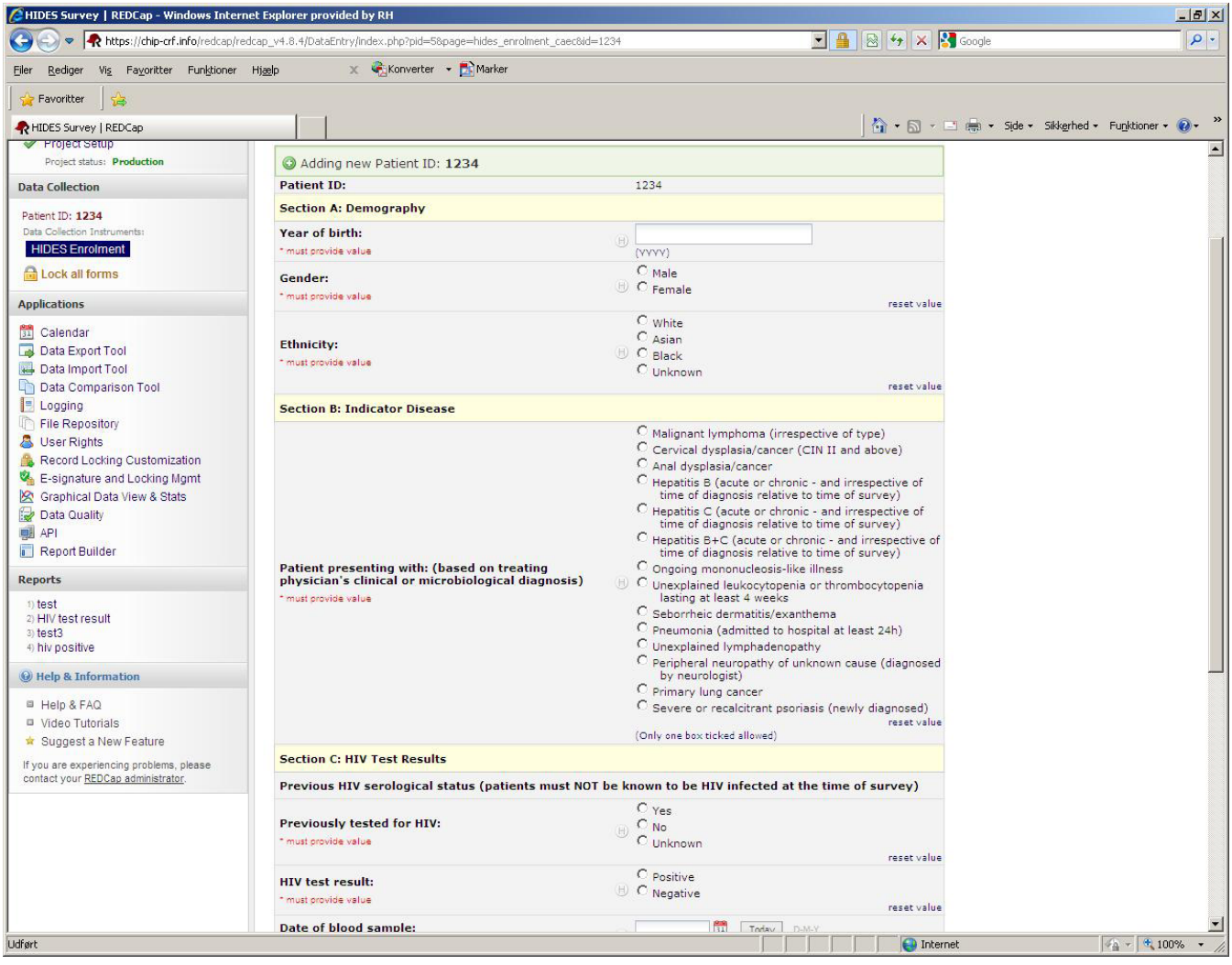
Method	Purpose	How?
HIV indicator conditions surveys	Identify HIV prevalence in potential indicator conditions to evaluate if the condition meets the 0.1% HIV prevalence cut-off	Offer HIV test to consecutive patients not yet known to be HIV positive and who present with the condition surveyed
HIV testing audits	Evaluate HIV testing performed in patients presenting with conditions already classified as indicators for HIV testing	Number of persons seen in the healthcare setting with a given condition and how many of these persons were offered an HIV test (and number of positive HIV test results)

To further refine this guidance, healthcare systems (and if not possible, individual healthcare settings) across Europe are encouraged to do the following:

- Introduce surveys for conditions that are potential indicators for routine HIV testing, but where data remains insufficient to adopt them as indicators for testing as part of routine care.
- Introduce auditing of the extent and outcome of HIV tests done for conditions included in table 1 (p 15) and adopted by the healthcare system as indicators for performing an HIV test.

For more information and methodology, please see www.hiveurope.eu or E-mail to: hiveurope@cphiv.dk; or call +45 3545 5757.

Example of online case report form for survey in potential indicator conditions



Appendix 4: Example of patient information leaflet

HAVING AN HIV TEST IN THE COLPOSCOPY DEPARTMENT
Chelsea and Westminster Hospital Foundation Trust

INFORMATION FOR PATIENTS

HIV (the human immunodeficiency virus) is a virus that affects the immune system and causes AIDS.

HIV is now a manageable infection with medication. Successful treatment depends on identifying the infection at an early stage.

There are some conditions which occur more frequently in people with HIV infection. These conditions can sometimes improve just by treating the HIV infection.

However it is not known how common HIV infection is in people with these different conditions.

We are now routinely offering HIV tests to all individuals with these conditions, and encouraging them to test for HIV infection, as recommended by National Guidelines.

Abnormality of the cells lining the neck of the womb (or "cervix") is one such condition, and the problem *may* be more common in people with HIV infection. However, the vast majority of women with abnormal cells of the cervix will not have HIV. The majority of women attending the Colposcopy Department will have been referred by their GP due to abnormalities of cells of the cervix.

Chelsea and Westminster Hospital NHS
NHS Foundation Trust

During your time in the Colposcopy Department, you will be asked if you are happy to have an HIV test. We will conduct this test on a sample of saliva. You can ask any questions you may have, and you do not have to have the test. Declining to have an HIV test will in no way affect the care you receive in the Colposcopy Department.

The test looks for the presence of antibodies (proteins) in saliva that may indicate whether or not you are infected with HIV. There is no HIV in saliva, itself.

The saliva HIV test is a screening test. The result may be "negative," which means you do not have HIV infection, or "reactive" which means you require further tests to see whether or not you have HIV infection. Any patient with a "reactive" test result will be asked to attend the John Hunter Clinic at Chelsea and Westminster for further tests. Everyone who accepts an HIV test will receive their result. We are not screening you for any other sexually transmitted infections by doing this test.

Taking an HIV test is confidential. Taking the test, and testing negative, has NO implications for insurance or mortgage applications.

If you feel you have been at risk of acquiring HIV infection in the past 3 months you should test today, and then repeat the test at 3 months. We can help arrange for you to do this.

HAVING AN HIV TEST IN THE COLPOSCOPY DEPARTMENT
Chelsea and Westminster Hospital Foundation Trust

INFORMATION FOR PATIENTS

Receiving your test result:

You can receive your HIV test result by text message to your mobile phone, or by letter. If you elect to receive a text message, and your result is negative, you will receive the following message:

Sender: "Colposcopy C+W"
Message: "Your salivary test result is negative"

If the result is reactive, or we need to contact you for any other reason, we will call your mobile phone. No one will receive a reactive result via text message.

If you elect to receive your result via letter, we will send your HIV test result alongside the letter from the Colposcopy Department concerning your other results from today. This will be copied to your GP, if they referred you to the Clinic. If you would rather we did not send the saliva HIV test result to your GP, simply let us know and we will not send this part of the letter.

Please inform the person taking your test how you would like to get your result. Please make sure we have your correct contact details, so we can make sure you receive your result.

If you have not received your result within two weeks, please contact the Health Advisers at the John Hunter Clinic, explaining that you accepted an HIV test in the Colposcopy Clinic. You are welcome to call this number if you have any other questions or concerns regarding your HIV test.

John Hunter Clinic
Health Advisers: (020) 8846 6155
Helpline open:
9.30am - 5pm Mon, Tues, Thurs, Fri,
12.30pm - 5pm Weds

Please keep this leaflet for your reference.

Date attended: _ _ / _ _ / 2011

Result due by: _ _ / _ _ / 2011

Chelsea and Westminster Hospital NHS
NHS Foundation Trust

Appendix 5: Example of presentation of guidance. Presented by Dr Keith Radcliffe at the HIV in Europe Copenhagen 2012 Conference, March 2012

HIV in Europe guidance on indicator condition guided HIV testing in adults

Dr Keith Radcliffe

On behalf of: *HIV in Europe* Panel on Guidance on Indicator Condition-Guided HIV testing in Adults

Benefits of early HIV diagnosis

- **Benefits to the infected individual**
  - Antiretroviral therapy (ART) ➡ Reduced mortality & morbidity (near normal life expectancy[1])
- **Benefits to the public health**
  - Reduced onward transmission
    - Reduction in unsafe sexual behaviour (68%[2])
    - ART ➡ infectiousness ↓ (96% in HPTN 052[3])
  - Reduced health care costs

1. May M et al. *BMJ* 2011; **343**: d6016.
2. Marks G et al. JAIDS 2005; **39**: 446-53.
3. Cohen MS et al. *N Engl J Med* 2011;**365**:493-505.

Problem of late diagnosis

- Across Europe ~50% cases are diagnosed late i.e. below threshold for treatment i.e. CD4 <350[1]
- More frequent in older male immigrants
- Less frequent in
  - MSM (men-who-have-sex-with-men)
  - Women

New approaches needed

1. HIV/AIDS surveillance in Europe 2010. *ECDC & WHO.*

Barriers to early diagnosis

- **Patient – *afraid to ask***
  - Unawareness of risk
  - Denial
  - Fear of stigma and discrimination
  - Difficulty accessing services (especially immigrants)
- **Physician/health care worker – *afraid to offer***
  - Lack of knowledge
  - Lack of confidence in asking about risk behaviours and offering a test
  - Fear of being perceived as discriminatory
  - Perceived as being too time-consuming or difficult

Overcoming the barriers

- Offer of HIV test acceptable to patients in many settings e.g. 83% acute medical patients[1]
- But test often not offered e.g. only 43% cases of TB tested[2]
- High variability between clinicians in offering test e.g. 45-88% among doctors[3]
- Opt-out (automatic) testing leads to increased rates e.g. 96% for antenatal screening in UK in 2010[4]

1. Ellis S et al. *Clinical Medicine* 2011; **11**: 541-3.
2. Thomas William S et al. *Int J STD & AIDS* 2011; **22**: 748-50.
3. Petlo T et al. *Int J STD & AIDS* 2011; **22**: 727-9.
4. National Antenatal Infections Screening Monitoring. *HPA.*

Indicator condition guided HIV testing

- Presence of specific diagnoses/clinical scenarios act as an ***automatic trigger*** for offering an HIV test
- One part of a rational strategy of HIV testing
- Complements other guidelines
  - National
  - ECDC
  - WHO

Appendix 6: Template letter to the editor

HIV in Europe
Working Together for Optimal Testing and Earlier Care

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date

Re. HIV Indicator Conditions: Guidance for implementing HIV testing in Adults

To the editor

In collaboration with stakeholders of the European Region and based on the existing evidence including results of the HIDES study (The HIV indicator diseases across Europe study - http://www.hides.eu/), the Steering Committee of the HIV in Europe Initiative (www.hiveurope.eu/) in collaboration with the European Center for Disease Prevention and Control (ECDC) and WHO Europe has developed a guidance document on how to implement indicator condition targeted HIV testing as part of routine care in health care settings.

We hope the journal will consider publishing the executive summary of the guidance document (enclosed) to ensure that this important HIV testing strategy becomes integrated part of clinical practice in concerned specialities.

The concept of indicator condition-guided testing is an approach through which health care professionals can be encouraged to HIV test more patients based on objective markers (i.e. conditions). In a concentrated epidemic, testing should be focused on certain sub segments of the population. The objective of the HIDES study is to better define which conditions have an HIV prevalence of >0.1 %, as HIV testing of populations with an HIV prevalence above this has shown to be cost-effective. Few data on HIV prevalence exist for various conditions and diseases where HIV prevalence is thought to be higher than in the general population, and the provision of evidence through HIDES will inform the guidance document as will the experiences of implementing additional surveys of HIV screening in suspected indicator conditions.

For more information please contact the HIV in Europe Secretariat at hiveurope@cphiv.dk . The full document can be downloaded at www.hiveurope.eu

Yours sincerely,

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Notes

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