9. MONITORING AND EVALUATION

Monitoring and evaluation are essential to implementation of provider-initiated HIV testing and counselling but may need to be supplemented by focused evaluations on specific aspects of programming. Regular evaluations of health care provider performance and patient satisfaction (including testing processes, pre-test information, consent process and post-test counselling) can help improve the effectiveness, acceptability and quality of HIV testing and counselling services.

1. INTRODUCTION

1.1 Background

In recent years, global commitment, action and resources to combat the HIV pandemic have increased markedly. In June 2006, the UN General Assembly endorsed the continued scale-up of HIV prevention, treatment, care and support with the goal of coming as close as possible to universal access by 2010.

Despite recent progress, at the end of 2006 an estimated 39.5 million people globally were living with HIV, and more than 4 million new HIV infections occurred in that year. Sub-Saharan Africa remains the most affected region, with 24.7 million people living with HIV (nearly two-thirds of the global burden), while epidemics in eastern Europe and Asia continue to grow[1].

Surveys in twelve high-burden countries in sub-Saharan Africa showed that a median of just 12% of men and 10% of women in the general population had been tested for HIV and received the results[2]. The result of low coverage and uptake of HIV testing and counselling and low levels of knowledge of HIV status is that the majority of people living with HIV access HIV testing and counselling only when they already have advanced clinical disease[3].

Where antiretroviral therapy is available, maximum benefit in terms of reduced morbidity and mortality is obtained when HIV is diagnosed before end-stage immunodeficiency. Even in settings where antiretroviral therapy is not yet available, interventions such as co-trimoxazole prophylaxis and antiretroviral prophylaxis for the prevention of mother-to-child transmission offer significant potential health benefits to individuals and their children. Earlier diagnosis also presents an opportunity to provide people with HIV with information and tools to prevent HIV transmission to others.

The revised Policy Statement on HIV Testing[4] published by UNAIDS and WHO in June 2004 emphasized the importance of increased knowledge of HIV status for expanding access to HIV prevention, treatment and care. The policy statement promoted both client-initiated HIV testing and counselling (also known as Voluntary Counselling and Testing, or VCT) and provider-initiated HIV testing and counselling.

1.2 Scaling up client-initiated HIV testing and counselling

Client-initiated approaches have been the primary model for providing HIV testing and counselling. Coverage of client-initiated HIV testing and counselling services is inadequate in both high-income and resource-constrained settings. WHO and UNAIDS strongly support the continued scale up of client-initiated HIV testing and counselling.

Uptake of client-initiated HIV testing and counselling has been hampered by many of the same factors that limit uptake of other HIV-related services, including stigma and discrimination, limited access to treatment, care and health services in general, as well as gender issues. A four-country survey in Asia showed that women were more likely to seek HIV testing and

counselling because their partner was ill, representing failures of diagnosis, prevention, treatment and care[5]. Underestimation of personal risk for HIV is also a frequent obstacle to uptake of client-initiated HIV testing and counselling, especially on the part of men[6,7,8].

Innovative approaches that reduce practical obstacles can increase access to and uptake of client-initiated HIV testing and counselling. The advent of rapid tests has reduced the time between taking tests and obtaining results, and where HIV testing and counselling is available in settings that are convenient to clients – such as at workplaces, in mobile clinics and during night hours – uptake increases markedly. Home-based HIV testing and counselling, often conducted as part of Demographic Household Surveys but increasingly as part of prevention and treatment interventions, is also emerging as a promising approach[9, 10, 11].

1.3. Scaling up provider-initiated HIV testing and counselling

Health facilities represent a key point of contact with people with HIV who are in need of HIV prevention, treatment, care and support. However, evidence from both industrialized and resource-constrained settings suggests that many opportunities to diagnose and counsel individuals at health facilities are being missed. In Australia, a review of records at a Canberra sexual health centre showed that more than half of HIV-positive patients with delayed diagnoses had earlier been in touch with health services, and almost all of those had at least one factor that should have prompted health care providers to consider the need for HIV testing and counselling[12]. A study in Uganda showed that, among adults who were offered HIV testing at a hospital (about half of whom were subsequently found to be HIV-positive), 83% were unaware of their HIV status, even though 88% had been to a health unit in the previous six months[13].

Provider-initiated HIV testing and counselling presents an opportunity to ensure that HIV is more systematically diagnosed in health care facilities in order to facilitate patient access to needed HIV prevention, treatment, care and support services.

In the industrialized world, a number of European countries have introduced provider-initiated HIV testing and counselling in the context of prenatal care. Provider-initiated HIV testing and counselling appears to have resulted in considerable increases in testing uptake in the United States, United Kingdom, Hong Kong, Singapore, Norway, and Canada, where the majority of clients (4/5 or more in most studies) agreed to be tested[14]. Concerned by persistent late diagnoses of HIV infection and a high proportion of people with HIV who are unaware of their HIV status, and in light of evidence that people who are aware of their HIV status reduce risk behaviours[15], the United States Centers for Disease Control and Prevention issued revised guidelines in September 2006 recommending "HIV screening" for all persons aged 13-64 years attending health facilities in the United States[16].

Several low and middle-income countries have introduced provider-initiated HIV testing and counselling in a variety of settings, including Botswana, Kenya, Malawi, South Africa and Uganda[17,18,19,20,21,22,23,24]. While data are still relatively limited, studies in prenatal care settings in

several low- and middle-income countries have shown that pregnant women were positively inclined to accept testing if they thought it could benefit their baby.

Evidence from both resource-rich and resource-poor settings indicates that the uptake of testing increases when testing is routinely discussed and offered, and where it is well-integrated into prenatal care[25,26,27,28]. Findings from a growing number of studies in settings other than pre-natal care are also encouraging. Comparisons of data collected before and after the introduction of provider-initiated HIV testing and counselling consistently show significantly higher uptake, as documented in post-partum wards in Botswana[29]; pediatric wards in Zambia[30]; tuberculosis clinics[31] as well as Ugandan pediatric wards[32], maternity ward[33] and STI clinics[34]. In Mbarara hospital in Uganda, increased uptake of HIV testing appeared to be associated with clinical benefits for patients. People diagnosed HIV-positive after provider-initiated HIV testing and counselling was introduced were at an earlier clinical stage and had higher CD4 counts than those identified beforehand, and were therefore more likely to be referred to treatment at an appropriate time[35].

Concerns exist that provider-initiated HIV testing and counselling could deter clients from accessing health services. Although limited, the available evidence does not support those fears. The introduction of provider-initiated HIV testing and counselling in antenatal care clinics in Botswana appears to have caused neither reduction in the use of prenatal care nor decline in the proportion of people receiving test results[36], and in Zimbabwe has had no negative effects on post-test counselling rates or the delivery of antiretroviral prophylaxis[37].

Studies have found patients to have generally positive attitudes about provider-initiated HIV testing and counselling. When hospitalized patients in the United States were asked how they would feel about an unsolicited HIV test, most had positive responses[38]. A comparison of three models of provider-initiated HIV testing and counselling in a tuberculosis clinic in Kinshasa, Democratic Republic of the Congo, found that more than two-thirds of clients preferred "opt-out" testing where the test would be performed unless they declined, notwithstanding common perceptions that it would be difficult to decline the test[39].

Concerns also exist that in some settings increased knowledge and disclosure of HIV status may be accompanied by increased stigma, discrimination, abandonment and violence. In a review of 17 studies, negative consequences of disclosure, including violence, were reported in 3% to 15% of cases, with other studies reporting lower or higher frequencies[40,41,42,43,44], the latter in settings with high baseline domestic violence. A systematic review of partner notification in the United States found few negative consequences[45], while a study in Tanzania found that about half of respondents reported receiving support from their partner[46]. Evidence from Kenya and Zambia shows that the majority of HIV-positive women reported positive outcomes with disclosure, including some who feared they would not receive support[47].

On balance, the available evidence suggests that provider-initiated HIV testing and counselling can be an important addition to the range of approaches available for scaling up HIV testing and

counselling and facilitates access to HIV treatment, prevention, care and support services. However, concerns about the potential coercion of patients and adverse outcomes of disclosure underscore the importance of adequate training and supervision for health care providers, particularly in the processes of counselling, obtaining informed consent and maintaining confidentiality of HIV test results. Close monitoring and evaluation, especially in the implementation stages, will be needed to ensure that provider-initiated HIV testing and counselling is implemented in a way that minimizes adverse outcomes and maximizes benefits for patients.

1.4 Adaptation of the guidance

The global guidance presented in this document will need to be adapted to different epidemiological and social contexts. The adaptation process will require an assessment of the risks and benefits of introducing provider-initiated HIV testing and counselling in a particular setting, including an appraisal of available resources, prevailing standards of HIV prevention, treatment, care and support and the social, legal and policy framework that is in place. In generalized epidemic settings where resources and capacity are limited, phased implementation in priority health facilities may be appropriate.

Adaptation of this guidance document and implementation of provider-initiated HIV testing and counselling should be undertaken in consultation with all key stakeholders, including civil society groups and people living with HIV/AIDS. Careful monitoring and evaluation will allow best use of available resources and help avoid negative outcomes, including stigma, discrimination, violence, breaches of confidentiality, coercion or unmet demand for treatment and other HIV services.

Endorsement of provider-initiated HIV testing and counselling by WHO and UNAIDS is not an endorsement of coercive or mandatory HIV testing. The overriding principle for health care providers should always be to do what is in the best interests of the individual patient. This requires giving individuals sufficient information to make an informed and voluntary decision to be tested, maintaining patient confidentiality, performing post-test counselling and making referrals to appropriate services.

2. OBJECTIVES

This document offers basic operational guidance on provider-initiated HIV testing and counselling in health facilities. It is intended for a wide audience, in particular policy-makers, HIV/AIDS programme planners and coordinators, health-care providers and non-governmental organizations involved in the provision of HIV/AIDS services. It does not address client-initiated HIV counselling and testing in detail, for which guidance already exists[48,49] and which WHO and UNAIDS strongly support.

The guidance aims for synergy between medical ethics and clinical, public health and human rights objectives. These include:

- Enabling people with HIV to know their HIV status in an informed and voluntary manner; to seek and receive HIV prevention, treatment, care and support services; to prevent the transmission of HIV and to be protected from HIV-related stigma, discrimination and violence.
- Improving treatment and prevention outcomes
- Promoting the right to autonomy, privacy and confidentiality
- Promoting evidence-based policies and practices and an enabling environment for implementation
- Elaborating the roles and responsibilities of health care providers in ensuring access to HIV related testing, counselling and related interventions.

The document elaborates upon the 2004 UNAIDS/WHO Policy Statement on HIV Testing by providing the following:

- Revised terminology for provider-initiated HIV testing and counselling (Section 3)
- Guidance on the implementation of provider-initiated HIV testing and counselling in different epidemic types and for different populations including children and adolescents (Section 4)
- A description of the enabling environment, including the recommended HIV services and the social, policy and legal framework needed to support implementation (Section 5)
- A description of the processes to be followed for provider-initiated HIV testing and counselling, including minimum pre-test information, informed consent and information to be provided during post-test counselling (Section 6)
- A brief discussion on testing technologies (Section 7)
- A brief discussion on adapting this document to national and local contexts (Section 8)
- A brief discussion on monitoring and evaluation (Section 9).

This document was developed drawing upon evidence and expert opinion presented at a consultation convened by WHO and UNAIDS in July 2006[50]; public comment received from more than 150 organizations and individuals during an online consultation period between November 2006 and February 2007, and additional consultations with a wide range of individuals and organizations.

3. TERMINOLOGY

The following terminology is used in this document:

Client-initiated HIV testing and counselling (also called Voluntary Counselling and Testing, or VCT) involves individuals actively seeking HIV testing and counselling at a facility that offers these services. Client-initiated HIV testing and counselling usually emphasizes individual risk assessment and management by counsellors, addressing issues such as the desirability and implications of taking an HIV test and the development of individual risk reduction strategies. Client-initiated HIV testing and counselling is conducted in a wide variety of settings including health facilities, stand-alone facilities outside health institutions, through mobile services, in community-based settings and even in people's homes.

Provider-initiated HIV testing and counselling refers to HIV testing and counselling which is recommended by health care providers to persons attending health care facilities as a standard component of medical care. The major purpose of such testing and counselling is to enable specific clinical decisions to be made and/or specific medical services to be offered that would not be possible without knowledge of the person's HIV status.

In the case of persons presenting to health facilities *with symptoms or signs of illness that could be attributable to HIV*, it is a basic responsibility of heath care providers to recommend HIV testing and counselling as part of the patient's routine clinical management. This includes recommending HIV testing and counselling to tuberculosis patients and persons suspected of having tuberculosis.

Provider-initiated HIV testing and counselling also aims to identify unrecognized or unsuspected HIV infection in persons attending health facilities. Health care providers may therefore recommend HIV testing and counselling to patients in some settings even if they *do not have obvious HIV-related symptoms or signs*. Such patients may nevertheless have HIV and may benefit from knowing their HIV-positive status in order to receive specific preventive and/or therapeutic services. In such circumstances, HIV testing and counselling is recommended by the health care provider as part of a package of services provided to all patients during all clinical interactions in the health facility.

It is emphasized that, as in the case of client-initiated HIV testing and counselling, provider-initiated HIV testing and counselling is voluntary and the "three C's" – informed consent, counselling and confidentiality – must be observed.

Substantial debate has occurred about whether provider-initiated HIV testing and counselling in health facilities should employ so-called "opt-out" or "opt-in" approaches.

With "opt-in" approaches, patients must affirmatively agree to the test being performed after pre-test information has been received. Informed consent is analogous to that required for special investigations or interventions in clinical settings such as liver biopsy or surgical interventions.

With "opt-out" approaches, individuals must specifically decline the HIV test after receiving pre-test information if they do not want the test to be performed. This approach to informed consent is analogous to that required for common clinical investigations such as chest X-rays, blood tests and other non-invasive investigations. In most circumstances, the health care provider's recommendation will lead to the procedure being performed unless the patient declines.

Consistent with WHO policy options developed in 2003[51] and with the 2004 WHO/UNAIDS Policy Statement on HIV Testing[52], an "opt-out" approach to provider-initiated HIV testing and counselling is adopted in this document. However, the document also acknowledges that in some circumstances, such as in health facilities that serve highly vulnerable populations, "opt-in" approaches merit consideration. Whether patients "opt-in" or "opt-out", the end result should be the same: an informed decision by the patient to accept or decline the health care provider's recommendation of an HIV test. The terms "opt-in" and "opt-out" are generally avoided in this document in favour of "provider initiated HIV testing and counselling" which incorporates the informed right of the patient to decline the recommendation of an HIV test.

No distinction is made in this document between HIV testing and counselling that is recommended for "diagnostic" purposes (that is, for patients with HIV-related symptoms) and HIV testing and counselling that is recommended to patients who may have HIV but who are not symptomatic. Terminology such as "HIV screening", "routine offer" and "routine recommendation"[53], are also avoided in favour of "provider-initiated HIV testing and counselling".

Guidance in the document is formulated in terms of whether a recommendation of HIV testing and counselling should be made by the health care provider to the patient, and in what circumstances.

> ***Provider-initiated HIV testing and counselling is neither mandatory nor compulsory.*** *WHO and UNAIDS do not support mandatory or compulsory testing of individuals on public health grounds.*

4. RECOMMENDATIONS FOR PROVIDER-INITIATED HIV TESTING AND COUNSELLING IN DIFFERENT TYPES OF HIV EPIDEMICS

Guidance on the implementation of provider-initiated HIV testing and counselling in this document is categorized according to HIV epidemic type (Box 1)[54]

Box 1: Typology of HIV Epidemics

WHO and UNAIDS define different types of HIV epidemics as follows:

1. Low-level HIV epidemics

Although HIV may have existed for many years, it has never spread to significant levels in any sub-population. Recorded infection is largely confined to individuals with higher risk behaviour: e.g. sex workers, drug injectors, men having sex with other men. Numerical proxy: HIV prevalence has not consistently exceeded 5% in any defined sub-population.

2. Concentrated HIV epidemics

HIV has spread rapidly in a defined sub-population, but is not well-established in the general population. This epidemic state suggests active networks of risk within the sub-population. The future course of the epidemic is determined by the frequency and nature of links between highly infected sub-populations and the general population. Numerical proxy: HIV prevalence is consistently over 5% in at least one defined sub-population but is below 1% in pregnant women in urban areas.

3. Generalized HIV epidemics

HIV is firmly established in the general population. Although sub-populations at high risk may contribute disproportionately to the spread of HIV, sexual networking in the general population is sufficient to sustain an epidemic independent of sub-populations at higher risk of infection. Numerical proxy: HIV prevalence consistently over 1% in pregnant women.

4.1 Provider-initiated HIV testing and counselling in all epidemic types

4.1.1 Symptomatic patients

Presentation to a health facility with symptoms or signs of disease implies a desire for diagnosis, treatment and care. In all types of HIV epidemics, health care providers should recommend HIV testing and counselling as part of the standard of care to all adults, adolescents or children who present to health facilities with signs, symptoms or medical conditions that could indicate HIV infection. These include, but are not necessarily limited to, tuberculosis and other conditions specified in the WHO HIV clinical staging system[55]. Many other common, minor complaints may also be indicative of underlying HIV infection.

Although a recommendation of HIV testing and counselling will most often be made to symptomatic patients during acute medical care, individuals with a medical condition or symptoms suggestive of HIV may also be seen in other clinical settings. Failure to recommend HIV testing and counselling to a patient with symptoms which may be HIV-related is substandard medical practice.

4.1.2 Symptomatic and HIV-exposed children

Determining the HIV status of children exposed to HIV during pregnancy, labour or breastfeeding is an important part of follow-up services in programmes for the prevention of mother-to-child HIV transmission (PMTCT). HIV testing and counselling should therefore be recommended for all HIV-exposed infants or infants born to HIV-positive women as a routine component of the follow-up care for these children.

In the first 18 months of life, methods of HIV testing that rely on the detection of the HIV virus or its products (virological testing) are required as HIV antibody testing may not reliably confirm the true HIV status of the infant. Virological methods are usually more expensive and technically demanding.

Because of the rapid progression of immunodeficiency in children and the non-specificity of clinical signs, HIV testing and counselling should also be recommended for children presenting with suboptimal growth or malnutrition in generalized epidemics, and may be considered for children under certain circumstances in other epidemic settings, such as when malnourished children do not respond to appropriate nutritional therapy.

Decisions about HIV testing for children may usefully be guided by clinical algorithms such as the one used for the Integrated Management of Childhood Illness (IMCI).[56]

4.1.3 Men undergoing circumcision as an HIV prevention intervention

Studies have recently shown up to 60% efficacy of male circumcision in preventing HIV transmission from women to men. Accordingly, WHO and UNAIDS have issued a series of recommendations endorsing male circumcision as an intervention for the prevention of HIV[57]. The recommendations focus primarily on the implementation of male circumcision in high-prevalence settings where circumcision rates are currently low. Consistent with these recommendations, HIV testing and counselling should be recommended to all men seeking circumcision as an HIV prevention intervention.

4.2 Provider-initiated HIV testing and counselling in generalized epidemics

4.2.1 Implementation in all health facilities

In generalized epidemics where an enabling environment is in place and adequate resources are available, including a recommended standard of HIV prevention, treatment and care (see Section 5), health care providers should recommend HIV testing and counselling to all adults and adolescents seen in all health facilities. This applies to medical and surgical services, public and private facilities, inpatient and outpatient settings and mobile or outreach medical services.

HIV testing and counselling should be recommended by the health care provider as part of the normal standard of care provided to the patient, regardless of whether the patient shows signs and symptoms of underlying HIV infection or the patient's reason for presenting to the health facility.

4.2.2 Priorities for implementation

In generalized epidemics, resource and capacity constraints may require a phased implementation of provider-initiated HIV testing and counselling, with certain health facilities or patient groups initially selected as priorities. Selection of priority health facilities or patient groups should be guided by an assessment of the local epidemiological and social context. The key steps in making such an assessment are described in Section 8.

The following should be considered priorities for the implementation of provider-initiated HIV testing and counselling in generalized epidemic settings:

- **Medical inpatient and outpatient facilities, including tuberculosis clinics**

In generalized epidemics, hospital medical wards usually have a high concentration of patients with HIV who would benefit from diagnosis, treatment and care. Because not everyone with severe HIV-associated immunodeficiency has obvious clinical symptoms or signs of disease, HIV testing and counselling should be recommended to all patients admitted to hospitals and other inpatient facilities in generalized epidemic settings. This includes patients suspected of having, diagnosed with or being treated for tuberculosis.

Although outpatients are generally less ill than inpatients, HIV testing and counselling should also be recommended to all persons attending medical outpatient facilities in generalized epidemic settings.

- **Antenatal, childbirth and postpartum health services**

HIV testing and counselling as early as possible during pregnancy enables pregnant women to benefit from prevention, treatment and care and to access interventions for reducing HIV transmission to their infants.

A substantial proportion of women present to health facilities at the time of labour without having previously accessed antenatal HIV testing and counselling. Although antiretroviral prophylaxis for PMTCT is most effective when given during pregnancy, labour and in the early postpartum period, it has also been shown to be effective when started at the time of labour and/or in the infant shortly after childbirth. Therefore, HIV testing and counselling should be recommended to all women of unknown HIV status in labour or, if this is not feasible, as soon as possible after delivery[58].

If an HIV test has not previously been performed, HIV testing and counselling should also be recommended to women in the postpartum period, preferably early in this period, to enable them to receive HIV-related services for themselves and the infant, including infant feeding counselling and support[59], and diagnosis of the infant, if appropriate.

Antiretroviral prophylaxis and infant feeding counselling are important interventions for the prevention of mother-to-child HIV transmission, and must be available as part of the standard of care for pregnant women who are diagnosed HIV-positive as a result of provider-initiated HIV testing and counselling. Rapid HIV testing is also important in these settings so that interventions can be delivered in a timely manner.

It is important to ensure that women identified as HIV-negative receive any necessary, immediate support to prevent becoming infected during the course of pregnancy and the breastfeeding period, as the risk of mother-to-child transmission is high if women seroconvert during these times.

Women diagnosed HIV-positive should be encouraged to propose HIV testing and counselling to their male partners. Such testing can be done either in the health facility, for example, following counselling of the couple, or through referral of the partner to client-initiated HIV testing and counselling services.

- **STI services**

In generalized epidemics, HIV is primarily transmitted through heterosexual sex, and the presence of a sexually transmitted infection (STI) can increase the risk of HIV acquisition or transmission. STI clinics are an important venue for increasing knowledge of HIV status among both men and women who are sexually active and increasing access to HIV prevention, treatment and care.

Accordingly, HIV testing and counselling should be recommended to all persons presenting at STI or sexual health services in generalized epidemics, or who present at other types of health services with an STI.

Patients diagnosed with an STI should be encouraged to propose HIV testing and counselling to their partners. Such testing can be done either in the health facility, for example, following counselling of the couple, or through referral of the partner to client-initiated HIV testing and counselling services.

- **Health services for most-at-risk populations**

Specific population groups in all epidemic types are at higher risk for HIV. These may include sex workers and their clients, injecting drug users, men who have sex with men, prisoners, migrants and refugees. These populations often suffer worse health problems and have more difficulty accessing quality health services.

Strategies are needed to increase access to and uptake of HIV testing and counselling for these groups, particularly through innovative client-initiated approaches such as services delivered through mobile clinics, in other community settings, through harm reduction programmes or

through other types of outreach. Prisoners should be able to access client-initiated HIV testing and counselling at any time during incarceration without being subject to mandatory HIV testing. Efforts to expand access to client-initiated HIV testing and counselling for most-at-risk populations should include social mobilization and education initiatives to encourage people to learn their HIV status and to access services.

Because of their special health needs, populations most at-risk for HIV may be more likely to attend specific health services, such as acute care, STI or drug dependence treatment services. Consideration should therefore be given to recommending HIV testing and counselling to all patients who attend those facilities or services if this is epidemiologically appropriate and socially acceptable. Plans for provider-initiated testing and counselling in such settings should prioritize the implementation of a supportive social, policy and legal framework, as described in Section 5.2.

Populations most at-risk of HIV transmission may be more susceptible to coercion, discrimination, violence, abandonment, incarceration or other negative consequences upon disclosure of an HIV-positive test result. Health care providers will usually require special training and supervision to uphold standards of informed consent and confidentiality for these populations. Additional discussion of the right to decline HIV testing, of the risks and benefits of HIV testing and disclosure, and about social support needs may be required. An "opt-in" approach to informed consent may merit consideration for highly vulnerable populations.

Involving most-at-risk populations and their advocates in the development of HIV testing and counselling protocols and in the monitoring and evaluation of provider-initiated HIV testing and counselling programmes will help to ensure that the most appropriate and acceptable practices are followed.

Health services should also ensure that mechanisms are in place for referral to prevention, care and support services provided by community-based organizations and civil society groups[60].

- **Services for younger children (under 10 years of age)**

In generalized epidemics, a substantial proportion of children seen at health facilities is infected with HIV. Children have a more rapid progression of HIV disease than adults and signs and symptoms of HIV-infection are often not specific[61]. Without access to care, at least one quarter of children with HIV die before the age of one year and most die before reaching five years of age. Antiretroviral treatment and/or interventions such as co-trimoxazole prophylaxis markedly reduce child morbidity and mortality, highlighting the importance of early paediatric HIV diagnosis.

HIV testing and counselling should therefore be recommended to all children seen in pediatric health services in generalized epidemic settings.

Special considerations will apply for obtaining informed consent in the case of children (see Section 6).

Because maternal antibodies may persist in exposed infants in the first year of life, antibody testing does not always reliably indicate the HIV status of the child. HIV testing for children less than 18 months of age is ideally undertaken using virological methods wherever possible (see Section 7).

Because parents generally accompany their children during visits to child health services, opportunities will arise to recommend HIV testing and counselling to the parents and siblings of the child, such as through family or couple counselling either in the health facility or through referral to client-initiated HIV testing and counselling services. HIV testing and counselling is especially important for mothers of HIV-infected children and for mothers who were not tested in PMTCT services.

- **Surgical services**

HIV testing simply for knowledge of HIV status by service providers for the purpose of "infection control" is not justified, as standard precautions should be followed for all patients regardless of their HIV status. HIV test results must not be used to deny surgery or clinical services that are otherwise indicated.

Although surgical patients generally have a lower HIV prevalence than non-surgical patients[62], HIV testing and counselling should nevertheless be recommended to all surgical patients attending health facilities in generalized epidemic settings. As in the case of all other people accessing health facilities in generalized epidemic settings, the objective of recommending HIV testing and counselling to surgical patients is to facilitate the timely detection of HIV and to provide the best possible care and support to the patient.

HIV testing and counselling should be recommended to all men seeking circumcision as an HIV prevention intervention.

- **Services for adolescents**

In generalized epidemics, adolescents (10-19 years), particularly girls, are at high risk of acquiring HIV. Adolescent-provider encounters in clinical settings are an opportunity for giving information and counselling about sexual and reproductive health. It is therefore recommended that adolescent health services be considered a priority for the implementation of provider-initiated HIV testing and counselling in generalized epidemics.

Special attention should be given to issues around informed consent in adolescents (See Section 6).

- **Reproductive health services, including family planning**

Knowledge of HIV status may increase a woman's ability to make voluntary and informed decisions about the number, spacing and, timing of pregnancies, including the use of

contraceptive methods. It is therefore recommended that provider-initiated HIV testing and counselling be integrated into reproductive health services in generalized epidemics.

Patients diagnosed HIV-positive in these services should be encouraged to propose HIV testing and counselling to their male partners. Such testing can be done either in the health facility, for example, following counselling of the couple, or through referral of the partner to client-initiated HIV testing and counselling services.

4.3 Provider-initiated HIV testing and counselling in concentrated and low-level HIV epidemics

4.3.1 Recommendation to prioritize provider-initiated testing and counselling for symptomatic patients

Health care providers should **not** recommend HIV testing and counselling to all persons attending all health facilities in settings with low-level and concentrated epidemics, since most people will have a low risk of exposure to HIV. In such settings, the priority should be to ensure that HIV testing and counselling is recommended to all adults, adolescents and children who present to health facilities *with signs and symptoms suggestive of underlying HIV infection*, including tuberculosis; and to children known to have been perinatally exposed to HIV.

If data show that HIV prevalence in patients with tuberculosis is very low, the recommendation of HIV testing and counselling to these patients may not remain a priority.[63]

4.3.2 Options for the implementation of provider-initiated HIV testing and counselling in selected health facilities

Although a country as a whole may have a low HIV prevalence, prevalence and/or risk of transmission may be higher within certain regions, among certain populations or among persons attending certain health facilities. Decisions about whether and how to implement provider-initiated HIV testing and counselling in selected health facilities in low-level and concentrated epidemics should be guided by an assessment of the epidemiological and social context. Based on that assessment, consideration may be given to the implementation of provider-initiated HIV testing and counselling in the following health facilities or services:

- **STI services**

The same considerations apply as in the case of generalized epidemics (see Section 4.2.2, page 24).

- **Health services for most-at-risk populations**

The same considerations apply as in the case of generalized epidemics (see Section 4.2.2, page 24-25).

- **Antenatal, childbirth and postpartum services**

A number of countries with concentrated or low-level epidemics that are aiming to eliminate HIV transmission to children have implemented provider-initiated HIV testing and counselling for all pregnant women.

Other countries – particularly those with very limited resources – have not implemented PMTCT programmes and are focusing on other priorities. Decisions about whether to make provider-initiated HIV testing and counselling part of such services in low-level and concentrated epidemics need to be based on an assessment of local resources and the epidemiological and social context. Recommending HIV testing and counselling may be appropriate for pregnant women identified as being at higher risk of HIV exposure according to national or local criteria.

However, all countries should address mother-to-child transmission in national HIV/AIDS plans, even if only some elements of a comprehensive PMTCT programme can initially be included. Information about MTCT and HIV testing and counselling should also be given to pregnant women during antenatal information sessions.

Health care providers should **not** recommend HIV testing and counselling for all children in pediatric services in concentrated or low-level epidemics. HIV testing and counselling be targeted to children with symptoms, signs or conditions potentially associated with HIV, or those known to have been exposed.

4.4 Summary of recommendations

ALL EPIDEMIC SETTINGS

HIV testing and counselling should be recommended in all health facilities to:

- *Adults, adolescents, or children who present in clinical settings with signs and symptoms or medical conditions that could indicate HIV infection, including tuberculosis*.*
- *HIV-exposed children or children born to HIV-positive women.*
- *Children with suboptimal growth or malnutrition or malnourished children, in generalized epidemics, who are not responding to appropriate nutritional therapy.*
- *Men seeking circumcision as an HIV prevention intervention.*

* If data show that HIV prevalence in patients with tuberculosis is very low, the recommendation of HIV testing and counselling to these patients may not remain a priority.

GENERALIZED EPIDEMIC SETTINGS

HIV testing and counselling should additionally be recommended to all patients in all health facilities, including medical and surgical services, public and private facilities, inpatient and outpatient settings and mobile or outreach medical services.

In the case of phased implementation of provider-initiated HIV testing and counselling, an approximate order of priority, depending on local conditions, may be as follows:

- *Medical inpatient and out patient facilities, including TB clinics*
- *Antenatal, childbirth, and postpartum health services*
- *STI services*
- *Services for most-at-risk populations*
- *Services for children under 10 years of age*
- *Services for adolescents*
- *Surgical services*
- *Reproductive health services, including family planning*

CONCENTRATED AND LOW-LEVEL EPIDEMIC SETTINGS

Implementation of provider-initiated HIV testing and counselling should additionally be considered in:

- *STI services*
- *Services for most-at-risk populations*
- *Antenatal, childbirth, and postpartum health services*
- *TB services*

5. ENSURING AN ENABLING ENVIRONMENT

Provider-initiated HIV testing and counselling should be implemented with the objective of maximizing the health and well-being of individuals through the timely detection of HIV, prevention of HIV transmission and subsequent access to appropriate HIV prevention, treatment, care and support services. Implementation of provider-initiated HIV testing and counselling must include measures to prevent compulsory testing and unauthorized disclosure of HIV status, and potential negative outcomes of knowing one's HIV status. Potential negative outcomes include discriminatory attitudes of health care providers; financial burden associated with testing and/or unauthorized disclosure of an individual's HIV status resulting in discrimination or violence. Women may be more likely than men to experience discrimination, violence, abandonment or ostracism when their HIV status becomes known. Although a synthesis of studies on disclosure of HIV status among women in developing countries reported positive outcomes related to disclosure in most cases[64], disclosure-related violence does occur and preventive measures must be taken[65].

Positive outcomes are most likely when HIV testing and counselling is confidential and is accompanied by counselling and informed consent, staff are adequately trained, the person undergoing the test is offered or referred to appropriate follow-up services and an adequate social, policy and legal framework is in place to prevent discrimination.

5.1 Recommended HIV-related services

Provider-initiated HIV testing and counselling should be accompanied by the recommended package of HIV-related prevention, treatment, care and support services shown in Table 1. Although not all the services need necessarily be available in the same facility as where the HIV test is performed, they should be available through local referral.

Although access to antiretroviral therapy is expanding, in many settings it is not yet available. The package of care and support services described in Table 1 may nevertheless provide significant health benefits for people who are diagnosed HIV-positive. Although access to antiretroviral therapy should not be an absolute prerequisite for the implementation of provider-initiated HIV testing and counselling, there should at least be a reasonable expectation that it will become available within the framework of a national plan to achieve universal access to antiretroviral therapy for all who need it.

Antiretroviral prophylaxis and infant feeding counselling are important interventions for the prevention of mother-to-child transmission. These interventions must be available as part of the standard of care for pregnant women who are diagnosed HIV-positive through provider-initiated HIV testing and counselling.

Provision of extensive prevention services may not be feasible or required for all people who test HIV-negative in many resource-limited health facilities. However, in most cases, these can be made available through referral to community-based or other appropriate services.

Table 1: HIV-related services recommended for implementation of provider-initiated HIV testing and counselling in health facilities

- *Individual or group pre-test information*
- ***Basic prevention services for persons diagnosed HIV-negative:***
  - *Post-test HIV prevention counselling for individuals or couples that includes information about prevention services*
  - *Promotion and provision of male and female condoms*
  - *Needle and syringe access and other harm reduction interventions for injecting drug users*
  - *Post-exposure prophylaxis, where indicated*
- ***Basic prevention services for persons diagnosed HIV-positive:***
  - *Individual post-test counselling by a trained provider that includes information about and referral to prevention, care and treatment services, as required*
  - *Support for disclosure to partner and couples counselling*
  - *HIV testing and counselling for partners and children*
  - *Safer sex and risk reduction counselling with promotion and provision of male and female condoms*
  - *Needle and syringe access and other harm reduction interventions for injecting drug users*
  - *Interventions to prevent mother-to-child transmission for pregnant women, including antiretroviral prophylaxis*
  - *Reproductive health services, family planning counselling and access to contraceptive methods*
- ***Basic care and support services for persons diagnosed HIV-positive:***
  - *Education, psychosocial and peer support for management of HIV*
  - *Periodic clinical assessment and clinical staging*
  - *Management and treatment of common opportunistic infections*
  - *Co-trimoxazole prophylaxis*
  - *Tuberculosis screening and treatment when indicated; preventive therapy when appropriate*
  - *Malaria prevention and treatment, where appropriate*
  - *STI case management and treatment*
  - *Palliative care and symptom management*
  - *Advice and support on other prevention interventions, such as safe drinking water*
  - *Nutrition advice*
  - *Infant feeding counselling*
  - *Antiretroviral treatment, where available*

5.2 Supportive social, policy and legal framework

At the same time as provider-initiated HIV testing and counselling is implemented, equal efforts must be made to ensure that a supportive social, policy and legal framework is in place to maximize positive outcomes and minimize potential harms to patients.

5.2.1 Basic elements

The following elements of a social, policy and legal framework should be in place to support the implementation of provider-initiated HIV testing and counselling in health facilities:

- **Community preparedness and social mobilization**

Public information campaigns should be conducted to raise community awareness about HIV/AIDS; promote the rights of people living with HIV/AIDS and the benefits of knowing and disclosing one's HIV status; and provide information about the available services for HIV testing, prevention, care and support. People living with HIV/AIDS and affected communities should be involved in the formulation, implementation and monitoring of such campaigns.

- **Adequate resources and infrastructure**

Policy-makers and planners should anticipate the additional resources required for the implementation of provider-initiated HIV testing and counselling in health facilities, including for training, clinical infrastructure and the purchase of commodities such as HIV test kits and other clinical supplies.

WHO and UNAIDS recommend that, to the extent possible, provider-initiated HIV testing and counselling should not involve any additional costs for patients at the point of service delivery. Resources allocated to the implementation of provider-initiated HIV testing and counselling should not be diverted from other needed services, including client-initiated approaches to HIV testing and counselling.

Adequate clinical infrastructure must also be available, including adequate private consulting rooms and lockable storage for medical records. Additional resources may be needed to assist community-based organizations in providing follow-up counselling, support and other services.

- **Health care provider training**

A major investment required for the implementation of provider-initiated HIV testing and counselling is likely to be in the training and ongoing supervision of health care providers and administrators.

A redistribution of health worker responsibilities (task-shifting) in health facilities may help to overcome chronic staff shortages in some settings. This may entail identifying appropriately skilled