MINISTRY OF HEALTH
KINGDOM OF SWAZILAND

NATIONAL COMPREHENSIVE HIV PACKAGE OF CARE

for Adults and Adolescents in Swaziland

JANUARY 2010

World Health Organization
REGIONAL OFFICE FOR Africa

MOHSW

ICAP
International Center for AIDS Care and Treatment Programs

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ACKNOWLEDGEMENTS

The National Guidelines on the Comprehensive HIV Package of Care for Adults and Adolescents in Swaziland was made possible by the commitment of the members of the Technical Working Group for HIV Treatment, Care and Support, who have worked tirelessly to ensure that the information included in the document is comprehensive and applicable to the lowest level of the health care delivery system.

Special thanks goes to ICAP for the great work in designing the layout of the document. The following are greatly appreciated:

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The following members of the Technical Working Group – Treatment, Care and Support – are appreciated for their dedication during the development of the Package of Care document:

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The following professionals are appreciated for their input:

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Mrs. Janet Khumalo, ICAP
Ms. Thandi Kunene, EGPAF
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FOREWORD

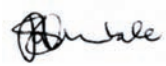
Swaziland continues to face the challenge of high HIV prevalence among the population and significant numbers of women estimated to be infected with the virus. The HIV epidemic has contributed to the overloading of the health system; which is struggling to keep up with the large numbers of people who need treatment and care as a result of HIV infection and AIDS-related illnesses. More than 70% of hospital attendance and admissions are due to HIV-related illnesses. Antiretroviral therapy has been proven to benefit the health of HIV-infected people and thus to reduce hospitalizations and death.

The Government of the Kingdom of Swaziland has committed resources towards the provision of free antiretroviral therapy to those who need it in the country. The National ART Programme in the Ministry of Health has been tasked with the responsibility of ensuring that antiretroviral therapy is available to Swazi citizens who need it; this is done following the guiding principles of equity in accessibility (rural and urban; rich or poor); affordability (free provision of services for ART); and quality and sustainability of services. Furthermore, the promotion of ART literacy has helped in building patients' capacity to self-manage HIV infection and be responsible for taking antiretroviral drugs as prescribed. This is one of the core strategies for limiting the development of HIV drug resistance—to ensure that the drugs in use in the country today can continue to be effective for as long as possible.

The development and reviewing of HIV treatment guidelines is one of the crucial measures to ensure standardization of treatment regimens, which will facilitate forecasting and monitoring of patients at the lowest level of health care service delivery (at clinics). In previous years, treatment guidelines focused on the use of antiretroviral drugs and on the monitoring of patients on ART. These new guidelines put the emphasis on holistic management of HIV-infected patients, whether or not they are on ART. Now called the Comprehensive HIV Package of Care, these guidelines emphasise management of the whole patient, not just the HIV disease, and provide information on assessing and managing nutritional status, mental health, reproductive health, adherence to care and treatment, and access to water and sanitation—among other important topics. The package been developed so as to make the information useful during the delivery of comprehensive HIV care and treatment services at all levels of the health care delivery system. This is in line with the decentralization of ART services to the clinic level, which is currently being coordinated by the National ART Programme.

The Package of Care is therefore a vital tool for the management of people living with HIV. It is hoped that provision of services guided by it will further improve the health of the people in Swaziland and reduce the morbidity and mortality in our country.

Mrs. Rejoice Nomathemba Nkambule



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ACRONYMS IN THIS DOCUMENT AND IN COMMON USE

3TC	lamivudine
ABC	abacavir
AA	Alcoholics Anonymous
ACF	Action contre la Faim ('action against hunger')
ADHD	attention deficit hyperactivity disorder
AFASS	acceptable, feasible, affordable, sustainable, and safe
AFB	acid-fast bacteria
ALT/AST	alanine aminotransferase/aspartate aminotransferase
ANC	antenatal care, or absolute neutrophil count, depending on context
ART	antiretroviral therapy
ARV	antiretroviral; also refers to antiretroviral drugs
ATV	atazanavir sulphate
AZT	zidovudine; also known as ZDV
BCG	bacille Calmette-Guérin
BMI	body mass index
BP	blood pressure
BUN	blood, urea, nitrogen
CBC	complete blood count
CBO	community-based organisation
CD	conduct disorder
CK	creatine kinase
CHAI	Clinton HIV/AIDS Initiative
CLHIV	child/children living with HIV
CMV	cytomegalovirus
CNS	central nervous system
COC	combined oral contraceptive
COSAD	Council on Substance Abuse and Drugs
CPT	cotrimoxazole preventive therapy
CSF	cerebrospinal fluid
CTX	cotrimoxazole
CXR	chest x-ray
CVA	cerebrovascular accidents
d4T	stavudine
ddC	zalcitabine; also known as dideoxycytidine)
ddI	didanosine
DM	diabetes mellitus
DMPA	depot medroxyprogesterone acetate
DNA PCR	DNA polymerase chain reaction

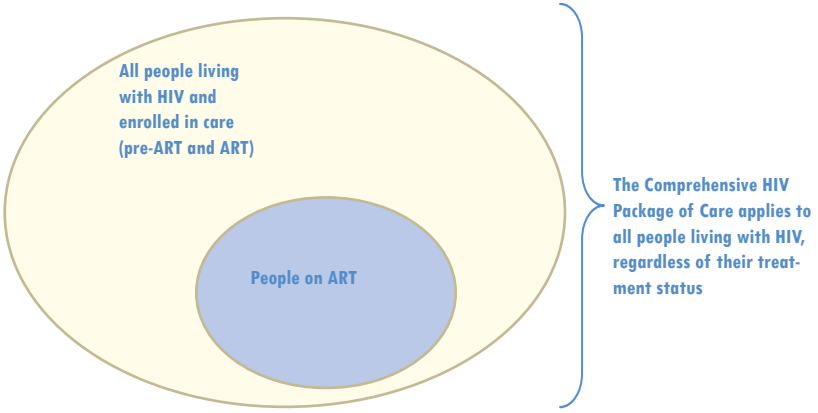
DOTS	directly observed therapy, short course
DRESS	drug rash with eosinophilia and systemic symptoms
DST	drug susceptibility test
DTP-Hib1	diphtheria, tetanus, pertussis, and Haemophilus influenzae Type B
EC	Expert Client
ECP	emergency contraceptive pills
EFV	efavirenz
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
EID	early infant diagnosis
FBC	full blood count
EMR	electronic medical records
FDC	fixed-dose combination
FP	family planning
FTC	emtricitabine
GSH	Good Shepherd Hospital
Hb	haemoglobin
HBV	hepatitis B virus
HBC	home-based care
HCW	health care workers
HEI	HIV-exposed infant
HepBSAg	hepatitis B surface antigen
HIV	human immunodeficiency virus
HIVAN	HIV-associated neuropathy
HMIS	health management information system
HSR	hypersensitivity reaction
HTC	HIV testing and counselling
ICAP	International Center for AIDS Care and Treatment Programs
IDU	injection drug user
IGA	income-generating activity
IDV	indinavir
IM	intramuscular
IMAI	integrated management of adolescent and adult illness
IMCI	integrated management of childhood illness
INH	isoniazid (isonicotinic acid hydrazide)
ICF	intensified case finding
IDU	injection drug user
IPC	infection prevention and control; also, sometimes, IP (infection prevention)
IPT	isoniazid preventive therapy
IRIS	immune reconstitution inflammatory syndrome
ITN	insecticide-treated bednet
ITP	inpatient therapeutic feeding programme
IU	international units

IUD	intrauterine device
IV	intravenous
KFT	kidney function test
KS	Kaposi's sarcoma
Kcal	kilocalories
LAM	lactational amenorrhea method
LFT	liver function test
LIP	lymphoid interstitial pneumonitis
LMP	last menstrual period
LNMP	last normal menstrual period
LPV/r	lopinavir/boosted with ritonavir
MC	male circumcision
MCH	maternal and child health
MD-TB	multidrug-resistant tuberculosis
MDT	multidisciplinary team
M&	monitoring and evaluation
MI	myocardial infarction
MOH	Ministry of Health
MSF	Médécins sans Frontières
MM	men who have sex with men
MTCT	mother-to-child transmission
MUAC	mid-upper arm circumference
NGO	nongovernmental organisation
NRL	National Referral Laboratory
NNRTI	non-nucleoside analog reverse transcriptase inhibitor
NRTI	nucleoside analog reverse transcriptase inhibitor
NtRTI	nucleotide analog reverse transcriptase inhibitor
NSAID	nonsteroidal anti-inflammatory drug
NTCP	National TB Control Programme
NVP	nevirapine
ODD	oppositional defiant disorder
OI	opportunistic infection
ORS	oral rehydration solution
OTP	outpatient therapeutic feeding programme
OVC	orphans and vulnerable children
PCR	polymerase chain reaction
PCP	pneumocystis carinii pneumonia; now known as pneumocystis jirovecii
PEP	postexposure prophylaxis
PEPFAR	The United States President's Emergency Plan for AIDS Relief
PGL	persistent generalised lymphadenopathy
PI	protease inhibitor
PITC	provider-initiated testing and counselling; sometimes known as PICT

PHU	primary health unit
PLHIV	person/people living with HIV
PML	progressive multifocal leukoencephalopathy
PMTCT	prevention of mother-to-child transmission
PO	by mouth
POC	Comprehensive HIV Package of Care
POP	progestin-only pill
PPD	purified protein derivative
PSI	Population Services International
PTB	pulmonary tuberculosis
RHM	Rural Health Motivator
RPR	rapid plasma reagin
RTI	respiratory tract infection
RTV	ritonavir
RUTF	ready-to-use therapeutic foods
SINAN	Swaziland Infant Nutrition Action Network
SD-NVP	single-dose nevirapine
SJS	Stevens-Johnson Syndrome
SMZ	sulfamethoxazole
SNAP	Swaziland National AIDS Programme
SPF	supplemental feeding programme
SQV	saquinavir
SRH	sexual and reproductive health
STI	sexually transmitted infection
TB	tuberculosis
TDF	tenofovir disoproxil fumarate
TEN	toxic epidermal necrosis
TMP	trimethoprim
TPHA	Treponema pallidum haemagglutination assay
TLC	total lymphocyte count
TST	tuberculin skin test
UNAIDS	Joint United Nations Programme on HIV/AIDS
USAID	US Agency for International Development
VCT	voluntary counselling and testing
VIA	visual inspection with acetic acid
URC	University Research Co.
VL	viral load
W/H	weight/height
WFP	World Food Programme
WHO	World Health Organization
XDR-TB	extensively drug-resistant TB
ZDV	zidovudine; also known as AZT

Chapter 1: INTRODUCTION TO THE COMPREHENSIVE HIV PACKAGE OF CARE

The Health Sector Response to HIV/AIDS Plan 2009–2014 prioritises the implementation of structured, comprehensive care for people living with HIV and AIDS. The ART Programme led the development of the Comprehensive HIV Package of Care to complement existing national guidelines. The package lays out a comprehensive approach to providing care services to adults, pregnant women, and adolescents across the continuum of care, focusing on the components of care preceding antiretroviral therapy (ART) at primary health care level. The package supports continuous, comprehensive care, both medical and psychosocial, rather than acute or episodic care



1.1 GOALS AND OBJECTIVES OF THE COMPREHENSIVE HIV PACKAGE OF CARE

Goal

The goal of the Comprehensive HIV Package of Care is to improve the quality of life of all people living with HIV (PLHIV) by providing a continuum of HIV care, from pre-ART to ART.

Objectives

- Provide comprehensive, quality health care and support services through the HIV care continuum.
- Provide structured follow-up of patients in care to monitor disease status and provide timely interventions as required.
- Empower health care workers to create awareness and increase uptake of HIV services in support of positive living among PLHIV—that is, protecting the health of the patients and transmission of HIV to their partners and families.
- Encourage patients' understanding and participation in the care plan, including adherence to care and medications.

1.2 PROVISION OF COMPREHENSIVE HIV CARE

All health facilities that provide care and treatment for PLHIV in Swaziland will implement this package of HIV care and treatment. Primary health care facilities are ideally placed to strengthen community linkages to ensure a continuum of care and regular follow-up of PLHIV. Clinicians, counsellors, community health workers, and other lay people are the key providers of the Comprehensive HIV Package of Care, comprising a multidisciplinary team for:

- People enrolled in HIV care but not yet eligible for ART.
- People already on ART.
- Pregnant women living with HIV.
- HIV-exposed infants and HIV-infected infants.
- People co-infected with HIV and tuberculosis (TB).
- PLHIV who may be exposed to high-risk behaviours, including prisoners, injection drug users (IDUs), sex workers, and men who have sex with men (MSM).

1.3 COMPONENTS OF THE COMPREHENSIVE HIV PACKAGE OF CARE

TABLE 1.1. SUMMARY OF THE COMPONENTS OF COMPREHENSIVE HIV CARE

CLINICAL	PSYCHOSOCIAL	PREVENTIVE/OTHER
• HIV testing and counselling, including early infant diagnosis (EID). • Baseline assessment. • Initiation and use of antiretroviral drugs (ARVs) in adults and adolescents (first- and second-line). • Transitioning from HIV care to HIV care and treatment. • Pre-ART and ART clinical and laboratory monitoring. • Assessing and managing common ARV side effects as well as HIV symptoms, including pain. • Tuberculosis (TB) case finding and screening, preventing, and treating TB. • Cotrimoxazole (CTX) and fluconazole prophylaxis. • Cancer screening and treatment. • Services for sexual and reproductive health (SRH), including family planning (FP) and male circumcision (MC). • Assessing and managing mental health conditions and substance abuse. • Palliative care.	• Adherence preparation and assessment. • Ongoing adherence counselling and support. • Step-up adherence counselling. • Psychosocial assessment. • Ongoing psychosocial support. • Counselling and support for disclosure—that is, a client's sharing his or her HIV status with others. • Community support, including access to support groups. • Counselling on substance use and abuse. • End-of-life support for the entire family.	• Primary prevention. • Positive prevention, including prevention of mother-to-child transmission (PMTCT), infant feeding, and postexposure prophylaxis (PEP). • Nutritional assessment, education, and support. • Counselling on hygiene, sanitation, and safe water.
CROSS-CUTTING COMPONENTS Family-focused care ~ Monitoring and evaluation (M&E)		

Chapter 2: HIV TESTING AND COUNSELLING – THE ENTRY POINT TO COMPREHEN SIVE HIV CARE

Key Reference Documents

- Government of the Kingdom of Swaziland. Policy on Safe Male Circumcision for HIV Prevention. 2009.
- Marufu T and Bock N. *Scaling Up Safe Male Circumcision in Swaziland—Strategy and Implementation Plan* [draft]. Brazzaville, Congo: World Health Organization Regional Office for Africa. 2008.
- Swaziland Ministry of Health. *HIV Testing and Counselling National Guidelines* [under revision as of February 2010]. April 2006.
- Swaziland Ministry of Health. National Tuberculosis Control Guidelines. May 2006.
- Swaziland Ministry of Health. *Prevention of Mother to Child Transmission of HIV Guidelines.* 2nd ed. 2006. Available at: http://www.unicef.org/swaziland/sz_publi cations_2006pmtctguidelines.pdf.

2.1 APPROACHES TO HIV TESTING AND COUNSELLING

HIV testing and counselling (HTC) is the entry point for HIV care. In Swaziland, the following approaches are currently in use:

- Client-initiated HIV testing and counselling, also known as voluntary counselling and testing (VCT).
- Provider-initiated HIV testing and counselling (PITC).

For more information on HTC models and approaches, see the national HIV testing and counselling national guidelines.

2.2 CLIENT-INITIATED TESTING AND COUNSELLING

VCT is offered in all the three models of HTC service provision:

- *Freestanding:* HTC that has its own location, unattached to a health facility.
- *Integrated:* HTC within any health facility, such as at clinics providing antenatal care (ANC), maternal¬, such as at clinics providing antenatal care (ANC), maternal¬–child health care (MCH), and others.
- *Mobile:* HTC provided via outreach (eg, a van or temporary site).

All patients presenting at a health care facility should be routinely offered HIV testing and counselling as part of basic services.

With HTC made accessible, clients are encouraged to seek out HTC services, ideally before falling ill. All health facilities should be able to offer HTC when a client requests it. For in-depth information about testing, see the national HIV testing and counselling guidelines.

2.3 PROVIDER-INITIATED HIV TESTING AND COUNSELING

In PITC, health care providers initiate routine HIV testing and counselling. PITC takes place in all scenarios where HTC will facilitate the provision of quality care services and will minimise missed opportunities.

PITC should be offered at all service provision points with emphasis on a family-focused approach. In other words, ask about other family members and try to draw them into care as well.

Adolescents are particularly vulnerable to HIV in Swaziland yet do not always have access to the prevention, care, and treatment services they need. Health care workers should make HIV testing services youth-friendly, nonjudgmental, and accessible to adolescents—by providing youth-friendly corners, for example.

Encourage all young people to know their HIV status.

HIV Testing and Counselling in a Maternal and Child Health Setting

All clients in maternal and child health settings—including pregnant and postpartum women, family planning clients, and children under five years of age—should be routinely offered HIV testing during clinic visits. Refer to the national HTC and PMTCT guidelines for details.

All people who test HIV positive, as well as all HIV-exposed infants, should be immediately enrolled in HIV care and routinely followed up, regardless of ART eligibility.

2.4 ENROLLING PATIENTS INTO PRE-ART CARE

Following diagnosis of HIV infection, a patient should be enrolled into structured pre-ART care at a facility that has the capacity to provide HIV services. This facility may be the one where the testing took place or another, via referral—preferably one near home. The enrolment process entails:

- Registering the patient into a pre-ART register.
- Issuing a patient-held appointment booklet. The patient will keep this booklet and will use it again when starting ART.

- Opening a pre-ART file.
- A baseline clinical, laboratory, and psychosocial assessment. For details, see Chapter 3.

Facilities have a responsibility to follow up on registered pre-ART patients and to contact them if they miss clinic appointments.

2.5 MALE CIRCUMCISION

Health care workers should strongly recommend circumcision for men who test negative. The MOH in Swaziland has included male circumcision in the national comprehensive HIV prevention package. Recent studies have shown that medically performed circumcision can significantly lower the probability of HIV-negative adult males contracting HIV through sex.

However, the protection is not complete, so even circumcised men should use condoms during sex to avoid HIV and other sexually transmitted infections (STIs).
Male circumcision clients should receive a complete package of HIV prevention, including:

- HIV testing and counselling.
- STI treatment.
- A supply of condoms.

Circumcision of men living with HIV does not appear to offer any protection against transmission to HIV-negative sexual partners.

Circumcision is not recommended for men living with HIV as a way to prevent HIV infection in their sexual partners.

Male circumcision should be available to HIV-negative boys and men of all age groups who request the service. The following are priority target groups for male circumcision:

- Boys aged between 15 and 24 years.
- Men involved in high-risk sexual behaviours, especially those over the age of 24, including men with STIs, long-distance drivers, and migrant workers.
- Male neonates (generally between the ages of eight days and one month).

Information on circumcision should be given to mothers during antenatal visits and parental consent obtained.

In addition, counsel women living with HIV that if their HIV-negative male partners should consider being circumcised; provide appropriate information and referrals.

Counselling should also be provided on the importance of allowing at least six weeks of healing time after the operation and avoiding sexual activity during that period.

Chapter 3: THE BASELINE ASSESSMENT

Key Reference Documents

- World Health Organization (WHO) Integrated Management of Adolescent and Adult Illness and Integrated Management of Childhood Illness. *Chronic HIV Care with ARV Therapy and Prevention: Interim Guidelines for Health Workers at Health Centers or District Hospital Outpatient Clinic.* Geneva, Switzerland: WHO. April 2007. Available at: http://www.who.int/hiv/pub/imai/Chronic_HIV_ Care7.05.07.pdf.

3.1 THE CLINICAL EVALUATION

Upon enrolment into HIV care, clients should undergo a comprehensive baseline assessment that includes both clinical and psychosocial evaluations. The information gathered from the baseline assessment guides the care plan, including both specific medical and supportive services and the frequency of monitoring and follow-up.

A comprehensive medical history and physical examination enables providers to stage patients using the World Health Organization clinical staging (see page 19), and to determine the person's functional status.

For components of the baseline assessment, see Table 3.1, on the next page.

3.2 PSYCHOSOCIAL ASSESSMENT

A psychosocial needs assessment should be conducted to evaluate the nonclinical needs and priorities of clients or patients and their families and provide appropriate counselling and link them to relevant community services and resources.

Psychosocial assessment should be done at every visit and appropriate counselling offered.

Needs assessment topics are presented in question form in the tables below. However, it's important to provide counselling on issues as they arise, so that the psychosocial assessment is more than just a question-and-answer session.

TABLE 3.1. BASELINE ASSESSMENT—THE CLINICAL EVALUATION

CONFIRMATION OF HIV DIAGNOSIS

- ❑ Document test results or repeat test at visit.

HISTORY AND REVIEW OF SYSTEMS AND PAST MEDICAL HISTORY

- ❑ **General health status:** Include current complaints/symptoms and a TB screen.
- ❑ **Drug history:** Ask about past and present medication; over-the-counter and traditional remedies; allergies.
- ❑ **Medical history:** Cover admissions; previous TB treatment; AIDS-defining illnesses.
- ❑ **Chronic illnesses:** Include diabetes mellitus (DM), mental illness, and others.
- ❑ **Sexual history:** Include sexual practice, past STIs, contraceptive use, and obstetric and gynaecological history, including last normal menstrual period (LNMP), PMTCT, and parity.
- ❑ **Review of family health status:** Cover disclosure status and HIV status of partner(s) and offspring.

COMPREHENSIVE PHYSICAL EXAM

- ❑ **Baseline vitals:** Include weight and height (W/H), blood pressure (BP), pulse, and temperature.
- ❑ **General exam:** Include oral cavity and lymph nodes, noting pallor, jaundice, etc.
- ❑ **Dermatological exam:** Cover trunk and extremities.
- ❑ **System exam:** Review respiratory system, cardiovascular system, and central nervous system (CNS), with mental state. Give abdominal exam, including rectal and vaginal exams.
- ❑ **Assessment and clinical staging:** Review according to the WHO Clinical Staging criteria *(see page 19)*.

LABORATORY EVALUATION

- ❑ CD4 count.
- ❑ CBC (complete blood count)/FBC (full blood count).
- ❑ Glucose, ALT/AST (alanine aminotransferase/aspartate aminotransferase), BUN (blood, urea, nitrogen), and creatinine.
- ❑ TPHA *(Treponema pallidum* haemagglutination assay) and RPR (rapid plasma regain).
- ❑ HepBSAg (hepatitis B surface antigen).
- ❑ Pregnancy test.

MANAGEMENT PLAN

- ❑ **Patient education:** Discuss risk reduction, nutrition, ART preparation, and alcohol and smoking cessation.
- ❑ **Cotrimoxazole preventive therapy:** Start cotrimoxazole preventive therapy (CPT), if eligible.
- ❑ **Antiretroviral therapy:** Decide eligibility for ART based on clinical staging.
- ❑ **Current illnesses:** Diagnose and treat.

TABLE 3.2. PSYCHOSOCIAL NEEDS ASSESSMENT: GUIDING QUESTIONS

FAMILY SITUATION AND SOURCES OF SUPPORT

- ❑ **Household:** Who lives in your household? How many children and dependents do you have? How old are they? What is their health status? Have they been tested for HIV? Do you have a partner or spouse? Do you live together? Has your partner been tested for HIV, do you know the results, and is he or she accessing HIV care services? If so, where? Does your partner or spouse have a livelihood/regular income? Do you work outside your home? What kind of work do you do? How do you support your own and your family's financial needs (eg, for housing and food)? Who generally makes decisions on behalf of the family?
- ❑ **Emotional Support:** Whom do you count on for emotional support? To whom do you feel closest in your household? In your family? Outside your family? Have you shared your diagnosis with anyone else, either inside or outside your household? What was the reaction? Have you felt shunned, discriminated against, or stigmatised because of your HIV status?
- ❑ **Spiritual Support:** What are your religious beliefs and affiliation? Do you go to services regularly?
- ❑ **Community Support:** Do you belong to any support groups? Have they helped? If not, why not? If you do not belong already, would you be interested in joining? Are you linked to community feeding programs?

MENTAL HEALTH AND COPING: SIGNS AND SYMPTOMS OF DEPRESSION

- ❑ Look for low mood, irritability; assess according to modified depression scale. Ask about:
- ❑ **Mood:** How have you been feeling during the past month? Have you been bothered by feeling down, depressed, or hopeless? By having little interest or pleasure in doing things? How do you feel about the future? Are you hopeful? Have you felt tense or anxious recently? Angry or irritable? Have you been worrying? Do you feel overwhelmed by what you have to do to take care of yourself and your family?
- ❑ **"CAGE":** CAGE is a useful acronym relating to four questions that help you begin to evaluate the scope of an individual's drinking problem:
  —Have you ever felt that you should **c**ut down on your drinking?
  —Have people **a**nnoyed you by criticising your drinking?
  —Have you ever felt **g**uilty or bad about your drinking?
  —Have you ever had an **e**ye-opener—a drink first thing in the morning, to steady your nerves or get rid of a hangover?

ABILITY TO ADHERE TO CARE AND TREATMENT

- ❑ **Health-Seeking Behaviours:** Do you see providers other than those at this clinic for your HIV? Include pastors, traditional healers, herbalists, counsellors, etc.
- ❑ **Keeping Clinic Appointments:** What transportation do you use to travel to the clinic? Do you have difficulties coming for your visits? What makes it difficult to come? What makes it easy or possible for your to come? How do you remember to come to your clinic appointments? What, if any, special arrangements must be made at work or at home when you come here? What financial considerations or work restrictions, if any, affect your ability to keep appointments?
- ❑ **Medications:** What reminders do you have for taking medication (alarm, treatment supporter, calendar)? If you take medicines, which ones have you missed recently? When was that? What happened?

Psychosocial Assessment of Pregnant Women

Ask pregnant women living with HIV many of the guiding questions listed in Table 3.2. Also discuss the additional questions in Table 3.3, below.

TABLE 3.3. PSYCHOSOCIAL NEEDS ASSESSMENT: ADDITIONAL GUIDING QUESTIONS FOR PREGNANT WOMEN
❑ What do you know about how to have a safer pregnancy?
❑ What fears or concerns do you have about your pregnancy?
❑ Can you tell me what you understand about mother-to-child transmission of HIV?
❑ Have you shared your HIV diagnosis with anyone? If so, whom did you tell? What was the reaction?
❑ Can you tell me more about your plans to deliver the baby?
❑ What steps to you and your partner(s) take to prevent STIs and HIV, such as using condoms while you are pregnant?
❑ Can you tell me more about how you plan to feed your baby?

Adolescents

For adolescents living with HIV, use many of the guiding questions listed in Table 3.2, above. Also discuss the topics outlined in Table 3.4, below.

TABLE 3.4. PSYCHOSOCIAL NEEDS ASSESSMENT: ADDITIONAL GUIDING QUESTIONS FOR ADOLESCENTS
❑ Has anyone talked with you about your diagnosis?
❑ What fears or concerns do you have about your diagnosis?
❑ Can you tell me what you understand about having HIV?
❑ Have you shared your HIV diagnosis with anyone? If so, whom did you tell? What was their reaction?
❑ Are you going to school now? If yes, how are you doing? Have you faced any problems there?
❑ Are you sexually active? What steps do you and your partner(s) take to prevent pregnancy, STIs, and HIV?
❑ Can you tell me more about your use of drugs or alcohol?

Chapter 4: PRE-ART SERVICES

Key Reference Documents

- Swaziland Ministry of Health. *Prevention of Mother to Child Transmission of HIV Guidelines.* 2nd ed. 2006. Available at: http://www.unicef.org/swaziland/sz_publications_2006pmtctguidelines.pdf.
- World Health Organization Integrated Management of Adolescent and Adult Illness and Integrated Management of Childhood Illness. *Chronic HIV Care with ARV Therapy and Prevention: Interim Guidelines for Health Workers at Health Centre or District Hospital Outpatient Clinic.* Geneva, Switzerland: WHO. April 2007. Available at: http://www.who.int/hiv/ pub/imai/Chronic_HIV_Care7.05.07.pdf.

4.1 THE NEED FOR CARE BEFORE ANTIRETROVIRAL THERAPY

All patients diagnosed with HIV need to be enrolled into chronic care and regularly reviewed clinically and immunologically.
The standard approach to reviewing all pre-ART patients includes: (see tables 3.1-3.4)

- History
  - —Interim history: presenting complaints.
  - —TB screening questionnaire (see Table 8.1).
- Clinical examination and staging.
- Review of laboratory results.
- Assessment of ART eligibility.
- Adherence review and psychosocial support.
- Management plan.

4.2 CLINICAL AND LABORATORY MONITORING

Pre-ART for Adults and Adolescents

Regular Clinical Check-Ups: All PLHIV should have regular clinical check-ups based on their WHO clinical stage and status. See Table 4.1 for the recommended schedule for check-ups.

TABLE 4.1. CLINICAL CHECKUP SCHEDULE FOR ADULTS AND ADOLESCENTS NOT ON ART

CLINICAL STAGE	FOLLOW-UP SCHEDULE[a]	COMPONENTS OF ROUTINE EVALUATION
STAGE 1 OR 2	Every *three* months (unless a new condition or problem arises).	❑ Physical examination. ❑ Clinical review of symptoms and signs, medication use, and side effects. ❑ Determination of HIV clinical stage and functional status. ❑ Adherence assessment and counselling. ❑ Assessment of family status. ❑ Assessment of nutritional status ❑ Review of TB status/TB questionnaire. ❑ Acute care, if necessary.
STAGE 3 OR 4	*ART should be initiated, but If not on ART* Every month. *For patients on TB treatment* Combine follow up visits for TB and ART.	

[a] More frequent visits may be needed for ongoing counselling and psychosocial support

Regular Clinical Staging: All PLHIV should undergo routine clinical staging at eache-alth facility visit according to CD4 count and according to the criteria in Chapter 3.

Regular CD4 and Other Laboratory Testing: Routine testing of CD4 count should begin as soon as possible after a diagnosis of HIV infection and according to the schedule in Table 4.2.

TABLE 4.2. CD4 AND OTHER LABORATORY TESTING SCHEDULE FOR ADULTS AND ADOLESCENTS NOT ON ART

	LAB TEST	INTERVAL
ALL ADULTS	CD4 count.	At initial HIV diagnosis. *If CD4 count <500 cells/mm³* Every three months. *If CD4 count >500 cells/mm³* Every six months.
FEMALES	Pap smear.	Annually.
ALL ADULTS	*Any other test* Based on clinical indication.	As needed.

Pre-ART for Pregnant Women

Pregnant women living with HIV need regular clinical and laboratory check-ups. These checkups should coincide with the antenatal visits. See the national PMTCT guidelines for further details; according to these guidelines, pregnant women not eligible for ART should start AZT at 14 weeks.

CD4 and Other Laboratory Testing in Pregnant Women: Low maternal CD4 count increases the risk of mother-to-child transmission of HIV during pregnancy and labour and during the postpartum period. CD4 count should therefore be closely monitored throughout pregnancy and after delivery. See the national PMTCT guidelines for details.

4.3 PATIENT FOLLOW-UP

All HIV-infected patients need to be engaged to receive chronic care and ongoing support.

Schedule each patient for a follow-up appointment. Actively follow up on patients who do not come back on their appointment date, either by calling them, by phoning their treatment supporter, by visiting them at home, or by linking with community support structures such as Rural Health Motivators (RHMs) or home-based carers.

Chapter 5: COTRIMOXAZOLE PROPHYLAXIS

Key Reference Documents

- Swaziland Ministry of Health, International Center for AIDS Care and Treatment Programs,
Elizabeth Glaser Pediatric AIDS Foundation, and the US Agency for International Development. *Cotrimoxazole Prophylaxis* [poster]. October 2007.
- Swaziland Ministry of Health. *Prevention of Mother to Child Transmission of HIV Guidelines.* 2nd ed. 2006. Available at: http://www.unicef.org/swaziland/sz_publications_2006pmtctguidelines.pdf.
- World Health Organization Integrated Management of Adolescent and Adult Illness and Integrated Management of Childhood Illness. *Chronic HIV Care with ARV Therapy and Prevention: Interim Guidelines for Health Workers at Health Centre or District Hospital Outpatient Clinic.* Geneva, Switzerland: WHO. April 2007. Available at: http://www.who.int/hiv/pub/imai/Chronic_HIV_Care7.05.07.pdf.
- World Health Organization. Guidelines on Co-Trimoxazole Prophylaxis for HIV-Related Infections among Children, Adolescents and Adultsin Resource-Limited Settings: Recommendations for a Public Health Approach. Geneva, Switzerland: WHO. 2006. Available at: http://www.who.int/hiv/pub/guidelines/WHO%20CTX.pdf

5.1 RATIONALE FOR COTRIMOXAZOLE PROPHYLAXIS

CTX prophylaxis has been shown to be effective in reducing mortality and morbidity in people of all ages living with HIV. Properly taken, CTX prophylaxis can prevent Pneumocystis jirovecii and other pneumonias, toxoplasmosis, bacterial infections, diarrhoea, and malaria. In addition, CTX prophylaxis can help people learn daily medication taking behaviours and adherence—before they initiate ART.

5.2 COTRIMOXAZOLE INDICATIONS FOR ADULTS AND ADOLESCENTS

Adults and Adolescents

All patients with HIV, including those on ART should receive CTX prophylaxis. Before initiation, ask patients about any previous history of sulpha allergy; those who have had a severe adverse reaction to any sulpha-containing medication should not be started on CTX.

Pregnant Women

The above indications also apply to pregnant women, who should be reevaluated for eligibility at every visit. Pregnant women who are on CTX prophylaxis or who initiate prophylaxis during their pregnancy should discontinue additional sulphadiazine/ pyrimethamine intermittent presumptive malaria therapy. Breastfeeding HIV positivewomen should continue with CTX prophylaxis.
When initiating, dispense one month's supply and schedule a follow-up visit for two days before the supply is to run out.

Discontinuation of CTX Prophylaxis

Patients should continue CTX prophylaxis for life, unless the following apply:

- If the doctor finds a medical reason to stop CTX
- If the patient feels overburdened by the number of pills

The reason for stopping CTX should be well documented.

5.3 COTRIMOXAZOLE DOSING FOR ADULTS AND ADOLESCENTS

As prophylaxis, CTX is given once daily. For dosage for CTX prophylaxis in adults and adolescents, see Table 5.1, below.

TABLE 5.1. DOSING FOR, CTX, BACTRIM, COTRIM TRIMETHOPRIM/SULFAMETHOXAZOLE (TMP/SMZ)

AGE	WEIGHT	SUSPENSION 5 ml–200 mg / 40 mg TMP + 200 mg S Once daily	SINGLE-STRENGTH ADULT TABLET 400 mg / 80 mg 80 mg TMP / 400 mg SMZ Once daily	DOUBLE-STRENGTH ADULT TABLET 800 mg / 10 mg 160 mg TMP / 800 mg SMZ Once daily
>14 years	>30 kg	—	2 tablets	1 tablet

5.4 MANAGING ADVERSE EVENTS WITH COTRIMOXAZOLE

Severe adverse reactions to CTX are uncommon. Every effort should be made to continue with the prophylaxis unless reactions are Grade 4. Note any allergic reactions in the patient's file to alert other health care workers. See Table 5.2 for side effects, Table 5.3 for recommended responses.

If CTX must be permanently discontinued, dapsone is an acceptable replacement. For adults and adolescents, the dosage is 100 mg per day.

TABLE 5.2. CTX TOXICITY GRADING SCALE FOR ADULTS AND ADOLESCENTS		
TOXICITY LEVEL	**CLINICAL DESCRIPTION**	**RECOMMENDATION**
GRADE 1	Erythema.	Continue CTX prophylaxis with careful and repeated observation and follow-up. Provide symptomatic treatment, such as antihistamines.
GRADE 2	Diffuse maculopapular rash, dry desquamation.	
GRADE 3	Vesiculation, mucosal ulceration.	Temporarily discontinue CTX until the adverse event has completely resolved (usually two weeks); then consider desensitisation *(see* Section 5.3, *below).*
GRADE 4	Exfoliative dermatitis, Stevens-Johnson syndrome or erythema multiforme, moist desquamation.	Permanently discontinue CTX. Refer patient for hospital care.

5.5 COTRIMOXAZOLE DESENSITISATION IN ADULTS AND ADOLESCENTS

In instances of Grade 3 reactions to CTX, consider desensitisation, described in Table 5.3, below. Do not attempt desensitisation in patients with a Grade 4 reaction. These patients should immediately be referred to a hospital.

TABLE 5.3. CTX DESENSITISATION FOR ADULTS AND ADOLESCENTS	
STEP	**DOSE**
DAY 1	80 mg SMZ + 16 mg TMP (2 mls of oral suspension[a])
DAY 2	160 mg SMZ + 32 mg TMP (4 mls of oral suspension)
DAY 3	240 mg SMZ + 48 mg TMP (6 mls of oral suspension)
DAY 4	230 mg SMZ + 64 mg TMP (8 mls of oral suspension)
DAY 5	One single-strength SMZ–TMP tablet (400 mg SMZ + 80 mg TMP)
DAY 6 AND ONWARDS	Two single-strength SMZ–TMP tablets or one double strength tablet (800 mg SMZ + 160 mg TMP)

[a] CTX oral suspension = 40 mg TMP + 200 mg SMZ

An antihistamine regimen should be started one day before the desensitisation regimen begins and continued daily until the dose escalation is completed. If a severe reaction occurs, terminate the desensitisation regimen. In the event of a minor reaction, repeat the same step for an additional day. If the reaction subsides, advance to the next step; if the reaction worsens, terminate the desensitisation regimen.

Chapter 6: USE OF ANTIRETROVIRAL DRUGS IN ADULTS AND ADOLESCENTS

Key Reference Documents

- Swaziland Ministry of Health. *Prevention of Mother to Child Transmission of HIV Guidelines. 2nd ed. 2006.* Available at: http://www.unicef.org/swaziland/sz_publications_ 2006pmtctguidelines.pdf.
- World Health Organization Integrated Management of Adolescent and Adult Illness and Integrated Management of Childhood Illness. *Chronic HIV Care with ARV Therapy and Prevention: Interim Guidelines for Health Workers at Health Centre or District Hospital Outpatient Clinic.* Geneva, Switzerland: WHO. April 2007. Available at: http://www.who.int/hiv/ pub/imai/Chronic_HIV_Care7.05.07.pdf.

6.1 A KEY COMPONENT OF THE PACKAGE OF CARE

This chapter describes the management of patients on ART, based on a public health approach as recommended by the World Health Organization. The provision of ART forms an integral part of the comprehensive package of care for people living with HIV.

All the many factors influencing adherence need to be strongly considered when assessing an individual's readiness to initiate ART. It is important that health care workers provide appropriate individual adherence counselling and treatment literacy before a patient starts ART. Equally important is ongoing counselling and adherence support post-initiation.

6.2 GOALS OF ANTIRETROVIRAL THERAPY

Primary Goal

The main goal of antiretroviral therapy is to decrease HIV-related morbidity and mortality, thereby improving the patients' quality of life. The viral load should become undetectable. Immunological function should be restored, and the CD4 cell count should rise and remain above the baseline count.

Secondary Goals

An auxiliary goal of ART is to reduce the incidence of HIV by:

- Reducing transmission within discordant couples, from mother to child, and to new partners.
- Reducing stigma and discrimination against PLHIV and increasing PLHIV and community participation in HIV/AIDS control and prevention.

6.3 INDICATIONS FOR ANTIRETROVIRAL THERAPY

In Swaziland, the decision to start ART relies on clinical and immunological criteria. Psychosocial considerations are also important.

Clinical Criteria

Patients with any WHO Stage 3 or Stage 4 condition are eligible to start ART. ART initiation is also recommended for patients with the following severe disorders:

- Any form of tuberculosis , especially drug-resistant TB.
- Hepatitis B co-infection.
- HIV-associated nephropathy (renal disease).

CRITERIA FOR ART ELIGIBILITY

WHO Clinical Stage 3 or Stage 4, regardless of CD4 count
OR
CD4 count <350 cells/mm^3, regardless of clinical stage
AND
Patient expresses willingness to start ART

Immunological Criteria

Patients with a CD4 count <350 cells/mm^3 are eligible to start ART.

Psychosocial Considerations

Because good adherence is so vital to ART success, it is important to consider all psychosocial issues before initiation, including:

- *Previous adherence:* Health care workers need to assess whether patients have shown good adherence to their appointments and treatments for opportunistic infections. Adherence to CTX prophylaxis can be assessed as well, although poor adherence does not necessarily predict poor adherence to ART.
- *Mental health:* Clients should have no untreated active depression and no active abuse of alcohol or other substances. Before initiating ART, health care workers need to identify patients with these issues and provide care and treatment.
- *Disclosure:* It is strongly recommended that clients disclose their HIV status to at least one friend or family member (someone who could become a treat

ment supporter), or that they have joined a support group that will offer peer support and ongoing treatment literacy.

- *Treatment literacy:* Before commencing ARV therapy, clients need to have accepted their HIV-positive status and have insight into the consequences of HIV infection and the role of ARV treatment.
- *Access to care and treatment:* Clients should be able to attend the ART clinic on a regular basis or have access to follow-up services. For patients in rural areas or for those remote from the treatment site, decentralization to clinics must be arranged.

A key to a successful ART program lies in optimal adherence to ARVs

TABLE 6.1. PATIENT PREPARATION FOR ART
CLINICAL EVALUATION
❑ Screen for TB, STIs, pregnancy, co-morbidities.
❑ Comprehensive physical examination.
❑ WHO staging.
❑ Contraception.
❑ Nutritional assessment.
LABORATORY EVALUATION
❑ CD4 count.
❑ Chemistry: Check creatinine and liver function tests (LFTs).
❑ CBC/FBC: Check for haemoglobin and cytopoenias.
❑ TPHA *(Treponema pallidum* haemagglutination assay), for syphilis.
❑ HepBSAg (hepatitis B surface antigen).
PYCHOSOCIAL ASSESSMENT AND PREPARATION
❑ Adherence sessions (preferably two or three; at least one must be individual).
❑ Discussion of peer support groups and structures.
❑ Discussion of community/facility feeding programme.
❑ Instruction in risk-reduction and positive-prevention strategies *(see* Chapter 14).

6.4. INITIATING ANTIRETROVIRAL THERAPY

Seldom is the initiation of ART an emergency. Before starting, patients need to be fully assessed; opportunistic infections identified and treated or stabilised; and quality adherence counselling and support put into place.

Fast-Track Initiation

Rapid assessment, fast-track adherence counselling and support, and prompt ART initiation are necessary for some patients.

- ART-eligible pregnant women: Start quickly (as early as 14 weeks of amenorrhea) to provide maximum protection from MTCT.
- Patients with profound immunosuppression (that is, CD4 count <100 cells/mm^3): Their significant risk for opportunistic illnesses mandates that they move quickly to initiate ART.

TABLE 6.2. WHO CLINICAL STAGING OF HIV DISEASE IN ADULTS AND ADOLESCENTS AGE 14 AND OLDER

CLINICAL STAGE 1

- ❑ Asymptomatic infection.
- ❑ Persistent generalised lymphadenopathy (PGL).
- ❑ Acute retroviral infection.

CLINICAL STAGE 2

- ❑ Unintentional weight loss (<10% of presumed or measured body weight).
- ❑ Minor mucocoetaneous manifestations (eg, seborrhoeic dermatitis, prurigo, fungal nail infections of fingers, recurrent oral ulcerations, angular cheilitis).
- ❑ Herpes zoster within the past five years.
- ❑ Recurrent upper respiratory tract infections (RTIs; eg, sinusitis, bronchitis, otitis media, pharyngitis).

CLINICAL STAGE 3

- ❑ Unintentional weight loss (>10% of presumed or measured body weight).
- ❑ Unexplained chronic diarrhoea for longer than one month.
- ❑ Unexplained persistent fever, intermittent or constant, for longer than a month.
- ❑ Oral candidiasis (erythematous or pseudomembranous).
- ❑ Oral hairy leukoplakia.
- ❑ Pulmonary tuberculosis, atypical or typical, within the previous year.
- ❑ Severe bacterial infections (eg, pneumonia, empyema, pyomyositis, bone or joint infection, meningitis, bacteraemia).
- ❑ Vulvovaginal candidiasis, chronic (ie, longer than one month) or poorly responsive to therapy.

CLINICAL STAGE 4

- ❑ HIV wasting syndrome.
- ❑ Pneumocystis pneumonia.
- ❑ Toxoplasmosis of the brain.
- ❑ Cryptosporidiosis with diarrhoea, longer than one month.
- ❑ Isosporiasis with diarrhoea, for longer than a month.
- ❑ Extrapulmonary cryptococcosis, including meningitis.
- ❑ Cytomegalovirus (CMV) infection (retinitis or of an organ other than liver, spleen, or lymph nodes).
- ❑ Chronic herpes simplex infection mucocoetaneous (longer than one month) or visceral (any duration).
- ❑ Progressive multifocal leukoencephalopathy (PML).
- ❑ Any disseminated mycosis (eg, histoplasmosis, coccidioidomycosis, penicilliosis).
- ❑ Candidiasis of trachea, bronchi, lungs, or oesophagus.
- ❑ Disseminated nontuberculous mycobacteria infection.
- ❑ Extrapulmonary TB.
- ❑ Nontyphoidal salmonella septicaemia.
- ❑ Lymphoma (cerebral or B cell non-Hodgkin's).
- ❑ Kaposi's sarcoma.
- ❑ HIV encephalopathy.

Preparing a Patient for Antiretroviral Therapy

The process of ART initiation involves a number of visits to the ART clinic and several activities, including registration, laboratory assessments, and three adherence counselling sessions (conducted in less than 10 days or at a more leisurely pace). The patient must develop an informed understanding of lifelong adherence and make a commitment to it. Finally, it is recommended that the patient also identifies a treatment supporter.

Health care workers must explain the process clearly to the patient up front. Only after the entire process has been completed can a patient initiate ART. For more information on adherence and psychosocial support, see chapters 7 and 13.

6.5 BASIC PRINCIPLES OF ANTIRETROVIRAL THERAPY

- At least three ARV drugs should be included in a combination antiretroviral regimen.
- Preferred regimens use combinations of two nucleoside reverse transcriptase inhibitors (NRTIs)—known as a dual-NRTI backbone regimen—plus either a non-nucleoside reverse transcriptase inhibitor (NNRTI) or a ritonavir-boosted protease inhibitor (PI).
- Regimen selection should take into consideration factors such as co-morbid conditions (eg, tuberculosis, hepatic dysfunction, renal dysfunction); pregnancy or pregnancy potential; and potential interactions with other medications.

Factors influencing choice of ARV Regimen

TABLE 6.3. REGIMENS FOR PATIENTS NAIVE TO ANTIRETROVIRAL THERAPY: TWO NRTIs AND ONE NNRTI

REGIMEN TYPE	REGIMEN	COMMENT
PREFERRED NRTI COMBINATION	TDF/3TC	Co-formulated when available.
ALTERNATIVE NRTI COMBINATION	AZT/3TC *or* D4T/3TC	Listed in order of preference. Co-formulated when available.
PREFERRED NNRTI	EFV	Except during first trimester of pregnancy or in women with high pregnancy potential.*
ALTERNATIVE NNRTI	NVP	In adult women with CD4 count $\leq 250/mm^3$ and in adult men with CD4 count $\leq 400/mm^3$.

* Women of childbearing age with high pregnancy potential are those who are trying to conceive or who are sexually active with men and are not using an effective and consistent form of contraception such as such as hormonal contraceptives plus condoms.

6.6 FIRST-LINE ANTIRETROVIRAL REGIMENS

For patients who are naïve to ART, the regimen should include two ARVs from among the NRTIs, plus one NNRTI.

The recommended first-line regimen is :

TDF (TENOFOVIR) + 3TC (LAMIVUDINE) + EFV (EFAVIRENZ)

Alternative first-line regimens are (in order of preference):

TDF (Tenofovir) + 3TC (Lamivudine) + NVP (Nevirapine)

OR

AZT (Zidovudine) + 3TC (Lamivudine) + NVP (Nevirapine)

OR

AZT (Zidovudine) + 3TC (Lamivudine) + EFV (Efavirenz)

Replace efavirenz with nevirapine in patients who cannot tolerate it or for whom efavirenz is contraindicated (pregnant women during their first trimester and sexually active women who are not using reliable contraception).

TABLE 6.4. OVERVIEW OF ARV DRUGS

CLASS	GENERIC NAME	RECOMMENDED DAILY DOSAGE	HOW PROVIDED	PRACTICAL CONSIDERATIONS	CONTRAINDICATIONS
NRTI	Zidovudine (AZT)	300 mg every 12 hours	300 mg tabs	With or without food, with a full glass of water	Lactic acidosis
	Lamivudine (3TC)	150 mg every 12 hours or 300 mg once daily	150 mg tabs	With or without food	Acute or chronic pancreatitis
	Stavudine (D4T)	30 mg every 12 hours	30 mg tabs	With or without food	Lactic acidosis, hepatic steatosis
	Abacavir (ABC)	300 mg Every 12 hours	300mg tabs	With or without food	Previous hypersensitivity reactions, kidney or liver disease
	Didanosine (DDI)	250mg every 12 hours if <60kg or 400mg every 12 hours if >60kg	250mg tabs and 400mg tabs	2 hours before or 1 hour after a meal Do not take with acidic juices, soda or milk	History of Pancreatitis, kidney or liver disease, neuropathy
	Emtricitabine (FTC)	200mg once a day	200mg tabs	With or without food	Kidney and liver disease
NTRTI	Tenofovir (TDF)	300 mg once a day	300 mg tabs	With or without food	Kidney and liver disease
NNRTI	Nevirapine (NVP)	200 mg daily for 14 days, then 200 mg every 12 hours	200 mg tabs	With or without food	Severe liver disease, history of Stevens-Johnson syndrome
	Efavirenz (EFV)	600 mg at night	600 mg tabs	Without food, at bedtime on an empty stomach	First trimester of pregnancy
PI	Lopinavir (boosted with Ritonavir) (LPV/r)	200mg lopinavir/50mg ritonavir twice daily	200/50mg tablets	With or without food	Diabetes, liver and heart problems
	Saquinavir (SQV/r)	1000mg/100mg twice daily	500mg and 200mg tablets	Better taken with food	Kidney or liver disease
	Indinavir (IDV)	400mg twice daily or three times a day	400mg tabs	Without food — take two hours before or one hour after a meal	Kidney or liver disease
	Atazanavir (ATV/r)	300mg atazanavir/100mg ritonavir once daily	300mg/100mg tabs	Better with food	Liver disease, heart problems, diabetes
	Ritonavir (RTV)	Used primarily to boost levels of other PIs in the blood stream, also used in children.			

TABLE 6.5. DRUG COMBINATIONS TO BE AVOIDED

DRUG COMBINATION	REASON
D4T + AZT (+ 3RD DRUG)	Proven antagonism.
D4T+ AZT (+ 3RD DRUG)	Overlapping toxicities.
TDF + 3TC + ABC	High incidence of virologic failure.
TDF + 3TC + DDI	High incidence of virologic failure; increased risk of side effects.
TDF + DDI + NNRTI	High incidence of virologic failure; increased risk of side effects.

TABLE 6.6. POTENTIAL ARV INTERACTIONS WITH OTHER DRUGS

GENERIC DRUG	POTENTIAL INTERACTION WITH
ZIDOVUDINE (AZT)	Codeine, clarithromycin, dapsone, rifampicin, phenytoin, phenobarbital, valproate, amphotericin B, fluconazole.
LAMIVUDINE (3TC)	Amphotericin B.
STAVUDINE (D4T)	Isoniazid, CTX, amphotericin B.
TENOFOVIR (TDF)	Streptomycin, CTX, amphotericin B, acyclovir, cimetidine, furosemide.
NEVIRAPINE (NVP)	Codeine, buprenorphine, clarithromycin, erythromycin, rifabutin, carbamazepin, phenobarbital, phenytoin, valproate, fluconazole, miconazole, artemisin, halofantrine, lumefantrine, quinine, haloperidol, diazepam, lorazepam, ketamine, garlic, milk thistle, furosemide, gliclazide, glipizide, glitazones, digoxin, dexamethasone, estradiol, ethinyl estradiol, levonorgestrel, prednisolone.
EFAVIRENZ (EFV)	Codeine, buprenorphine, clarithromycin, rifabutin, rifampicin, , phenobarbital, phenytoin, ketoconazole, artemisin, halofantrine, lumefantrine, quinine, haloperidol, diazepam, lorazepam, cimetidine, ketamine, garlic, milk thistle, furosemide, gliclazide, glipizide, estradiol, ethinyl estradiol, levonorgestrel, prednisolone.
	STRONG INTERACTION—DO NOT COMBINE
NEVIRAPINE (NVP)	Rifampicin, ketoconazole, Saint John's wort.
EFAVIRENZ (EFV)	Saint John's wort.

TABLE 6.7. ARVS NOT RECOMMENDED AS PART OF INITIAL THERAPY

ANTIRETROVIRAL DRUGS OR COMPONENTS	REASONS FOR NOT RECOMMENDING AS INITIAL THERAPY
ABC+3TC+AZT	• Inferior virologic efficacy.
ABC + DDI	• Insufficient data in treatment-naïve patients.
ABC + TDF	• Insufficient data in treatment-naïve patients.
DDI + TDF	• High rate of early virologic failure. • Rapid selection of resistance mutations. • Potential for immunologic nonresponse/CD4 decline.
IDV (unboosted)	• Inconvenient dosing (three times daily with meal restrictions). • Fluid requirement.
IDV/R	• High incidence of nephrolithiasis (kidney stones).
RTV as sole PI	• High pill burden. • Gastrointestinal intolerance.
SQV (unboosted)	• Inferior virologic efficacy.

TABLE 6.8. MOST COMMON ADVERSE DRUG REACTIONS TO FIRST-LINE DRUGS: TYPE, SYMPTOMS, MANAGEMENT, AND PREVENTION

GENERIC NAME	ADVERSE REACTIONS	FREQUENCY	SIGNS AND SYMPTOMS	MANAGEMENT	PREVENTION
ZIDOVUDINE (AZT)	Minor symptoms	High	Nausea, vomiting, abdominal pain, diarrhoea, headaches; at the beginning of the treatment.	Symptomatic treatment only if not subsiding or if leading to complication (dehydration).	Take AZT with food.
	Lipodystrophy	High	Shrinking of lower limbs and buttocks, accumulation of fat around the abdomen, gynaecomastia, buffalo hump.	If clearly marked, switch to TDF.	Regular exercise.
	Myalgia	High	Intermittent muscle pain (usually lower limbs), cramps.	NSAID, stretching, massages.	None.
	Leucopoenia	High	Leucopoenia < 750/ml.	Follow up, if high grade, with structured ART interruption, monitoring, and reintroduction of ART (TDF).	None.
	Red cell megaloblastia	High	None.	None—a good sign of adherence to AZT!	None.
	Nail discoloration	Medium	Black lines perpendicular to nail growth line (fingers, toes).	None.	None.
	Bone marrow* suppression	Medium	Anaemia, bicytopoenia or pancytopoenia.	If high grade, implement structured ART interruption, monitoring, and reintroduction of ART (TDF).	None.
	Hepatitis*	Low	Nausea, vomiting, jaundice, right flank pain, or asymptomatic + raised ALTs.	Follow up, if high grade, with structured interruption of ART, monitoring, and reintroduction of ART without AZT.	Avoid alcohol and other hepatotoxic drugs.
	Lactic acidosis*	Low	Fatigue, rapid loss of weight, abdominal and limb cramps, nausea, in a very adherent patient (more commonly female, obese, pregnant). Critical stage: dyspnoea.	Stop all ART and follow up on the weight gain; usually after one month, reintroduce ART with TDF. If dyspnoea: hospitalisation.	Weight check at each consultation, patient's education.
	Myopathy	Low	Muscle weakness, muscle stiffness, muscular pain, cramps.	Check creatine kinase (CK); if high grade, switch AZT to TDF; massage, stretching.	None.
LAMIVUDINE (3TC)	**Pancreatitis**	Low	Epigastric pain, loss of appetite.	If high grade, implement structured ART interruption; when subsided, reintroduce regimen without 3TC, d4T, or ddI.	Avoid alcohol and other pancreatotoxic drugs.
	Paresthesia/ peripheral neuropathy	Low	Numbness, pins and needles, burning sensation of the limbs.	Pyridoxine, amitriptyline. If high grade, switch regimen to one without 3TC, d4T, and ddI.	Avoid alcohol and other neurotoxic drugs.
ABACAVIR (ABC)	**Hypersensitivity reaction**	Low	Fever, rash, headache, sore throat, cough, shortness of breath	Stop the medication immediately, treat symptoms	None.
	Lactic acidosis	Low	Nausea, vomiting, abdominal discomfort, fatigue, muscle weakness in arms and legs	Stop the medication and treat symptoms	None.
	Minor symptoms	Medium	Loss of appetite, headache, malaise, nausea, vomiting, diarrhea	Continue medication, symptoms improve within a few weeks of starting ART	None.
DIDANOSINE (DDI)	**Lactic acidosis**	Medium	Nausea, vomiting, abdominal discomfort, muscle weakness and tiredness, shortness of breath	Stop all ART, treat symptoms and re-introduce ART with another NTRI e.g. TDF	Avoid stavudine when taking didanosine
	Pancreatitis	Low	Nausea, vomiting, abdominal pain	Stop all ART, treat symptoms	Avoid alcohol
	Peripheral neuropathy	Medium	Pain, tingling, numbness, burning sensation in hands and or feet	Stop DDI and substitute with another NRTI that does not cause neuropathy, e.g. AZT	
	Minor symptoms	High	Nausea, headache, dry mouth, CNS symptoms (anxiety, insomnia, irritability, restlessness)	Continue treatment, symptoms subside within weeks of starting ART	None.
EMTRICITABINE (FTC)	**Lactic acidosis**	low	Nausea, vomiting, abdominal discomfort, muscle weakness and tiredness, shortness of breath	Stop all ART, treat symptoms and re-introduce ART with another NTRI e.g. TDF	None.
	Minor symptoms	low	Headache, diarrhea, nausea, rash, stomach pain, indigestion	Continue treatment. Symptoms usually subside within a few weeks	None.
STAVUDINE (D4T)	Peripheral neuropathy	High	Numbness, pins and needles, burning sensation of the limbs.	Pyridoxine, amitriptyline. If high grade, switch regimen to one without D4T or DDI.	Avoid alcohol and other neurotoxic drugs.
	Lipodystrophy	High	Shrinking of lower limbs and buttocks, accumulation of fat around the abdomen, gynaecomastia, buffalo hump.	If clearly marked, switch to TDF.	Regular exercise.
	Pancreatitis*	Low	Epigastric pain, loss of appetite.	If high grade, implement structured ART interruption; when subsided, reintroduce regimen without 3TC, d4T, or ddI.	Avoid alcohol and other pancreatotoxic drugs.
	Lactic acidosis*	Low	Fatigue, rapid loss of weight, abdominal and limb cramps, nausea, in a very adherent patient (more commonly female, obese, pregnant). Critical stage: dyspnoea.	Stop all ART and follow up on the weight gain; usually after one month, reintroduce ART with TDF. If dyspnoea: hospitalisation.	Weight check at each consultation, patient's education.
	Liver failure*	Low	Jaundice, fatigue, pruritus, drowsiness, restlessness, confusion, coma.	Emergency hospitalisation.	Avoid alcohol and other hepatotoxic drugs.

GENERIC NAME	ADVERSE REACTIONS	FREQUENCY	SYMPTOMS	MANAGEMENT	PREVENTION
TENOFOVIR (TDF)	Skin rash	High	Patchy skin rash, localized oedematous lesions.	Usually at the beginning of the treatment; subsides without treatment.	None.
	Depression	Medium	Isolation, sad ideation; insomnia, mood changes.	Amitriptyline. If suicidal ideation: hospitalisation.	None.
	Fatigue	Medium	General fatigue.	Subsides after some time.	Promote motivation, physical exercise.
	Acute renal disease*	Low	Fatigue, reduced micturation, pruritus, headache, back pain.	Creatinine clearance< 30 ml/mn/1.72 m² is indicative of severity.	Regular follow-up; avoid nephrotoxic drugs.
NEVIRAPINE (NVP)	Skin rash	High	Pruritic macules, papules, or plaques.	Check pyrexia; antihistamines; close follow-up. If lesions progressing, implement structured ART interruption. When subsided, reintroduce ART without NVP (use EFV or boosted PI).	None.
	Minor symptoms	High	Nausea, vomiting, abdominal pain, diarrhoea, headache, at the beginning of the treatment.	Symptomatic treatment only if not subsiding or if leading to complication (eg, dehydration).	Take ART with food.
	Hepatitis*	Medium	Nausea, vomiting, and jaundice; or asymptomatic + raised ALTs.	Follow up, if high grade, with structured ART interruption, monitoring, and ART reintroduction without NVP (use EFV or boosted PI).	Avoid alcohol and other hepatotoxic drugs.
	Stevens-Johnson syndrome*	Medium	Fever, fatigue, painful skin lesions or blisters, disseminated blisters.	Drip line, one shot of antibiotics, emergency hospitalisation.	Follow up on any rash.
	Liver failure*	Low	Jaundice, fatigue, pruritus, drowsiness, restlessness, confusion, coma.	Emergency hospitalisation.	Avoid alcohol and other hepatotoxic drugs.
	Hypersensitivity drug reaction*	Low	Confluent maculopapular rash, pyrexia.	Drip line, one shot of antibiotics, and emergency hospitalisation.	Follow up on any rash.
EFAVIRENZ (EFV)	Depression	High	Isolation, sad ideation; insomnia, mood changes.	Amitriptyline. If suicidal ideation: hospitalisation.	None.
	Dizziness, insomnia	High	——	Low doses of diazepam.	Physical exercise during the day.
	Skin rash	High	Pruritic macules, papules or plaques.	Check pyrexia; antihistamines; close follow-up. If lesions progressing, implement structured ART interruption. When subsided, reintroduce ART without EFV and NVP (use a boosted PI).	None.
	Nightmares, vivid dreams	Medium	——	Low doses of diazepam.	Physical exercise during the day.
	Stevens-Johnson syndrome*	Low	Fever, fatigue, painful skin lesions or blisters, disseminated blisters.	Drip line, one shot of antibiotics, emergency hospitalisation.	Follow up on any rash.
LOPINAVIR/r (LPV/r)	Minor symptoms	High	Abnormal bowel movements, feeling tired (weak), headache, diarrhea, nausea, vomiting	Continue medication, if vomiting persists, anti-emetics may help.	None.
	Hyperlipidemia	Medium	Heart attack, stroke	Use of lipid lowering drugs, except simvastatin and lovastatin	Physical exercise, use of other lipid lowering drugs such as pravastatin, fluvastatin
	Pancreatitis	Low	Nausea, vomiting, abdominal pain	Stop medication, iv fluids, admit in hospital for further management	Avoid alcohol.
	Diabetes	Medium	Symptoms of hyperglycemia	Use of antihypertensives	None.
	Lipodystrophy	Medium	Increased fat around abdomen, breasts, back of neck and	Continue treatment, counselling and reassurance	Regular exercise.
SAQUINAVIR (SQV)	**Minor symptoms**	Medium	Headache, loss of appetite, malaise, vomiting,	Continue treatment. Symptoms subside within weeks	None.
	Hyperlipidemia	Medium	Heart attack, stroke	Use of lipid lowering drugs, except simvastatin and lovastatin	Physical exercise, use of other lipid lowering drugs such as pravastatin, fluvastatin
	Lipodystrophy	Medium	Increased fat around abdomen, breasts, back of neck	Continue treatment, counselling and reassurance	Regular exercise.
INDINAVIR (IDV)	**Nephrolithiasis**	High	Pain when urinating, back pain	Change medication to other PI	Drink six glasses of water per day
	Skin manifestations	Medium	Rash, dry skin, hyperpigmentation, hair loss, brittle finger nails and toe nails	Continue medication.	None.
	Hyperbilirubinemia	Low	Yellowing of skin, eyes and nails	Stop medication, manage the symptoms, change to other PI	None.
	Hyperlipidemia Lipodystrophy	Medium	Increased fat around abdomen, breasts, back of neck	Use of lipid lowering drugs, stop medication if heart attack	Regular exercise.
ATAZANAVIR (ATV)	**Hyperbilirubinemia**	Low	Yellowing of skin, eyes and nails	Stop medication, manage the symptoms, change to other PI	None.
	Nephrolithiasis	High	Pain when urinating, back pain	Change medication to other PI	Drink six glasses of water per day
	Palpitations	Low	Dizziness, light heartedness	Stop medication, cardiac examination and management	None
	Other symptoms	Low	Pain/tingling in arms and legs, nausea, diarrhea, abdominal pains, rash	Continue medication. Symptoms subside within weeks	None.
RITONAVIR (RTV)	**Oral paraesthesiae**	Low	Numbness and tingling around mouth	Continue medication. Symptoms subside within weeks	None.
	GIT symptoms	Medium	Nausea, vomiting, diarrhea	Continue medication. Symptoms subside within weeks	None.
	Hyperlipidemia Lipodystrophy	Medium	Increased fat around abdomen, breasts, back of neck	Use of lipid lowering drugs, stop medication if heart attack	Regular exercise.

* Side effects **highlighted in bold** and shaded in blue are life threatening.

6.7 SPECIAL CONSIDERATIONS FOR ANTIRETROVIRAL THERAPY

TB/HIV Co-Infection

For patients who are on TB treatment, the recommended first-line regimen to use when initiating ART is:

- **TENOFOVIR + LAMIVUDINE + EFAVIRENZ (TDF +3TC + EFV)**

ART must be started as soon as possible after the onset of TB treatment. Practically, this means starting ART as soon as the TB treatment is tolerated—usually two or three weeks after TB treatment initiation. This timing eliminates the potential for confusion in the event that TB treatment and ARVs share a pattern of side effects. For more information, see Chapter 8.

Co-Infection with Hepatitis B and/or C and Hepatic Dysfunction.

Lamivudine and tenofovir have antiviral effects against the hepatitis B virus (HBV). Their combination can suppress HBV replication and decrease the risk of HBV developing resistance to monotherapy with lamivudine only.
Thus, the recommended first-line regimen is very appropriate for hepatitis and HIV co-infected patients is:

- **TDF +3TC + EFV or NVP**

Renal Dysfunction

Creatinine clearance evaluates the kidney capacity to filter the substrates from the blood; some drugs can cause filtration impairment.

When patients with HIV-associated nephropathy are initiated on ART regardless of CD4 count, individual ARV doses should be adjusted to creatinine clearance; fixed-dose combinations are not advisable for use in patients with significant renal dysfunction requiring dosage adjustments. TDF should be avoided in severe nephropathy.

Pregnancy and ART

Women on ART Who Become Pregnant: The MOH recommends that women of reproductive age on ART receive ongoing monthly pregnancy and family planning counselling. Women on ART should discuss their pregnancy intentions with the ART team before becoming pregnant.

The following is the proposed approach to management :

- Urge a client who may become pregnant to report to her ART team as soon as

she misses her monthly period, to ensure quick diagnosis of pregnancy.
- Emphasize that she will need to continue ART for her health and to prevent transmission of HIV to her infant.
- If she is on an EFV-based regimen, consider substituting EFV with NVP if she presents during the first trimester. No substitution is necessary if the pregnancy is not known until after the first trimester.
- Note that exposure to EFV during pregnancy is not an indication for abortion.

Pregnancy-associated nausea and vomiting may affect a woman's ability to adhere to ART and may occasionally require that treatment be temporarily suspended. If nausea and vomiting are significant problems and not manageable by medication or other initiatives, a temporary suspension of treatment may be necessary until the symptoms are controlled.

Women on ART Who Don't Want to Have Children: Offer effective family planning, preferably at the ART unit.

Women on ART Who Express a Wish for a Child and Are Not Pregnant: Before making any recommendation, consider three points:
- Review the patient—her clinical, immunological, and (if available) virologic status.
- Provide adequate counselling around the risks of infection of the partner (if partner is HIV negative) and the risks of mother-to-child transmission of HIV.
- Discuss the issue with the couple together.

Consider the following options if the woman is clinically asymptomatic (see the T staging section in the paragraph on clinical failure, page 36), immunologically stable (preferable with a CD4 count >500 cells/mm^3), and virologically suppressed(undetectable viralload):

- Timed ovulatory unprotected sexual intercourse: explain risk of HIV transmission to partner especially among discordant couples.
- If partner is HIV negative: artificial insemination (although this technique is not yet available in Swaziland).

Women Not on ART Who Become Pregnant

HIV-infected pregnant women not on ART need to be assessed for ART eligibility with clinical staging and a CD4 count. Women who are eligible (with CD4 <350 cells/mm3 or clinical Stage 3 or 4) are at higher risk of mother-to-child transmission and need to initiate ART in order to:

- Prevent morbidity and mortality in the woman herself.
- Prevent mother-to-child transmission during pregnancy, labour and delivery, and breastfeeding—ART is the most effective method to achieve this goal.

Eligible pregnant women often do not initiate ART for various reasons—nonavailability of ART at the clinic, fear of disclosure to her partner, fear of harming the baby, or feeling herself too healthy to begin a course of treatment that will last a lifetime, among other reasons. The MOH recommends that ART be made available to pregnant women at ANC clinic (either at PHUs or at clinics). Appropriate counselling to address the psychosocial issues and information on the benefits of ART for both mother and child must be provided in order to help mothers-to-be make the right decision.

Recommended Regimen for Pregnant Women During the Second and Third Trimester: All pregnant women with indications for ARV treatment should receive ART. The preferred first-line antiretroviral regimen for pregnant women is:

AZT + 3TC + NVP

For women not on ART who become pregnant, issues to consider include the following:

- A pregnant woman with a CD4 count between 250 and 350 cells/mm3 who has indications for ART can be started on an NVP-containing regimen, with close monitoring during the first 12 weeks of therapy; or on an EFV-containing regimen, if she is in the second or third trimester of pregnancy; or on a triple NRTI- or a PI-based regimen.
- EFV remains an option for the NNRTI component of a first-line regimen in a pregnant woman during the second or third trimester of pregnancy, provided she does not want any other children and will use contraception after the pregnancy.
- TDF should be considered as a component of initial ART for pregnant women when other alternatives are not available or are contraindicated.

A woman with indications for ART who presents very late in pregnancy should be started on ART, regardless of the gestational stage of the pregnancy.

For Pregnant Women Not Eligible for ART: Start ARV prophylaxis, per PMTCT guidelines.
For further information, see the Swaziland national PMTCT guidelines.

6.8 MONITORING PATIENTS ON ART

During patients' first six months on ART, closely review patients on a monthly basis:

- ***Clinical monitoring:*** At every visit, check TB screening, side effects, adverse effects, immune reconstitution inflammatory syndrome (IRIS), new opportunistic infections (OIs), especially flare-up of subclinical TB.
- ***Immunological monitoring:*** CD4 counts done at 3months after initiation then at 6 monthly intervals.
- ***Laboratory monitoring:*** ALT, AST, BUN, Creatinine, Hb done at 6 month intervals or when indicated, e.g. Hb at 1 month if on AZT.
- ***Adherence counselling and support:*** At every visit, include an assessment of adherence (eg, pill count).
- ***Virological monitoring:*** Done for cases of suspected treatment failure (see section on viral load monitoring) Viral load counts done at 3 or 6 month interval, when available. In Swaziland, viral load monitoring is still limited.

Although patients can be expected to improve clinically and immunologically during this period, not all do. Notably, in patients started with advanced clinical disease and lower CD4 counts (eg, CD4 count <50 cells/mm3), the risk of death is higher within the first 6 months of ART initiation.

TABLE 6.9. CLINICAL CHECKUP SCHEDULE FOR ADULTS AND ADOLESCENTS ON ART

FOLLOW-UP SCHEDULE	INCLUDED IN ROUTINE ADULT EVALUATION
WHEN STARTING ART The second week after starting ART, the fourth week after starting ART, then monthly for the first year. **AFTER ONE YEAR ON ART** If stable after one year, provide refills every three months and check-ups every six months.	❑ Physical examination. ❑ Clinical review of symptoms and signs, medication use, side effects. ❑ Determination of HIV clinical stage and functional status (ambulatory, working, bedridden). ❑ Adherence assessment and counselling. ❑ Assessment of family status and family planning. ❑ Assessment of LNMP and pregnancy status for women. ❑ Review of TB status with TB screening tool. ❑ Acute care, if necessary. ❑ Management of symptoms. ❑ Management of chronic problems, e.g. diabetes,hypertension. ❑ Start or resupply CTX and ART.

Immune Reconstitution Inflammatory Syndrome

Any opportunistic infection occurring during the first six months after ART initiation might have two causes:

- The immune system is not yet fully functional (the least likely scenario).
- IRIS has occurred. Typically seen when a patient's impaired immune function is restored, IRIS is characterized by the paradoxical clinical worsening of a known condition or the appearance of a new condition. Infectious pathogens most frequently implicated in the syndrome include mycobacteria, varicella zoster, herpes viruses, and cytomegalovirus. At clinic level, health care workers should refer patients with suspected IRIS to the visiting doctor or to the hospital.

TABLE 6.10. CD4 AND OTHER LABORATORY MONITORING SCHEDULE FOR ADULTS AND ADOLESCENTS ON ART

	LAB TEST	INTERVAL
At ART initiation	❑ CD4 ❑ CBC/FBC+ differential ❑ LFT ❑ Urea and creatinine ❑ *For women:* Pregnancy test	
At follow-up visits	❑ CD4	Three and six months after ART initiation; every six months thereafter.
	❑ VL	Suspected treatment failure.
If regimen includes NVP	❑ ALT	Two weeks after initiation and before dose escalation. *If within normal limits*: Test again at three and six months and every 12 months thereafter.
For female patients with baseline CD4 count >250 cells/mm³ or abnormal liver function	❑ ALT/AST	Week two, four, eight, and 12 after initiation; every three months thereafter.
If regimen includes AZT	❑ Hb or CBC/FBC + differential	One and three months after initiation; every six months thereafter.
Women	❑ Pap smear	Annually.

[1] *See* Measuring Viral Load, *next page.*

6.9 IDENTIFYING AND PREVENTING TREATMENT FAILURE

Treatment failure is inevitable in clients who have been on treatment for a long time. The rule is to monitor patients closely and to identify treatment failure as soon as possible. Causes are numerous:

- Inadequate adherence (patient-centred).
- Pre-existing drug resistance.
- Regimen complexity (provider-controlled).
- Side effects.
- Suboptimal pharmacokinetics (poor drug absorption, metabolism, and ex cretion).

Many factors need to be taken into account when considering a patient's response to ART. The timing of the decision to switch from first-line to second-line therapy is critical and should not be made prematurely. Conversely, as far as possible, it should not be delayed; delay can result in further mutations of the virus and development of resistant virus that jeopardises the patient's chances of future success.

Identifying Treatment Failure

Treatment failure can be defined using virological, immunological, or clinical criteria. Virologic failure leads to immunologic failure, which leads to clinical failure. These events may be separated by months, or years, and in some patients may not even occur in this order.

Do not wait for patients to get to clinical failure before taking action.

Virologic Failure

In ART-naïve patients, virologic failure is defined by viral load (VL) as follows:

- VL >**400 copies/ml** at **six months.**
- VL >**50 copies/ml** at **48 weeks.**
- Repeated detectable VL (>**1,000 copies/ml**) on **two consecutive measurements, one** to **three months** apart, after prior undetectable VL.

Virologic Blip: Virologic failure should not be confused with a virologic 'blip', which can be defined as:

- A transient detectable VL (up to 1,000 copies/ml), *and*
- On a single occasion, *and*
- In a person who previously had an undetectable VL.

Blips could occur as a result of an intercurrent infection, such as influenza, malaria, TB, or the like, and do not indicate virologic failure. However, the occurrence of a blip is an opportunity to discuss adherence with your client.

Immunologic Failure

Immunologic failure is the failure to achieve and maintain an adequate CD4 response, consisting of one of the following:

- Failure to increase the patient's CD4 count by **more than 25–50 cells/mm³** during the **first year** of therapy.
- The **fall of the patient's CD4 count to pre-therapy level** or below.
- A **50% fall** from **on-treatment peak level** (if known).
- **Persistent CD4 count <100 cells/mm3 after one year on ART.**

Current medications and untreated co-infections and co-morbidities can cause immunologic failure and should be identified and managed.

Clinical Failure

Clinical failure is defined in two ways:

- The development of a **new or recurrent opportunistic infection after at least six months** on treatment.
- The worsening of a preexisting **WHO Stage 3 or 4 condition** that is not part of IRIS.

The development of a new or recurrent WHO Stage 3 or 4 condition while on treatment after the first six months of ART is considered functional evidence of HIV disease progression.

To assess their clinical evolution under ARVs, patients are staged according to the WHO staging system. However, clinical assessment under ART, according to the WHO staging system, is called the T staging (T for treatment). The T staging is like WHO staging except the stage of patients on ART can go in reverse.

Measuring Viral Load

The best means of identifying treatment failure—measuring viral load—is limited by cost and availability in Swaziland. Until VL testing's cost and availability permit its use to monitor patients on a wide and regular basis, it is reasonable to offer VL testing to the following patients:

- **As a first step in patient with suspicion of treatment failure:**
  —Patients who have been on ART for more than one year whose CD4 count has dropped by more than 50% of its peak.
  —Patients on ART for more than a year whose CD4 count has reached the baseline value or has dropped below it.
  —ART patients at one year with a CD4 increase not exceeding 100/ml.
- **Any time there is a discrepancy between clinical and immunological findings.**

With lower cost and wider availability of viral load testing in the near future, the next priority will be to assess the viral load after **six months** on ART. Optimally, when VL testing is widely available, it will be performed after **three months**, at **six months**, and every six months thereafter.

Preventing Treatment Failure

Although treatment failure may be inevitable, many measures can delay it:

- Conduct a thorough adherence and psychosocial assessment before initiating clients on ART; again two weeks after initiation; and thereafter regularly at any time the patient is due for a CD4 follow-up assessment.
- Take time to go through the initial drug selection in partnership with your clients.
- Maintain solid relationships with your clients. Good communication is key: Collaborative pill count can add some value but does not replace a good relationship.
- Test for CD4 counts every six months.
- Use VL testing as previously indicated (until it becomes available regularly and widely in Swaziland).

6.10 MANAGING TREATMENT FAILURE

Adherence Assessment and Support

Where the above investigations suggest treatment failure, meet as a multidisciplinary team to discuss the key questions:

- Is treatment failure due to poor adherence without any resistance?
- Is treatment failure possibly due to an underlying HIV drug resistance that may have developed?

Root Cause Assessment and Solutions

The course of action depends on the scenario. (See Figures 6.1, 6.2, 6.3.)
Scenario 1: Patient Has Completely Stopped Treatment: If the patient stopped all ARVs once, the risk of development of drug resistance is relatively low unless she was on nevirapine and the interruption was not structured.

The stoppage may have been prompted by financial difficulties, distance from the ART centre, drug side effects, social or work-related issues, the patient's failure to accept her HIV status, or the like. Try to pinpoint the specific problem, and then work with the patient to solve it. Provide step-up adherence counselling, then restart the previous first-line regimen. Check the patient's CD4 count and/or the VL after three months.

Scenario 2: Adherence is Poor: In this situation, the risk of developing drug resistance is very high. The issues behind the spotty adherence are likely numerous, com

plex, and difficult to identify: the patient's lack of understanding of HIV, the principles of ART, its side effects and the risk of developing drug resistance, poor counselling, psychological or psychosocial issues such as depression, lack of family support, fear of stigma or discrimination at work or in the family, etc. Clinical conditions can be the cause as well: TB meningitis, HIV encephalopathy, and the like.

If the poor adherence is relatively new (less than 12 months):

- Identify and address the underlying factors.
- Provide step-up adherence counselling and support.
- Continue same regimen, with reinforced adherence support and CD4 count and VL testing after three months.

If the problem is longstanding (more than 12 months):

- Identify and address the underlying factors.
- Provide step-up adherence counselling and support.
- Change to a second-line regimen.
- Check CD4 and/or VL after three months.

Scenario 3: The Patient Is Fully Adherent. In this case, the patient's virus is likely to have developed drug resistance. First rule out possible drug interactions, problems with absorption, etc. If present, address as appropriate.

If drug interactions or absorption problems seem absent, then drug resistance is probably the cause, especially if the patient has been on ART for more than three years with a history of undetectable viral load. In an individual who started ART recently, has good adherence, and is evidencing clinical, immunological, or virological failure, consider the possibility of primary resistance (transmitted resistance). In both these cases, a switch to a second-line regimen is indicated.

6.11 SECOND-LINE REGIMEN AFTER TREATMENT FAILURE

Ultimately, the decision to change to a second-line regimen, as well as the specific choice of the regimen, is a collective decision to be made by the entire multidisciplinary team (MDT). The patient sees the doctor, who then brings the case to the MDT. At clinic level, the client must be referred to an ART doctor to help make the decision to switch.

Once treatment failure has been identified and you have confirmed that a switch to a second-line regimen is indicated, base the patient's second-line regimen on the previous regimen.

FIRST LINE REGIMEN		SECOND LINE REGIMEN
TDF +3TC + EFV TDF + 3TC + NVP	→	AZT + 3TC + LPV/r or *ATV/r
AZT + 3TC + NVP AZT + 3TC + EFV	→	TDF + 3TC + LPV/r or *ATV/r

* Soon to be made available in SD

WHO RECOMMENDATIONS FOR SECOND LINE REGIMEN

- Use of ATV/r preferred over LPV/r due to:
    - Comparable efficacy in treatment experienced patients
    - Dosing convenience better with ATV/r (once daily dosing)
    - Lower bill burden with ATV/r compared to LPV/r
    - Lower cost compared to LPV/r
- ATV/r can be used in pregnant women. No evidence of risk of toxicity to both the mother and the foetus.
- Patients with anaemia and have been on TDF based first line regimen should be switched to ABC + DDI + LPV/r

Before Switching Regimens

- Take a thorough ARV history to help determine the appropriate second-line regimen.
- Optimize adherence.
- Treat all intercurrent OIs until they have resolved.
- Treat and control all co-morbidities when possible (renal, liver disease, cardiac disease, diabetes, etc.).

Patients who were previously treated with regimens other than the standard first-line regimens must be individually evaluated before switching to a second-line regimen.

In Swaziland, plans are underway to make ATV/r available, preferably as a combined ritonavir boosted pill. When available, prescribers will be informed officially by the National ART Programme.

FIGURE 6.1. TREATMENT FAILURE SCENARIO 1: PATIENT COMPLETELY STOPPED TREATMENT.

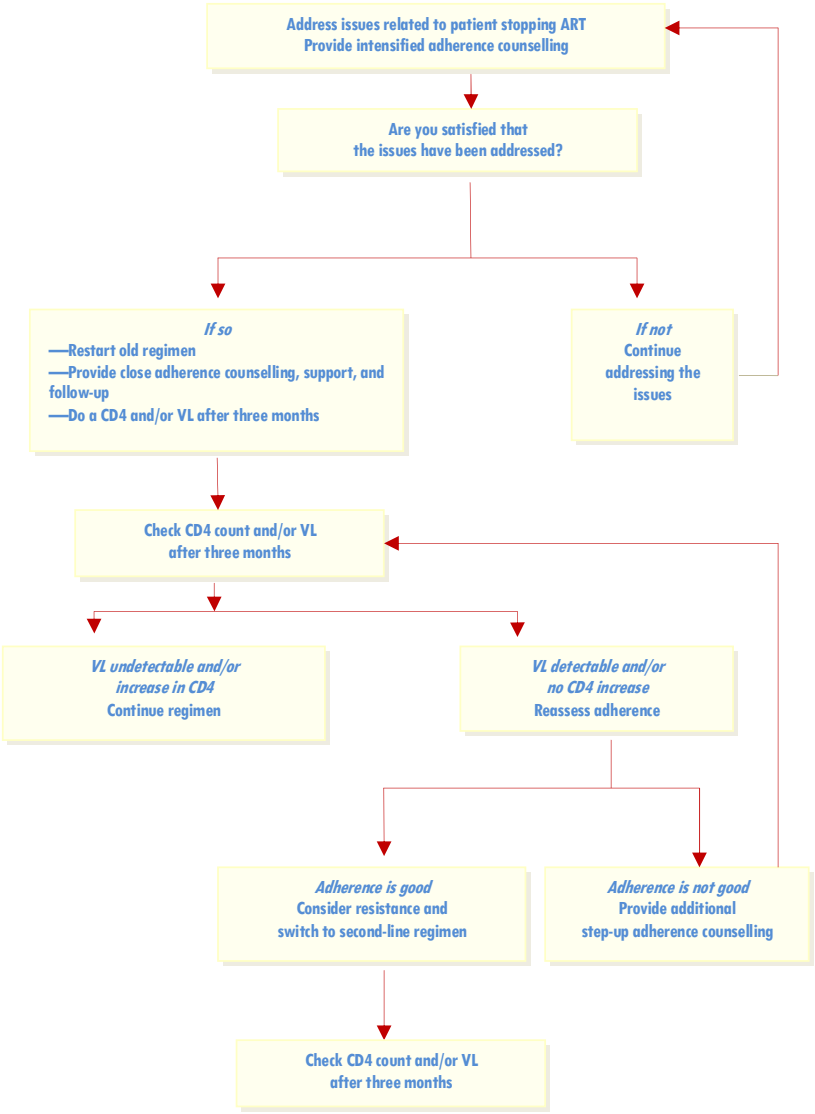


FIGURE 6.2. TREATMENT FAILURE SCENARIO 2: ADHERENCE IS POOR.

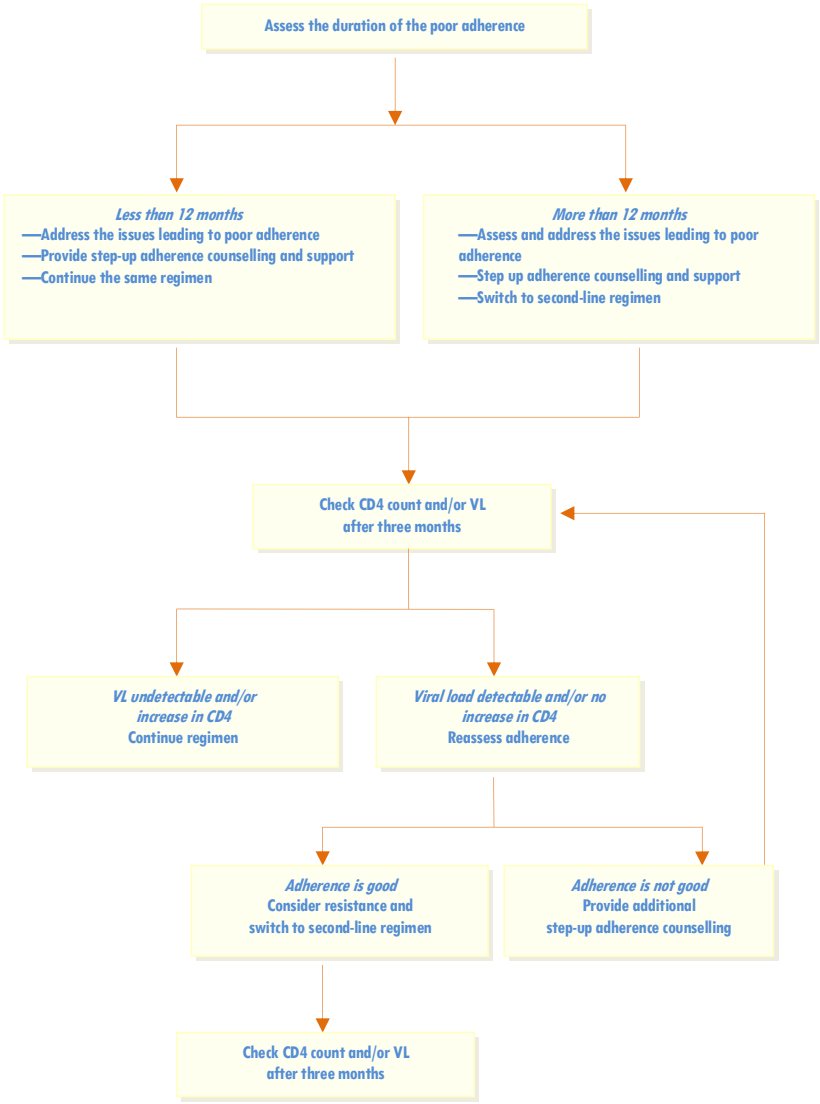
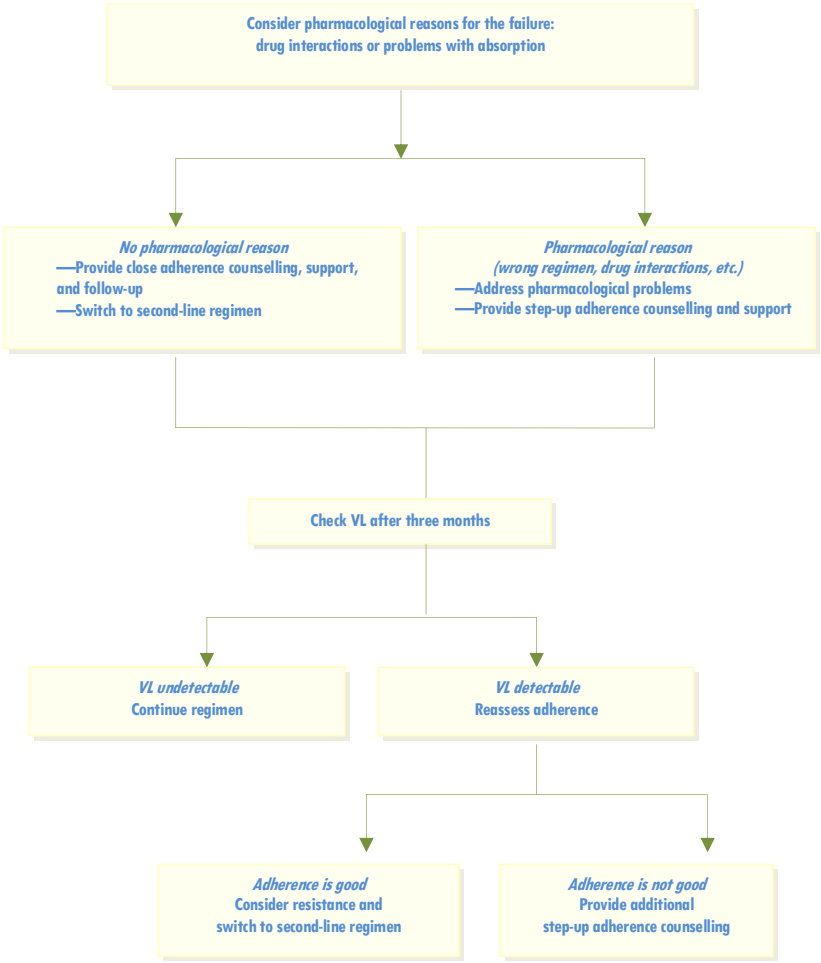


FIGURE 6.3. TREATMENT FAILURE SCENARIO 3: THE PATIENT IS FULLY ADHERENT.



Treatment-Experienced Patients

Treatment-experienced patients are patients who have been exposed to different regimens.

The goal of treatment for patients with prior drug experience and resistance is to reestablish virologic suppression to <50 copies/ml.

Assessing and managing a patient who is experiencing treatment failure is complex; for guidance, consult an experienced HIV doctor.

TABLE 6.12. ANTIRETROVIRAL REGIMENS AND COMPONENTS THAT ARE NOT RECOMMENDED AND WHY

	RATIONALE	EXCEPTION
ANTIRETROVIRAL REGIMENS NOT RECOMMENDED		
Monotherapy with NRTIs	• Rapid development of resistance. • Inferior antiretroviral activity compared to a combination of three or more ARVs.	No exceptions.
Dual-NRTI regimens	• Rapid development of resistance. • Inferior antiretroviral activity compared to a combination of three or more ARVs.	No exception.
Triple-NRTI regimens except for AZT+ABC + 3TC or possibly TDF + ABC + 3TC	• High rate of early virologic nonresponse seen when triple-NRTI combinations, including TDF + ABC + 3TC or TDF + ddI + 3TC, were used as initial regimen in treatment-naïve patients. • Other triple-NRTI regimens have not been evaluated.	ABC+AZT+3TC and possibly TDF + ABC + 3TC in selected patients for whom other combinations are not desirable.
ANTIRETROVIRAL COMPONENTS NOT RECOMMENDED AS PART OF AN ANTIRETROVIRAL REGIMEN		
D4T+ddI	• High incidence of toxicities, including peripheral neuropathy, pancreatitis, and lactic acidosis. • Reports of serious, even fatal, cases of lactic acidosis with hepatic steatosis, with or without pancreatitis, in pregnant women.	When no other antiretroviral options are available and when potential benefits outweigh the risks.
Dual-NNRTI combinations (eg, NVP+EFV)	• When EFV is combined with NVP, a higher incidence of clinical adverse events is seen, compared to a regimen based on EFV or NVP alone. • EFV and NVP reduce the efficacy of one another.	No exceptions.
EFV during the first trimester of pregnancy or in women with significant childbearing potential	• Teratogenic (that is, causing causing developmental malformations) in nonhuman primates	When no other antiretroviral options are available and when potential benefits outweigh the risks.
NVP in treatment-naïve women with CD4 >250 or in men with CD4 >400	• High incidence of symptomatic hepatotoxicity.	Use only if no other antiretroviral option is available. If used, monitor patients closely.
D4T + AZT	• Antagonistic effect on HIV-1.	No exceptions.
Unboosted SQV	• Inadequate bioavailability.	No exceptions.

Chapter 7: ADHERENCE TO CARE AND TREATMENT

Key Reference Documents

- Lesotho Ministry of Health and Social Welfare and the International Center for AIDS Care and Treatment Programs. Adherence and Psychosocial Support Implementation Workshop for Multi-Disciplinary HIV Care Teams. Facilitator and Participant Manual. 2008.
- Swaziland Ministry of Health and International Center for AIDS Care and Treatment Programs. Peer Education and Support in HIV/AIDS Prevention, Care, and Treatment: A Comprehensive Training Course for Expert Clients in the Kingdom of Swaziland. Trainer and Participant Manuals. 2007. Available at: http://www.columbia-icap.org/resources/ supporttools/index.html.
- Swaziland Ministry of Health. A*RV Treatment Literacy Training Course, Trainee's Manual.* 2005.
- *Also see chapters* 3 and 13 for more on psychosocial assessment and support; Annex 1 for a sample ART readiness assessment tool; Annex 2 for a sample psychosocial assessment tool; and Annex 3 for a sample ongoing adherence assessment tool.

7.1 WHAT IS ADHERENCE AND WHY IS IT IMPORTANT?

Adherence to care and medication regime is important to comprehensive HIV care at individual, family, community, and national levels. Adherence helps prevent mother-to-child transmission and to improve the health and well-being of adult and paediatric clients living with HIV. Near-perfect adherence is required for ART to be successful—to decrease viral load and to increase CD4 cells in the body.

The recent addition of Expert Clients in HIV care and treatment and PMTCT programs nationally has increased attention to adherence support, not to mention the time dedicated to it. However, although Expert Clients are key players in supporting adherence, the responsibility for it is shared by all members of the multidisciplinary care team, including Expert Clients.

Adherence Defined

The standard clinical definition of adherence has been "taking >95% of medications the right way, at the right time." Over time, this definition has been broadened to include additional factors related to continuous, comprehensive care: following a care plan, attending scheduled clinic appointments, picking up medicines on time, getting regular CD4 tests.

Adherence also includes active participation of the client in his or her care plan and

implies understanding, consent, and partnership among the client, his or her family, health care workers, and community workers. Adherence also requires a client's taking responsibility for his or her own health. Finally, adherence changes with time.

Adherence to Care: This includes:

- Entering into and continuing on a care and treatment plan.
- Taking medicines to prevent and treat OIs.
- Participating in ongoing education and counselling.
- Attending scheduled appointments and having laboratory tests (eg, regular CD4 tests or chest x-rays).
- Picking up medications when scheduled—before finishing the current supply.
- Modifying lifestyle and avoiding risky behaviours.
- Making a commitment to preventing new HIV infections.

Adherence to Treatment: This includes:

- Taking ARVs correctly, as prescribed, and understanding that they must be taken for the rest of the client's life.
- Taking other medicines, such as CTX, as prescribed.
- Not taking any treatment breaks or drug holidays.
- Not mixing traditional and alternative medicines with ARVs.
- Giving medications to HIV-exposed and HIV-infected infants and children as prescribed.

Nonadherence: Non-adherent behaviour is characterised by the following:

- Missing one or many appointments at the clinic, lab, or pharmacy.
- Not following the care plan.
- Missing one or more doses of medicine.
- Stopping medicine for a day or many days and taking treatment breaks or drug holidays.
- Taking medicines at the wrong times.
- Taking medicines without following instructions.
- Mixing ARVs with traditional and alternative medicines or remedies.

7.2 COMMON FACTORS AFFECTING ADHERENCE

Health care workers should be aware that many factors affect adherence. It is not only about an individual client's knowledge and actions.

Adherence is also closely related to the client's community and culture, to health services and programs, and to the medicines themselves.

Health care workers should try to align care and counselling with the realities of clients' daily lives—because many of these factors greatly impact adherence. Table

7.1 enumerates some of the most common factors affecting adherence to care and treatment.

TABLE 7.1. SUMMARY OF COMMON FACTORS AFFECTING ADHERENCE

CATEGORY	FACTORS
THE CLIENTS THEMSELVES	❑ Confidence in his or her ability to adhere; self-efficacy. ❑ Acceptance of status and disclosure to others. ❑ Having a treatment supporter. ❑ Understanding of treatment benefits and/or PMTCT. ❑ Understanding of the importance of adherence. ❑ Quality of life while on treatment. ❑ Travel and migration. ❑ Health status. ❑ Mental illness or substance abuse. ❑ Concern for family well-being.
OUR COMMUNITY AND CULTURE	❑ Poverty. ❑ Malnutrition. ❑ Lack of food. ❑ Stigma. ❑ Social support. ❑ Availability or lack of childcare if needed to attend the clinic. ❑ Family structure and hierarchy. ❑ Gender inequality. ❑ Violence. ❑ Migration. ❑ Trust or lack of trust for the clinic or hospital. ❑ Preference for obtaining health services from traditional healers.
HEALTH SERVICES	❑ Fees or costs to patients. ❑ Drug shortages. ❑ Distance to clinic or transportation problems. ❑ Convenience of clinic hours and waiting times. ❑ Patient record and tracking systems. ❑ Staffing types and levels at clinics. ❑ Provider attitudes. ❑ Youth-friendliness of services. ❑ Space for private counselling. ❑ Coordination of services—'one-stop shopping'. ❑ Referral systems and linkages to social and material support. ❑ Availability of home visits and access to support groups. ❑ PLHIV involvement in health services.
THE HIV MEDICATIONS	❑ Side effects of medications. ❑ Number of pills in regimen. ❑ Dose timing. ❑ Taste of medications. ❑ Changes in drug supplier—labelling, pill size, colour, formulation. ❑ Changes in the number of pills taken.

7.3 STRATEGIES TO SUPPORT ADHERENCE

Upon Enrolment into Care

Gather Basic Client Information: First, record key information about the client in his file: name, ART or ANC number, sex, age, physical address and description of the location (if needed), phone contact number (and whether it is the client's own phone or someone else's), the name of the client's Rural Health Motivator, contact information for the client's treatment supporter, and the client's consent to be called by phone and visited at home.

Discuss Psychosocial Issues Relating to Adherence: In addition, with each client, conduct an individual psychosocial assessment that covers psychosocial issues affecting adherence to care and positive living. See chapters 3 and 13 for more on psychosocial topics, Annex 2 for a sample psychosocial assessment tool.

During Ongoing Care

Health care workers at all levels can do many things to help clients adhere to care: working to make services client-friendly, practicing good communication skills, maintaining confidentiality, offering peer support, and developing outreach and follow-up systems. See Table 7.2, next page.

7.4 SETTING THE STAGE FOR SUCCESSFUL ADHERENCE BEFORE ART INITIATION

Step 1: Group Education Sessions

In Swaziland, adult clients starting ART should participate in at least two distinct structured group education sessions. Group education sessions should ideally be held in a meeting room or large clinic room rather than an open waiting room. Existing clients should not be mixed in the same sessions with newcomers, who will have different knowledge levels and questions. Clients should be encouraged to bring their treatment supporters to the group education sessions.

For Pregnant Women: Hold special group education sessions covering topics of specific concern to pregnant women. Stress the need for ongoing care and treatment for the mother and the baby postpartum. The first group education session can be held with all pregnant women who have tested positive for HIV (while awaiting CD4 results); the second session can be held with pregnant women who will be initiating ART once CD4 test results are confirmed.

Step 2: Individual Sessions

Although group education sessions are efficient for giving key information to many people simultaneously, clients initiating care and treatment also need to speak pri

vately with a health care worker, counsellor, or Expert Client. So, before any client begins ART, provide at least one individual counselling session. In it, include an adherence assessment. Also conduct a psychosocial assessment at this time if none has not been conducted in the recent past. For topics to discuss during adherence and psychosocial support assessments, see Table 7.3.

TABLE 7.2. STRATEGIES TO PROMOTE AND SUPPORT ADHERENCE TO COMPREHENSIVE HIV CARE

STRATEGY	KEY POINTS
CLIENT-FRIENDLY SERVICES	❑ Make the environment pleasant and comfortable, with not-too-long wait times and a shady waiting area, convenient hours, and welcoming staff and volunteers. ❑ Prioritise women and couples; allow them to go ahead of other clients. ❑ Keep services easy to access and co-located—a person can get many health needs, including children's care and treatment, taken care of during the same visit. ❑ Provide childcare facilities at the clinic. ❑ Ensure that services are youth friendly.
GOOD COMMUNICATION	❑ Follow good communication and active listening skills. ❑ Ask open-ended questions about adherence to help the client share. Example: "Some people find it hard to come to the clinic every month because they have so much to do at home. How has this been for you?" ❑ Check in regularly with the client; to gauge understanding, use reflection—repeat what the client has said to you in your own words. ❑ Show concern and respect. ❑ Never judge someone that you are counselling.
CONFIDENTIALITY	❑ Remind clients that care and treatment information may be shared among the multidisciplinary team but will not be disclosed outside that group. ❑ Make sure all clients understand that what is said at the clinic is confidential. ❑ Assure all clients that their HIV status will not be disclosed without their consent. ❑ Remind clients that they might see other community members at the clinic and help them prepare for this.
EDUCATION AND PEER SUPPORT	❑ Have Expert Clients help clients understand HIV and the need to return to the clinic even if they are not on ART; provide practical adherence counselling. ❑ Promote adherence by providing support groups and one-on-one counselling. ❑ Link clients to PLHIV associations, which can help members with adherence.
STRONG OUTREACH AND FOLLOW-UP	❑ Use an appointment system to track which clients are supposed to come to the clinic each day, and for which services. ❑ Give clients reminder cards so they know when to come back to the clinic. ❑ Encourage clients taking ART to have a treatment supporter. ❑ Develop tracing systems to follow up with clients who miss appointments. ❑ Keep contact information updated and organised for each client. ❑ Respect clients' wishes about how they prefer to be contacted. ❑ Link clients with PLHIV associations and nongovernmental organisations (NGOs) in the community that can help support adherence. ❑ *For clients who have missed appointments:* Conduct home visits or link to Rural Health Motivators or other community health workers, providing the client has agreed in advance to be contacted. ❑ *Providing the client has agreed in advance:* Contact RHMs, home-based caregivers, or other community health workers to provide home-based adherence support and follow-up.

TABLE 7.3. KEY TOPICS TO ADDRESS AND PROVIDE ADDITIONAL COUNSELING ON DURING THE INDIVIDUAL ADHERENCE AND PSYCHOSOCIAL SUPPORT ASSESSMENT

TYPE OF ASSESSMENT	TOPICS TO COVER
ART READINESS ASSESSMENT	❑ Participation in group education sessions. ❑ Understanding of CD4 count. ❑ Expectations about taking ARVs. ❑ Understanding of how ARVs can prevent MTCT and make people healthier. ❑ A client's confidence in his or her ability to take the medications every day, for the rest of his or her entire life. ❑ Past experiences with adherence (for example, to CTX or TB treatment). ❑ Specific ARV regimen (names of drugs, colour/shape, how and when to take). ❑ Common side effects and management techniques. ❑ Importance of adherence and consequences of nonadherence. ❑ Remembering to come to the clinic for regular appointments. ❑ Remembering to take pills on time, every day. ❑ Use of tools, such as medicine diary, pill box, calendar, cell phone, watch. ❑ Use of other medications, including traditional medicine. ❑ Potential difficulties in coming to the clinic. ❑ Planning for time spent away from home. ❑ Planning for medication storage. ❑ What to do if doses are missed. ❑ What to do if there are any problems. ❑ Concerns about taking ARVs. ❑ Questions about care and treatment plan for self, baby, or others. ❑ Additional topics for parents and caregivers. ❑ Other caregivers and their knowledge of how to give medications.
PSYCHOSOCIAL ASSESSMENT[a]	❑ Disclosure to family members and partner. ❑ Partner testing. ❑ Family members on ART. ❑ Number and ages of children. ❑ Children who have been tested, children on ART, children who are sick. ❑ Disclosure to children. ❑ Sources of support at home and in the community. ❑ Treatment supporter. ❑ Membership in support group or community organisation. ❑ Challenges resulting from poverty, such as food security and difficulty in obtaining transport to the clinic.

[a] Note: Conduct a psychosocial assessment when clients are first enrolled in care and again when they are preparing to initiate ART.

TABLE 7.4. KEY TOPICS TO DISCUSS IN GROUP EDUCATION SESSIONS WITH CLIENTS STARTING ART

TYPE OF ASSESSMENT	TOPICS TO COVER
PRE-ART SESSION 1 Basic Information About HIV Care and Treatment	❑ The client's understanding of his own diagnosis. ❑ Knowledge of how HIV is transmitted and prevented. ❑ How HIV affects the immune system. ❑ The meaning of the CD4 count. ❑ What is ART and who needs ARVs and ART; beliefs and attitudes about ART. ❑ Benefits and challenges of ART. ❑ Importance of ongoing care and regular clinic visits and keeping appointments: two weeks after initiation, lab tests, ongoing ART refills, and adherence assessments. ❑ Positive living. ❑ Importance of disclosure. ❑ Family testing and enrolment. ❑ Nutrition. ❑ Safer sex, dual protection, and prevention and treatment of STIs. ❑ Pregnancy intentions and preventing new infections in babies. ❑ OI prophylaxis and treatment of OIs (especially CTX). ❑ TB prevention and treatment. ❑ Identification of sources of social support (family, treatment supporter, counsellor, support groups, community groups). ❑ Summary, question-and-answer period, reminder to participants about the next session (time, date, location). ❑ Offer to provide follow-up on any of these topics in individual counselling.
PRE-ART SESSION 2 Adherence to HIV Care and Treatment	❑ ART = lifetime commitment. ❑ Importance of adherence to care plan and to treatment. ❑ What can happen if you don't adhere to care and treatment. ❑ Previous adherence experiences (CTX, TB, etc.). ❑ Common adherence barriers and challenges. ❑ Adherence strategies and tips. ❑ Linkages to home-based care. ❑ Special adherence issues for pregnant women and adolescents. ❑ Understanding the treatment plan (explanation of each ARV, dosing schedule, what to do about missed or late doses). ❑ Preventing and managing side effects. ❑ Problem-solving around adherence barriers, including the use of tools such as medicine diaries, pill boxes, watches, cell phones, etc. ❑ How to make the care and treatment plan part of everyday life. ❑ What to do if there is a problem or question. ❑ Plan for two-week and subsequent follow-up visits. ❑ Reminders on positive living, safer sex, and pregnancy planning. ❑ Linkages and referral to support groups and community support services. ❑ Summary, time for questions and answers. ❑ Offer to provide follow-up on any of these topics in individual counselling.

7.5 SETTING THE STAGE FOR SUCCESSFUL ADHERENCE POST-INITIATION

Ongoing adherence monitoring and support is vital to encourage clients to understand their challenges and be open about any problems they may be facing so that health care workers can provide them with support.

Don't forget to update patient contact information at each visit

The Two-Week Follow-Up Visit

Adherence should be discussed and assessed two weeks after ART initiation. This is a critical time to talk with people about their experiences with ART, their doubts, their challenges, and their concerns, and to identify and immediately address any barriers to adherence.

At All Subsequent Clinic and Pharmacy Visits

Adherence assessment and support should be a routine part of every clinic visit. Clients should never be judged about their adherence challenges, and health care workers should build trusting relationships with clients, so they feel comfortable being completely honest about adherence.

Update Patient Information: At each visit, routinely update patient information: age, physical address and description of the location (if needed), and phone contact number (and whether it is the client's own phone or someone else's) as well as the name of the client's Rural Health Motivator, and contact information for the client's treatment supporter.

Ask Questions: To assess adherence, the most effective method is to spend time talking with clients about their adherence strategies and challenges, using open-ended questions. At each visit, ask the same questions and record the client's responses in his or her chart:

- Can you tell me more about how you took your medications this month?
- During the last seven days, how many pills did you miss or take late?
- How did the medicines make you feel?
- Can you tell me more about any problems you had with your medicines this month?
- What challenges did you have taking your medications this month?
- What support do you have to take your medications?

Other Tools to Assess Adherence and Identify Challenges: In addition to self-reports, health care workers can also use such methods as pill counting.
The use of pharmacy records and comparison of adherence assessments with clini

cal and immunologic outcomes (including CD4 count and VL, where available) will, in combination with client feedback, give a more complete picture of the client's adherence.

As adherence preparation, support, and assessment are the responsibility of the entire multidisciplinary team, adherence issues and findings should be routinely discussed during MDT meetings.

For Pregnant Women

Health facilities should prioritise pregnant women for care and treatment. For example, health facilities can create family HIV care days at ART and maternal–child health clinics for pregnant women, children, and family members and implement policies to ensure that pregnant women do not have to wait when they come for HIV care and treatment services.

7.6 ONGOING WORK WITH CLIENTS

Praise for Good Adherence

When clients are adhering well, praise them for good adherence, remind them to come back if they have any problems, and talk about how important it is to be open with health care providers and to work together to resolve adherence challenges.

When Adherence Is Challenging

Provide one-on-one counselling, try to identify the specific issues, discuss the specifics of how challenges affect adherence, and help resolve these challenges and minimise or eliminate barriers. In addition, discuss the importance of adherence, give referrals to support groups or other organisations, and plan for next steps, including the clinic return date.
Praise the person for being open about the challenges.
Providing specific guidance and helping clients identify exactly when and how medicines will be taken (times, cues, with or without food, etc.) in a way that is tailored to the person's life will likely help improve adherence.

When Clients Who Repeatedly Face Adherence Challenges Frequently Miss Appointments: Provide one-on-one counselling to try and understand what is happening in the person's life and the reasons behind the poor adherence. Ideally, the person will receive continued and individualised adherence counselling and will resume treatment only after barriers have been identified and solutions to these barriers put in place.

If transportation costs or distances are barriers, try to locate a clinic offering needed services closer to the person's home, then conduct a formal transfer.

If alcohol and substance abuse may be a cause of nonadherence, screen for them and provide referrals for counselling and treatment if necessary.

If a person resumes ART after a period or periods of discontinuation, encourage the client to use a treatment supporter and to have that individual directly observe him taking his medicine until adherence barriers are overcome.

Via a phone call to the client, the treatment supporter, or the local RHM, or through a home visit (providing the patient has previously consented), health care facilities should routinely document and trace patients who fail to return for clinic appointments.

Step-Up Adherence Counselling

When patients have defaulted for a period of time and then return to the clinic, it's important to conduct a step-up adherence counselling session, with either the nurse or an Expert Client leading a discussion about the practical and psychosocial reasons for nonadherence. Understanding the patient's barriers to adherence can help you provide future support.
See Table 7.5 for questions to ask.

TABLE 7.5. QUESTIONS TO ASK DURING STEP-UP ADHERENCE COUNSELLING

QUESTION FOCUS	TOPICS TO COVER
ADHERENCE	❑ What have been the barriers to taking the medication? When is it most difficult to remember your medications? Barriers may be: —Logistical (travel, away from home). —Psychosocial (stigma, secrecy). —Medication-specific (related to side effects, number of pills). ❑ It's not easy to take medicine every day. What things help you to take your pills? Do you have anyone who supports you in taking your medication? ❑ Has your experience with the clinic been what you expected? What support could the clinic provide to help you with adherence?
PSYCHOSOCIAL ISSUES	❑ Has your life situation changed since you started medication? ❑ Do you have supportive people in your life at the moment? ❑ How have you been feeling (both physically and emotionally) during the past month? ❑ How have your feelings or your life situation affected your ability to take your medication?

In addition, identify any mental health issues, such as depression, alcoholism, or drug use.

By spending a bit of extra time with nonadherent patients and understanding both the medical and psychosocial reasons for their nonadherence, it's possible to begin to help them get back to taking their medication.

Once you know the facts, consider whether existing support structures are appropriate or need improvement. Are there alternative that might work better for this patient? In addition, consider such support mechanisms as:

- Pillboxes.
- Dosing diaries.
- Mandatory support group attendance.
- A stepped-up schedule of counsellor visits.

With supportive counselling, you can help patients cope with stress, understand their personal adherence issues, and make appropriate personal decisions.

Chaper 8: PREVENTING AND TREATING TUBERCULOSIS

Key Reference Documents

- Swaziland Ministry of Health. *National TB Control Guidelines.* May 2006.
- Swaziland Ministry of Health. *Swaziland National Policy Guidelines for TB/HIV Collaborative Activities.* June 2007.
- World Health Organization Integrated Management of Adult and Adolescent Illness. Tuberculosis Care with TB-HIV Co-Management. Geneva, Switzerland: WHO. April 2007. Available at: http://www.who.int/hiv/pub/imai/ TB_HIVModule23.05.07.pdf.
- Stop TB Department and Department of HIV/AIDS, World Health Organization. TB/HIV Guidelines for Improving the Diagnosis and Treatment of Smear Negative Pulmonary and Extrapulmonary Tuberculosis among Adults and Adolescents: Recommendations for HIV-Prevalent and Resource-Constrained Settings. Geneva, Switzerland: WHO. 2006. Available at: http://www.who.int/tb/ publications/2006/tbhiv_recommendations.pdf.

8.1 THE THREE I'S STRATEGY

Tuberculosis is the most common opportunistic infection and the leading cause of mortality among people living with HIV. Early detection and treatment of TB among PLHIV is critical in the control of TB infection. To prevent the spread of TB among the general population, health facilities should adopt the Three I's strategy, which is composed of:

- Intensified case finding (ICF).
- Isoniazid preventive therapy (IPT).
- Infection prevention and control (IPC).

To improve adherence to clinic appointments and medication compliance among patients with HIV and TB co-infection, health care workers should endeavour to co-schedule clinic visits for ARV and TB drug refills and clinic reviews.

8.2 INTENSIFIED CASE FINDING

TB Screening

At the Health Facility: All PLHIV should undergo routine screening for TB at every visit using the TB screening questionnaire in Table 8.1.

- If a person screens negative (ie, answers 'no' to all symptoms), health care workers should administer the screening questionnaire again at the next visit.

- If a person answers 'yes' to question 1, or 'no' to question 1 but 'yes' to two or more other questions, the person should be considered a TB suspect and evaluated for TB disease.

TABLE 8.1. TB SCREENING QUESTIONNAIRE FOR ADULTS AND ADOLESCENTS

	FIRST VISIT		SECOND VISIT		THIRD VISIT		FOURTH VISIT		FIFTH VISIT		SIXTH VISIT	
VISIT DATE												
SYMPTOM												
SCREENING QUESTIONS	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
1. Have you had a cough for two or more weeks?												
2. Have you had night sweats for two or more weeks?												
3. Have you lost noticeable weight in the last four weeks?												
4. Have you had a fever for two or more weeks?												
5. Do you have any chest pain?												

NOTES

'Yes' to question 1 only: The person is a pulmonary TB suspect. Do the sputum and refer to the doctor for further evaluation.

'No' to question 1 but 'yes' to two or more questions: The person is a TB suspect. Do the sputum and refer to the doctor for further evaluation.

'No' to all questions: The person is not a TB suspect. Repeat the screening at next visit.

Self-Screening at Home: All PLHIV should be educated about the importance of seeking medical care promptly if they—or any family members that they live with—develop any symptoms suggestive of TB disease listed in Table 8.1 above.

8.3 PULMONARY TUBERCULOSIS DIAGNOSIS IN ADULTS AND ADOLESCENTS

Diagnostic Tools

The diagnostic tests used to evaluate PLHIV who are pulmonary TB suspects include sputum microscopy, chest radiograph (aka, a chest x-ray), and sputum culture.

Sputum Microscopy: Direct microscopic examination of stained sputum smears allows the detection of M. tuberculosis bacilli. The results are reported as positive or negative depending on whether or not acid-fast bacteria (AFB) are observed. PLHIV who are TB suspects should submit two sputum specimens for AFB smear microscopy within 24 hours ("spot/morning"—that is, one specimen provided on the spot and a second provided the next morning), as described in the *WHO TB/HIV Guidelines for Improving the Diagnosis and Treatment of Smear Negative Pulmonary and Extrapulmonary Tuberculosis among Adults and Adolescents.* Sputum collection should be performed at all facilities, even if smear preparation and microscopy are performed off site.

Sputum collection should be conducted in the open air and away from other people.

Finally, to expedite TB diagnosis among PLHIV, spot sputum collection—that is, collection of a sputum sample during the visit—is compulsory.

Chest Radiograph: Although chest x-ray abnormalities are common in PLHIV without TB, chest x-rays do play a significant role in shortening delays in diagnosis and should be performed early in the course of investigation of a TB suspect. The chest x-ray presentation of TB varies depending on the person's CD4 count, as explained further in Table 8.2.

TABLE 8.2. RADIOGRAPHIC ABNORMALITIES SEEN IN PULMONARY TB

HIGH CD4 COUNT	LOW CD4 COUNT
Upper lobe infiltrates	Interstitial infiltrates (especially lower zones)
Bilateral infiltrates	Interthoracic lymphadenopathy
Cavitation	No cavitation
Pulmonary fibrosis and shrinkage	No abnormalities

In no case should a chest x-ray alone be used to diagnose pulmonary TB. The need for sputum smear is of primary importance. The diagnosis of pulmonary TB can be led by the chest x-ray only in cases of negative smear tests.

Sputum Culture: Mycobacterial culture, although the gold standard for diagnosing TB and assessing drug susceptibility, is expensive, and it takes between four and six weeks to get the results.

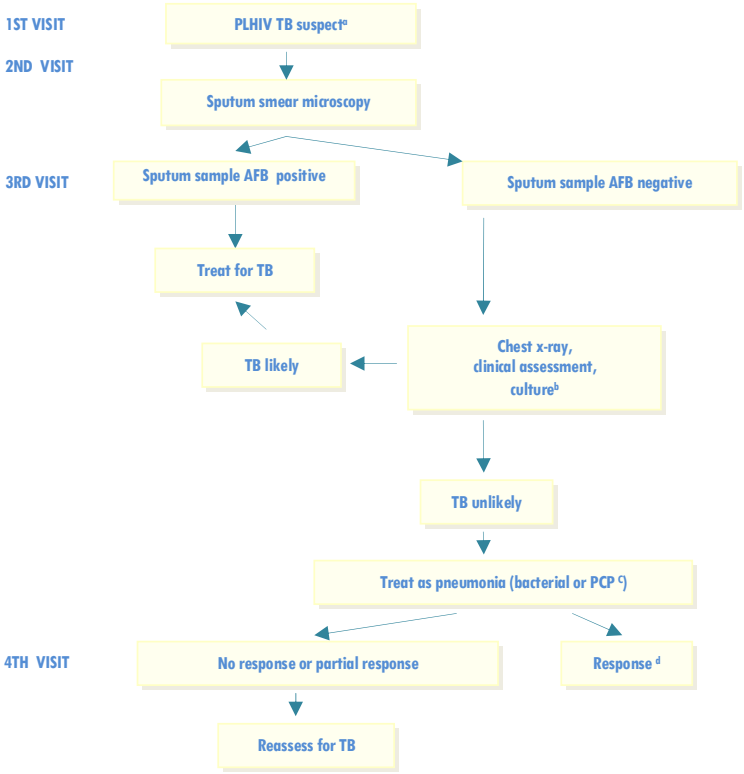
A sputum specimen should be sent for culture whenever multidrug-resistant TB (MDR-TB) is suspected, based on:

- Exposure to MDR-TB.
- History of TB treatment failure.
- TB relapse.
- Lack of sputum smear conversion after two to three months of intensive TB treatment.

A negative sputum in PLHIV does not rule out TB infection.

A sputum culture should also be obtained when pulmonary TB is suspected and sputum smears are negative, as outlined below

FIGURE 8.1. ALGORITHM FOR THE DIAGNOSIS OF PULMONARY TB AMONG ADULTS LIVING WITH HIV.



[a] Antibiotics to cover both typical and atypical bacteria (except fluoroquinolones) should be considered.

[b] When possible, the investigations within this box should be done at the same time so as to decrease the number of visits and speed up the diagnosis.

[c] *Pneumocystis jirovecii* pneumonia (PCP).

[d] Advise to return for reassessment if symptoms recur.

Diagnostic Sequence

For the diagnosis of pulmonary TB in adults living with HIV, see the algorithm in Figure 8.1.

First Visit: When the screening tool shows the patients to be TB suspects, provide sputum bottles and instruct on sputum collection. The patient must be seen by the doctor or nurse.

Second Visit: Have patients return the following day with a second sputum specimen. Send samples to the lab as soon as possible.
If MDR-TB is suspected, ask the patient to come with early morning sputum on a third visit and send the sample for culture and drug susceptibility testing.

Third Visit: If one or both sputum results are positive, classify the person as a smear-positive TB case and start TB treatment. If the sputum smear is negative, do a chest x-ray and further clinical assessment.

If the clinical assessment and chest x-ray suggest TB, classify the patient as a smear-negative TB case and start TB treatment.

Give all patients who have started TB treatment a review date within two weeks of commencing treatment.

To treat bacterial infections or Pneumocystis jirovecii pneumonia, patients not treated for TB should receive broad-spectrum antibiotics (not fluoroquinolones, because of their potential action on M. tuberculosis). Patients being treated for pneumonia should be given a review date within a week for treatment efficacy assessment.

Fourth Visit: For patients treated for pneumonia, reassess the response to antibiotics. In the event of partial or no response, reassess for TB with sputum smears, if available. If clinical assessment and chest x-ray are highly suggestive of TB, start TB treatment.

Follow up on patients with an immediate response to treatment for PCP or bacterial pneumonia to rule out superimposed tuberculosis.

For patients on TB treatment, assess for resolution of the fever, improvement in appetite, and appearance of side effects of the drugs.

TB Diagnosis in Pregnant Women

All HIV-infected pregnant women should be screened for TB using the screening questionnaire in Table 8.1. If the screening is positive, follow the algorithm outlined in Figure 8.1.

Chest x-rays are not recommended during pregnancy, particularly during the first trimester

8.4 EXTRAPULMONARY TB

The most common forms of extrapulmonary TB include lymph node, pleural, and disseminated TB. With the exception of lymph node TB, most people with extrapulmonary TB are managed without bacteriological or histological confirmation.

The clinical presentation and diagnostic evaluation for the commonest manifestations of extrapulmonary TB are summarised in Table 8.3.

TABLE 8.3. DIAGNOSIS OF EXTRAPULMONARY TB

LOCATION	CLINICAL CHARACTERISTICS	DIAGNOSTIC INVESTIGATIONS	HIGH SUSPICION OF TB IF:	FINDINGS SUGGESTING A NON-TB DIAGNOSIS
LYMPH NODE	• Lymph node swelling in neck or armpits	• Needle aspirate for AFB microscopy, cytology. • If aspirate nondiagnostic: Excisional biopsy. • Sputum smears. • CXR.	• 2 cm or more, multiple, matted. • Asymmetrical. • Fluctuant, fistulated. • Weight loss, night sweats, fever.	• Kaposi's sarcoma (KS) in skin, mouth. • Symmetrical. • Tender, inflamed. • Small (less than 2 cm), discrete, in more than two extrainguinal areas (PGL).
PLEURAL EFFUSION	• Reduced chest wall movement • Dull to percussion • Absent breath sounds	• CXR. • Aspirate and inspect fluid. • Differential white blood cell count and protein determination of aspirate. • Sputum smears.	• Unilateral. • Aspirate of fluid: Clear, straw-coloured; purulent; forms spider web on standing. • Aspirate >50% lymphocytes and >30 g/L protein. • Weight loss, night sweats, fever.	• Bilateral. • Clinical KS or other malignancy. • Aspirate of fluid fails to form spider web.
DISSEMINATED (MILIARY TB)	• Weight loss • Fever • Night sweats	• CXR. • Urinalysis. • Malaria blood film. • Cryptococcal antigen. • CBC/FBC, blood culture. • Sputum smears. • Abdominal ultrasound scan (if possible).	• Weight loss, fever, cough. • Abnormal CXR (includes miliary pattern). • Large spleen, liver. • Night sweats. • Anaemia, cytopoenia.	• Severe diarrhoea. • Blood in stool. • Positive cryptococcal antigen, positive malaria smear, or blood culture growth for bacteria other than *M. tuberculosis* complex.
PERICARDIAL	• Heart sounds distant • Swollen legs, abdomen • Distended neck and hand veins with arm held above shoulder	• CXR. • Cardiac ultrasound; if not available, electrocardiogram. • Sputum smears.	• Weight loss, night sweats, fever. • Cardiac shadow enlargement on CXR. • Evidence of TB elsewhere, including the lungs.	• Normal cardiac shadow. • High blood pressure. •
MENINGITIS	• Severe persistent headache • Significant cognitive decline • History of gradual onset • Neck stiffness • Confusion • Abnormal eye movements • Cranial nerves palsy	• Lumbar puncture. • Cerebrospinal fluid (CSF) microscopy (gram stain, AFB), protein, glucose. • Cryptococcal antigen, india ink • Sputum smears.	• Weight loss, night sweats, fever. • CSF cloudy with high protein, low glucose, and high lymphocytes. • CSF: Cryptococcal antigen negative. • Evidence of TB elsewhere.	• CSF: Numerous neutrophils on microscopy. • Cryptococcal tests positive. • Rapid onset.

8.5 TB TREATMENT

PLHIV should be treated for TB using a combination of drugs following the national tuberculosis control guidelines.

ART Initiation in Relation to HIV Staging and Start of Pulmonary TB Treatment

All HIV-positive patients who have TB should start ART as soon as possible, regardless of their CD4 count.

ART-Naïve Patients Who Present with TB

Initiate TB treatment first. Then, after the person is stable on TB treatment, initiate ART.

People Who Develop TB While on ART

Continue ART with changes to the regimen and monitoring as outlined in Chapter 6, section 6.7.

Interactions of TB Treatment with Other Drugs

Rifampicin and Nevirapine: Avoid co-administering these drugs. Instead, in adults and children over three years of age, administer two NRTIs and EFV, if possible. If NVP is co-administered with rifampicin, close monitoring for HIV treatment failure and hepatotoxicity is essential.

Oral Contraceptive Pills and Rifampicin: Because oral contraceptive pills are not effective when administered with rifampicin, women of childbearing age who do not want to become pregnant should either receive a contraceptive pill containing a higher dose of oestrogen
(50 mcg) or use another form of contraception.

Special Conditions During TB Treatment

Pregnancy: Streptomycin should not be given to pregnant women due to its toxic effects on the fetus.
Breastfeeding Mothers: All TB drugs can be safely used by breastfeeding women. Women receiving TB treatment should be encouraged to continue breastfeeding. Breastfeeding mothers must be provided with surgical masks.

Every TB patient who tests HIV positive should start on ART, regardless of CD4 count.

8.6 SUPPORTING ADHERENCE DURING TREATMENT FOR TUBERCULOSIS

Treatment adherence should be promoted by a patient-centred approach based upon the following elements:

- Facilitating access to treatment.
- Choosing the most convenient time and place for directly observed treatment.
- Providing comprehensive social and medical services, as needed, through linkages to community-based care.
- Educating and counselling TB/HIV patients and treatment observers.

Tracing: When TB patients move away or their whereabouts become unknown between two clinic visits, their treatment supporters should immediately notify the TB supervisor or the nurse in charge at the health facility, who should initiate the tracing of the patient (via phone call or visit from the RHM). Finally, a defaulter card should be completed and the regional TB coordinator informed so that tracing can be initiated.

8.7 TB PREVENTION IN PATIENTS

Patient Education and Counselling: People with TB should receive education and counselling about how they can avoid transmitting TB to others. Instruct people with TB to:

- Cover their mouths with a tissue, scrap of cloth, or their sleeve when they cough or sneeze.
- Dispose of the tissue in a waste basket or burn or bury it after use.
- Open windows and doors to allow fresh air into their homes.

Patients' Household Members: Household contacts of the person with TB should be evaluated for TB and offered HIV testing and counselling.

BCG Vaccination: Neonates, including HIV-exposed babies, should receive BCG vaccination shortly after birth. Infants and children with confirmed HIV infection should not receive BCG. Note that although the BCG vaccine protects children against disseminated and severe TB (eg, miliary TB, tuberculous meningitis), it does not protect adults against pulmonary TB.

Use of Isoniazid Preventive Therapy

HIV infection increases the risk of developing active TB, either by reactivating a latent infection or, after recent infection, allowing rapid progression to disease. IPT reduces the incidence of TB disease in both adults and children with HIV who are also infected with M. tuberculosis. In PLHIV, an extra benefit of a reduced risk of TB may be a reduction in the risk of progression of the HIV infection.

Important Considerations: Before initiating IPT, exclude the possibility of active TB. If it remains a possibility, do not initiate IPT.

IPT is also contraindicated in individuals with chronic liver disease or hepatitis and in those who regularly drink excessive amounts of alcohol. IPT is not recommended for pregnant women due to the potential increased risk of hepatitis.

Adherence must be monitored closely, so this treatment may be appropriate only where such monitoring is a possibility.

Indications: IPT should be provided to PLHIV who do not have active TB, particularly those who are members of one of the following vulnerable groups: close contacts of TB patients; health facility workers; miners; and prisoners. IPT is recommended for all children living with HIV who have a documented exposure to TB in whom active TB has been ruled out.

Dosing: The recommended dose of isoniazid is 5 mg/kg daily for six months, up to a maximum dose of 300 mg daily.

Monitoring People on IPT: All individuals with HIV receiving IPT should be evaluated monthly. At each monthly visit, assess for TB symptoms (cough, fever, night sweats, and weight loss), toxicity (hepatitis, neuropathy, and rash), and adherence. If a person on IPT develops TB symptoms, discontinue IPT and promptly evaluate for TB.

8.8 TB INFECTION CONTROL IN HEALTH CARE SETTINGS

Identify and Triage TB Suspects

Give TB suspects and people with TB a tissue or cloth to use to cover their mouth and nose when they cough in the health facility. Direct TB suspects to a well-ventilated waiting area (preferably outside), and give them priority at the front of the queue so that they can quickly access the services they need.

Elements of an Infection Control Plan

Each health facility must formulate and implement an infection control plan. This plan should include the following:

- *Personal measures:* Provision of anti-inhalation masks to health care workers and visiting family members; medical screening and follow-up of health care workers.
- *Administrative measures:* Identification of high-risk areas; triage of coughing patients; and isolation of admitted patients according to risk.
- *Environmental measures:* Well-ventilated waiting areas and clinic rooms; exposure to sunlight; specific attention to sputum collection and lab staining areas.
- *Hospital hygiene:* General hygiene and disinfection; proper management of medical waste, including sharps and sputum containers.
- *Regular training:* IPC measures training for the entire staff.

Five Steps to Prevent Transmission of TB in Health Care Settings

Screen: Early recognition of patients with suspected or confirmed TB disease is the first step. Assign a staff member to screen patients immediately after they arrive at the facility. Patients with cough lasting more than two weeks or who report being under investigation or treatment for TB should not queue with other patients to enter, register, or get a card. Instead, they should be managed as outlined below.

Educate: Instruct individuals identified as TB suspects by screening in cough hygiene (see section 8.8, above). When possible, provide face masks or tissues to help them cover their mouths.

Separate: Separate patients identified as TB suspects or cases by the screening questions from other patients. Ask them to wait in a separate, well-ventilated area.

Provide HIV Services: Triage symptomatic patients to the front of the line for the services they are seeking; provide care quickly so as to reduce the amount of time that others are exposed to them. In an integrated service delivery setting, provide patients with the HIV services they are accessing before the TB investigation, if possible.

Investigate for TB: Do TB diagnostic tests on site, if possible. If not, ensure that the facility has an established link with a diagnostic facility to which symptomatic patients can be referred. Also, each facility should have a link with a TB treatment facility to which those diagnosed with TB can be referred.

8.9 MULTIDRUG-RESISTANT AND EXTENSIVELY DRUG-RESISTANT TB

Drug-resistant tuberculosis is confirmed through laboratory tests that demonstrate growth in vitro of infecting isolates of M. tuberculosis in the presence of one or more TB drugs. There are four categories of drug resistance:

- *Monoresistance:* Resistance to one TB drug.
- *Polyresistance:* Resistance to more than one TB drug, other than isoniazid and rifampicin.
- *Multidrug resistance:* Resistance to at least isoniazid and rifampicin.
- *Extensive drug resistance:* Resistance to any fluoroquinolone and at least one of three injectable second-line drugs (capreomycin, kanamycin, and amikacin) in addition to isoniazid and rifampicin.

Patients with drug-resistant TB are categorised as Category IV in the standard WHO-recommended regimens for TB treatment. Diagnostic Category IV includes patients with:

- Confirmed MDR-TB.
- *Suspected MDR-TB:* Suspicion of MDR-TB requires that the case management committee recommends recommend Category IV treatment for the patient. Patients may be entered in the Category IV register and started on Category IV

ity test surveys or other epidemiologic data indicate a very high probability of MDR-TB.

- *Polyresistant TB:* Some cases of polyresistant TB require Category IV treatments. These patients require prolonged treatment (18 months or more) with first-line drugs combined with two or more second-line drugs. The patients should be entered into the Category IV register.

In PLHIV, the diagnosis of MDR-TB—and extensively drug-resistant tuberculosis (XDR-TB) is more difficult than it is in individuals not infected with HIV. In PLHIV, because the signs and symptoms may not be typical of pulmonary TB, MDR- and XDR-TB may be confused with other pulmonary or systemic infections. The presentation of TB among PLHIV is more likely to be extrapulmonary or sputum smear negative than in HIV-uninfected TB patients, especially as immunosuppression advances. The resulting misdiagnosis or delays in diagnosis lead to higher morbidity and mortality among PLHIV. Thus, PLHIV and other vulnerable groups should be targeted for culture and drug susceptibility testing (DST) at the start of TB treatment.

Refer confirmed cases of MDR-TB or XDR-TB or to the TB hospital in Manzini for specialised management.

Patients with a high probability for MDR-TB should be asked to provide spot and morning sputum samples, and these samples should be sent to the National Referral Laboratory in Mbabane for culture and drug susceptibility testing.

Concomitant Treatment of Drug Resistant TB and HIV: The treatment of drug-resistant TB in PLHIV is very similar to that in patients without HIV. However, the following should be considered:

- ART plays a crucial role, as mortality in MDR-TB/HIV patients not on ART is extremely high.
- Adverse effects are more common among PLHIV. The multiple medicines used to treat drug-resistant TB are associated with high risk of toxicity, and when combined with ART, the incidence of adverse effects is high. Some toxicity is common to both TB treatment and ART, which may result in increased rates of adverse events.
- Monitoring needs to be more intense for both response to therapy and adverse effects. IRIS may complicate therapy (see Chapter 6, section 6.8)

Chapter 9: PMTCT AND INFANT FEEDING

Key Reference Documents

- Butte NF, Lopez-Alarcon MG, Garza C. *Nutrient Adequacy of Exclusive Breastfeeding for the Term Infant During the First Six Months of Life.* Geneva, Switzerland: Department of Nutrition for Health and Development and Department of Child and Adolescent Health and Development, WHO. 2002. Available at: http://whqlibdoc.who.int/publications/9241562110.pdf.
- Swaziland Ministry of Health. National Infant and Young Child Nutrition Guidelines. 2009.
- Swaziland Ministry of Health. *Prevention of Mother to Child Transmission of HIV Guidelines. 2nd ed.* 2006. Available at: http://www.unicef.org/swaziland/sz_publications_2006pmtctguidelines.pdf.
- World Health Organization. *Rapid Advice: Use of Antiretroviral Drugs for Treating Pregnant Women and Preventing HIV Infection in Infants.* Geneva, Switzerland: WHO. November 2009. Available at: http://www.who.int/hiv/pub/mtct/ rapid_advice_mtct.pdf.
- World Health Organization, Unicef, and Interagency Task Team on Prevention of HIV Infection in Pregnant Women, Mothers and Their Children. *Guidance on Global Scale-Up of the Prevention of Mother-to-Child Transmission of HIV: Towards Universal Access for Women, Infants and Young Children and Eliminating HIV and AIDS among Children.* Geneva, Switzerland: WHO. 2007. Available at: http://www.unicef.org/aids/files/PMTCT_enWEBNov26.pdf.

9.1 PREVENTING MOTHER-TO-CHILD TRANSMISSION OF HIV

As shown in Table 9.1, two basic approaches to the use of ARV for PMTCT are recommended:

- ART for HIV-positive pregnant women in need of treatment.
- ARV prophylaxis for all HIV-positive pregnant women who are not in need of ART for their own health.

TABLE 9.1. ELIGIBILITY CRITERIA FOR ART OR ARV PROPHYLAXIS IN HIV-POSITIVE PREGNANT WOMEN	
BY CD4 COUNT	**TREATMENT**
CD4 <350 CELLS/MM³	ART, regardless of clinical stage
BY WHO CLINICAL STAGE	**TREATMENT**
STAGE 1	ARV prophylaxis
STAGE 2	ARV prophylaxis
STAGE 3	ART, regardless of CD4
STAGE 4	ART, regardless of CD4

9.2 ART FOR HIV-POSITIVE PREGNANT WOMEN

Maternal ART for treatment-eligible HIV-positive pregnant women is the most effective intervention for promoting the HIV-infected mother's health and decreasing the risk of mother–to-child HIV transmission during pregnancy, labour and delivery, and breastfeeding.

HIV-infected pregnant women in need of ART for their own health should start ART regardless of gestational age and continue throughout pregnancy, delivery, and thereafter. For the recommended national ARV regimens, see Chapter 6.

EFV-based ART regimens should not be initiated during the first trimester.

9.3 ARV PROPHYLAXIS IN HIV-POSITIVE PREGNANT WOMEN

All HIV-positive pregnant women who are not eligible for ART should receive short-course ARV prophylaxis for PMTCT from 14 weeks of gestation or as soon as possible thereafter.

Recommended ARV Prophylaxis for PMTCT for Pregnant Women

- Antepartum: Daily AZT starting from 14 weeks of gestation.
- Intrapartum: At the onset of labour, give sd-NVP; during labour and delivery, provide AZT + 3TC.
- Postpartum: AZT + 3TC for seven days postpartum.

Recommended ARV Prophylaxis for PMTCT for HIV-Exposed Infants

All HIV-exposed infants should receive NVP for six weeks. Breastfeeding infants should continue daily NVP until one week after cessation of breastfeeding.

9.4 INFANT FEEDING

All mothers living with HIV should be counselled on infant feeding during routine ANC visits.

Discuss the advantages and disadvantages of infant-feeding options and the risk of HIV infection in the infant versus the risks of the infant becoming sick and malnourished with replacement feeding (which is often greater than the risk of HIV). Breast milk is healthy, accepted, and free, and prevents diseases such as diarrhoea and respiratory problems in the baby. Breast milk is the only food babies need until they are six months old.

Mothers Who Breastfeed

- Ensure that HIV-positive mothers receive the care they need—lifelong ART or ARV prophylaxis to reduce mother-to-child transmission through breastfeeding, following the national guidelines.
- HIV-positive mothers should exclusively breastfeed their HIV-exposed infants for the first six months of life and should continue breastfeeding for the first 12 months of life.
- Introduce appropriate complementary foods after six months; breast¬feeding should continue until the baby's first birthday.
- Breastfeeding should stop only after a safe and nutritionally adequate diet without breast milk can be provided.
- HIV-exposed infants should receive daily NVP prophylaxis for 12 months or up to one week after breastfeeding is completely stopped, whichever comes first.
- Mothers who decide to stop breastfeeding should do so gradually over a period of one month, and HIV-exposed infants should receive daily NVP prophylaxis for up to one week after breastfeeding is completely stopped. Rapid or abrupt weaning is not advisable.
- At any time, when breastfeeding stops, the infant should be provided with safe, nutritionally adequate replacement food to enable normal growth and development.

Alternatives to Breastfeeding

For Infants Less Than Six Months Old: Commercial infant formula milk is acceptable as long as all of the following conditions relating to home conditions and the family's situation and attitudes are met:

- Safe water and sanitation are assured in the household and in the community.
- The mother or other caregiver can reliably provide sufficient formula milk to support normal growth and development of the infant.
- The mother or caregiver can prepare the formula milk cleanly and frequently enough so that it is safe and carries a low risk of diarrhoea and malnutrition.
- The mother or caregiver can, during the first six months, feed the infant for

mula milk only and completely refrain from all breastfeeding.

- The family is supportive of this practice.
- The mother and/or caregiver can access health care that offers comprehensive child health services.

Home-modifiedanimalmilkisnotrecommendedforinfantslessthansixmonthsold.

Expressed heat-treated breast milk can be considered only in special circumstances. For details, see the national infant and young child nutrition guidelines.

For Children More Than Six Months Old: Commercial infant formula milk should be provided as long as home conditions described above are met.

Animal milk (boiled for infants less than 12 months old) should be provided as part of a diet adequate in micronutrients. Infant meals (milk-only or in combination with other foods) should be provided four or five times per day. All children need complementary foods from six months of age.

Mothers Who Do Not Breastfeed

The mothers of all HIV-exposed infants who are not breastfeeding should be supported with adherence to infant ARV prophylaxis up to the age of six weeks.

Mothers who do not breastfeed should give their HIV-exposed infants only commercial infant formula milk and only when all the conditions for replacement feeding listed above (see the section describing breastfeeding alternatives for infants less than six months old) are met.

Health care workers should counsel nonbreastfeeding mothers not to give infants diluted cow's milk, regular milk, milk powder, or milk creamer.

When the Infant Is HIV-Infected

Health care workers should strongly encourage mothers of HIV-infected infants to breastfeed exclusively during their baby's first six months and to continue breast¬feeding until the baby's second birthday or beyond. The mother should introduce complementary feeding at the age of six months while breastfeeding continues.

The infant should be started on ART following the national guidelines.

Chapter 10: SCREENING AND TREATMENT OF CANCERS COMMON AMONG PEOPLE LIVING WITH HIV

Key Reference Documents

- Centers for Disease Control and Prevention (CDC), *Division of Cancer Prevention and Control* [Web site]. http://www.cdc.gov/cancer/.

10.1 CERVICAL CANCER

All women living with HIV should have an annual visual inspection of the cervix using acetic acid (VIA) to screen for possible lesions or areas of concern. Women with lesions should be referred for further evaluation and management to a facility where there is a gynaecologist. Invasive cervical cancer is a WHO Stage 4 condition; patients should start ART.

10.2 ANAL CANCER

All adults living with HIV should have an annual visual inspection of the perianal region and a digital rectal examination. As part of the annual physical examination, clinicians should inquire about anal symptoms, such as itching, bleeding, diarrhoea, or pain. Clients with abnormal anal physical findings, such as warts, hypopigmented plaques or lesions, lesions that bleed, or other lesions of uncertain aetiology should be referred to Mbabane Government Hospital for further investigation. Clinicians should also refer the following PLHIV for anal cytology: men who have sex with men, any client with a history of anogenital condyloma, and women with abnormal cervical and/or vulvar histology.

10.3 KAPOSI'S SARCOMA

All adults living with HIV should have an annual visual inspection of the entire skin surface, including the soles of the feet, scalp, ears, external genitalia, and the oral cavity. Advise clients to seek medical care if they detect a new pigmented lesion on their skin.

Kaposi's sarcoma is a Stage 4 condition; patients with KS should start ART regardless of CD4 count. KS lesions may initially worsen with ART and clients may need chemotherapy. Eventually, lesions will improve.

Patients with widespread cutaneous disease or symptomatic visceral involvement should receive chemotherapy, where available.

10.4 BREAST CANCER

All women living with HIV should have a digital breast examination upon enrolment in HIV care and annually thereafter. Health care workers should encourage clients to conduct breast self-examinations monthly and show them how to do so. Advise clients to seek medical care if they detect a new lump in a breast. Refer those reporting a new lump—men as well as women—to Mbabane Referral Hospital, or call the Swaziland Breast Cancer Network or other outreach site for further evaluation and management.

10.5 OTHER CANCERS

Be vigilant in watching for the development of AIDS-associated cancers such as lymphomas as well as for other cancers not specifically associated with HIV infection but common in the general population, including colorectal cancer, oesophageal cancer, lung cancer, prostate cancer, and lymphomas.

Refer patients presenting with signs and symptoms of these cancers to Mbabane Government Hospital for further evaluation and management.

Health care workers should also promote risk-reduction behaviours, such as smoking cessation.

TABLE 10.1. COMMON NON-HIV-ASSOCIATED CANCERS

TYPE OF CANCER	PRESENTING SYMPTOMS
LYMPHOMA	❑ Lymph nodes that are newly developed, pathologically enlarged (typically >2 cm), or progressive. ❑ Unexplained constitutional symptoms (weight loss, fever, and night sweats) that last for more than two weeks.
CENTRAL NERVOUS SYSTEM LYMPHOMA	❑ Neurologic deficit corresponding to location of focal brain lesion.
COLORECTAL CANCER	❑ Abdominal pain, change in bowel habits, hematochezia or melena, weakness, anaemia, and weight loss.
OESOPHAGEAL CANCER	❑ Swallowing painful or difficult; weight loss; husky or raspy voice; nausea, vomiting (especially with blood); coughing, pneumonia.
LUNG CANCER	❑ Cough, weight loss, dyspnoea, chest pain, haemoptysis. ❑ Lung mass on chest x-ray.
PROSTATE CANCER	❑ Urinary urgency, nocturia, frequency, and hesitancy. ❑ Mass on digital rectal examination.

Chapter 11: SEXUAL AND REPRODUCTIVE HEALTH

Key Reference Documents

• The Body [Web site]. *Forum on Impotence and Other Sexual Problems.* Available at: http://www.thebody.com/Forums/ AIDS/ SideEffects/Archive/Impotence/index.html.

• Swaziland Ministry of Health. Management of Sexually Transmitted Infections. 2007.

• Swaziland Ministry of Health. National Family Planning Service Delivery Guidelines. 2007.

• Swaziland Ministry of Health. Prevention of Mother to Child Transmission of HIV Guidelines. 2nd ed. 2006. Available at: http://www.unicef.org/swaziland/sz_publications_2006pmtctguidelines.pdf.

• World Health Organization Integrated Management of Adolescent and Adult Illness. Chronic HIV Care with ARV Therapy and Prevention: Interim Guidelines for Health Workers at Health Centre or District Hospital Outpatient Clinic. Geneva, Switzerland: WHO. April 2007. Available at: http://www.who.int/hiv/pub/imai/Chronic_HIV_Care7.05.07.pdf.

• World Health Organization, Reproductive Health and Research. Medical Eligibility Criteria for Contraceptive Use.
3rd ed. Geneva, Switzerland: WHO. 2004.

• Yacobson, I. Filling the Knowledge Gap: Contraception for Women and Couples with HIV [PowerPoint presentation]. 2005. Baltimore, Md., and Washington, DC: Family Health International and US Agency for International Development.

11.1 SEXUAL AND REPRODUCTIVE HEALTH COUNSELING AND SERVICES

Providing nonjudgmental information on and services for SRH can reduce the chances of HIV transmission and facilitate the planning of healthy families for PLHIV. Health care workers should assess clients' sexual health needs and conditions upon enrolment into care and routinely thereafter, including:

- Ascertaining pregnancy intentions and desires.
- Screening for and treating STIs.
- Screening for cancers of the reproductive system.
- Providing contraceptive information, services, and supplies.
- Providing nonjudgmental counselling and practical advice on sexual health concerns.
- Helping clients identify and reduce their risk of acquiring HIV or passing HIV to another person, with risk-reduction counselling for clients belonging to most-vulnerable groups, including sex workers, migrant workers, and men who have

sex with men.

- Screening for sexual violence and providing necessary services and referrals, including postexposure prophylaxis.

11.2 DUAL PROTECTION

Dual protection is defined as the simultaneous prevention of STI/HIV infection and unwanted pregnancy. Dual protection can be achieved through:

- The use of male or female condoms in combination with another contraceptive method.
- The use of male or female condoms alone.
- Abstinence.
- Avoiding all forms of penetrative sex.

Using condoms plus a hormonal or long-term contraceptive method is one of the best ways to prevent HIV and STIs as well as unwanted pregnancy in male–female sexual relationships.

11.3 CONTRACEPTIVE CHOICES

Family planning services must be provided to PLHIV as a matter of priority. Providers should assess the pregnancy status and intentions of each client or the client's partner at every visit. If a woman or a couple wishes to prevent or delay pregnancy, provide contraceptive counselling, information about methods, and/or referrals following the guidance below.

Counsel women living with HIV who wish to have a baby on the safest times to do so to protect their own health and reduce the chances of HIV infection in the baby. Generally, it is safest for women to have a baby when her CD4 count >350 cells/mm3; when she does not have AIDS-defining illnesses, including tuberculosis; and when she is on ART (if eligible).

People and couples living with HIV who wish to prevent, delay, or space pregnancy can choose from a range of contraceptive methods. Health care workers providing HIV care should offer counselling to clients on the options.

When choosing among them, PLHIV can consider:

- The method's effectiveness.
- Its ease of utilization.
- Ease of access.
- Cost.
- Whether the method is short-, medium-, or long-term.
- Whether partner involvement is required.

Other factors specifically related to HIV disease include:

- Whether interactions with ARV medications might change the method's

efficacy.

- Whether the method provides protection from HIV and STI transmission and acquisition.

At minimum, male and female condoms, oral contraceptives, and injectable contraceptives should be made available within HIV care and treatment clinics. Clients should be referred to a FP clinic for other methods.

11.4 WORLD HEALTH ORGANIZATION MEDICAL ELIGIBILITY CRITERIA

WHO medical eligibility criteria for contraceptive methods classifies medical conditions into categories based on the risks and benefits associated with use of the method among women with those conditions. Table 11.1 outlines the restrictions for use for each category.

TABLE 11.1. WHO MEDICAL ELIGIBILITY CRITERIA

CATEGORY	DESCRIPTION	WHEN CLINICAL JUDGMENT IS AVAILABLE
1	No restriction for use.	Use the method under any circumstances.
2	Benefits generally outweigh risks.	Generally use the method.
3	Risks generally outweigh benefits.	Use of the method is not usually recommended unless other methods are not available or acceptable.
4	Unacceptable.	Method not to be used.

For each contraceptive method described in the following section, there is an accompanying table describing the WHO medical eligibility criteria for women living with HIV, women with AIDS, and women on ART. See WHO Medical Eligibility Criteria for further information on contraceptive use.

11.5 BARRIER METHODS

Condoms

Only condoms provide protection from both pregnancy and HIV and STI transmission and acquisition. Male and female condoms are highly effective when used consistently and correctly every time. In real-life situations, correct and consistent condom use may be difficult to achieve. Partner involvement is required. Some people report diminished sensation when using condoms during sex. Condom use does not interfere with medications, however, and except when an individual is allergic to latex, there are no common side effects for male and female condoms.

TABLE 11.2. WHO ELIGIBILITY CRITERIA FOR CONDOMS

PATIENT STATUS	CATEGORY
Women who are HIV-infected	1
Women with AIDS	1
Women on ART	1

For perfect male condom use, pregnancy rates are 2%. For more typical use: 15%. Pregnancy rates for perfect female condom use are 5% and for more typical use, 21%.

Spermicides and Diaphragms with Spermicides

These methods are not recommended for PLHIV, as they may increase the risk of HIV transmission.

11.6 HORMONAL METHODS

Hormonal contraceptives, including combined oral contraceptive pills (COCs), progestin-only oral contraceptive pills (POPs), emergency contraceptive pills (ECP), injectables, and implants are appropriate and effective contraceptive methods for women living with HIV. They are generally easy to use, are suitable for short- and long-term use, are reversible, and provide noncontraceptive health benefits.

Some concerns have been raised about the use of hormonal methods (COCs in particular) among women living with HIV, including:

- Reduced efficacy of ART.
- Reduced efficacy of hormonal contraceptive.
- Increased side effects of hormonal methods.
- Faster rate of disease progression for women who are not on ART (although it has not been proven that ARVs affect contraceptives' effectiveness, and at the time of writing, no studies of clinical outcomes had been completed, and no data existed on the interaction of ARVs and any hormonal contraceptives except COCs).

Hormonal contraceptive methods are safe and effective for women living with HIV, especially when accompanied by good counselling and clinical services.

- Clients who choose hormonal methods should be provided with adherence counselling at initiation and ongoing about the importance of taking COCs on time each day (including planning reminder cues), never missing pills, and the importance of returning to the clinic for COC refills, injections, or replacement of implants.
- Women using hormonal contraceptives should be encouraged to practice dual protection by also using male or female condoms for prevention of HIV and STI transmission, and as a back-up contraceptive method.

Combined Oral Contraceptive Pills and Progestin-Only Pills

COCs and POPs are pills that a woman takes once a day to prevent pregnancy. They contain the hormones oestrogen and progestin (in the case of COCs) and progestin alone (in the case of POPs). Both types are very effective at preventing pregnancy when taken on schedule.

TABLE 11.3. WHO ELIGIBILITY CRITERIA FOR COMBINED ORAL CONTRACEPTIVE PILLS

PATIENT STATUS	CATEGORY
Women who are HIV-infected	1
Women with AIDS	1
Women on ART	2

Women living with HIV can use oral contraceptive pills without restrictions. Women who take ART can use oral contraceptive pills as well, and should be encouraged to pay close attention to taking the pills at the same time, every day.

Side effects are generally minor and include menstrual changes, spotting, headaches, weight gain, and nausea.

Encourage dual protection—the use of condoms in addition to oral contraceptives.

COCs should not be used by women taking rifampicin as TB treatment.

Injectables

Progestin-only injectable contraceptives, such as Nur-Isterate and Depo-Provera (depot medroxyprogesterone acetate, aka DMPA and 'the shot'), contain no oestrogen. To prevent pregnancy, a shot is given to the woman in the arm or upper buttock every two or three months, depending on the type of injectable. Injectables are highly effective when used correctly.

TABLE 11.4. WHO ELIGIBILITY CRITERIA FOR INJECTABLES

PATIENT STATUS	CATEGORY
Women who are HIV-infected	1
Women with AIDS	1
Women on ART	2

Women living with HIV can use progestin-only injectables without restrictions. Wom

en on ART can also use progestin-only injectables safely and effectively. It is important to counsel women to come for their next injection on time and without delay.
Side effects of injectables may include spotting at first, then amenorrhea and weight gain.
Encourage women choosing to use injectable contraceptives to use condoms for dual protection.

Hormonal Implants

Progestin-only implants (eg, Implanon, Norplant) consist of up to six hormone-filled, matchstick-like rods, which are inserted under the skin in a woman's upper arm. Hormonal implants can prevent pregnancy for between three and seven years, depending on the type. Highly effective at preventing pregnancy, implants are a long-term contraceptive method that can be easily reversed.

TABLE 11.5. WHO ELIGIBILITY CRITERIA FOR IMPLANTS

PATIENT STATUS	CATEGORY
Women who are HIV-infected	1
Women with AIDS	1
Women on ART	2

Women living with HIV who do not take ART can use progestin-only implants without restrictions. Women on ART can also use progestin-only implants. Side effects of implants may include nausea, weight gain, and changes in monthly bleeding. As with all hormonal methods, women should also be encouraged to use condoms for dual protection.

Emergency Contraceptive Pills

ECP is used to prevent pregnancy after unprotected intercourse.

TABLE 11.6. WHO ELIGIBILITY CRITERIA FOR ECP

PATIENT STATUS	CATEGORY
Women who are HIV-infected	1
Women with AIDS	1
Women on ART	1

ECP can be used if no contraceptive method was used, or if the contraceptive method failed—for example, a condom broke during sex. ECP should be taken as soon as possible after unprotected sex (although it can be taken up to 72 hours after sex). Used correctly and in timely fashion, ECP can reduce the risk of pregnancy by 75%.

ECP is usually a combination of oral contraceptives taken in two doses. Prostinor-2 is being used in Swaziland. To use it, women take one tablet as soon as possible after unprotected sex (up to 72 hours) and another tablet exactly 12 hours after the first (two tablets in all).

Previously used ECPs include Ovral (with two tablets taken right away and two tablets

12 hours later) and Lofeminal (with four tablets taken right away and four more 12 hours later).

ECP is safe for all women, including those living with HIV and those taking ART. Side effects of ECP may include nausea, vomiting, and changes in the menstrual cycle. Women receiving ECP should be counselled on adopting a regular contraceptive method, as well as on condom use for dual protection.

11.7 LONG-TERM AND PERMANENT METHODS

All people who choose a long-term or permanent method of contraception should be encouraged to use dual protection to prevent HIV and STI transmission.

TABLE 11.7. WHO ELIGIBILITY CRITERIA FOR IUD USE

PATIENT STATUS	CATEGORY	
	INITIATE	CONTINUE
HIV-infected women	2	2
Women with AIDS (without ARVs)	3	2
Women on ART (clinically well)	2	2

Intrauterine Devices

This small device inserted into a woman's uterine cavity is highly effective at preventing pregnancy. The copper-containing CuT 380A—the most commonly used IUD—remains effective for up to 12 years. An IUD can be provided to a woman living with HIV if she has no symptoms of AIDS and no STIs. A woman who develops AIDS while using an IUD can continue to use the device. A woman with AIDS who is doing well clinically on ART can both initiate and continue IUD use but may require follow-up. An IUD generally should not be initiated in a woman with AIDS who is not taking ART. Side effects of IUDs may include heavy bleeding and pain during the first months of use, as well as spotting.

Encourage women choosing an IUD to use condoms for dual protection.

Male and Female Sterilisation

The WHO medical eligibility criteria state that sterilisation is a safe and effective method for clients living with HIV. If a woman or man has an acute AIDS-related illness, sterilization should be delayed until the condition has improved. Because sterilisation is a surgical procedure, any acute HIV-related opportunistic infection may complicate or prolong recovery.

Neither male nor female sterilisation offers protection from HIV and STI transmission, so couples should be counselled about dual protection and encouraged to use condoms

11.8 OTHER CONTRACEPTIVE METHODS

Lactational Amenorrhea Method

LAM is a temporary, natural contraceptive option for women who are less than six months postpartum, who are exclusively breastfeeding, and who have no menses. Encourage women practicing LAM and their partners to use condoms for dual protection.

Fertility Awareness Methods

These methods require a woman to identify the fertile days of her menstrual cycle and to abstain from sex during these times. To do so, she can observe fertility signs, such as the consistency of her vaginal mucus, or she can follow the calendar.

Encourage women living with HIV to use condoms as dual protection, especially during fertile days, or to abstain. Also counsel on the availability of more reliable contraceptive methods, emphasizing the importance of using condoms for dual protection.

11.9 SPECIAL CONSIDERATIONS

Postpartum Contraceptive Use

To prevent mother-to-child transmission of HIV, counsel all postpartum women and their partners to use condoms for dual protection and when breastfeeding. See Table 11.8, below, for postpartum contraceptive considerations.

TABLE 11.8. SPECIAL CONTRACEPTIVE CONSIDERATIONS FOR POSTPARTUM WOMEN

	IF BREASTFEEDING	IF NOT BREASTFEEDING
COCs	Do not use until six months postpartum.	Begin 21 days postpartum.
Implants, injectables, and POPs	Do not use until six weeks postpartum.	May begin immediately postpartum.
Female sterilisation	Within seven days of birth or delay to six weeks.	
IUD	If copper IUD, insert <48 hours postpartum or delay to four weeks postpartum.	
LAM	Can be used for six months postpartum if woman is exclusively breastfeeding and menses have not returned.	

11.10 ABORTION

Abortion is illegal in Swaziland. It is permitted only on medical or therapeutic grounds when a doctor certifies one of the following:

- Continued pregnancy endangers the woman's life or constitutes a serious threat to her physical health.
- Continued pregnancy constitutes a serious threat to the woman's mental health.
- There is a serious risk that the child will suffer from physical or mental defect of such a nature that the child will be irreparably seriously handicapped.
- The pregnancy resulted from rape, incest, or unlawful sexual intercourse with a mentally ill female.

HIV alone is not considered medical grounds for abortion in Swaziland.

Refer a woman considering abortion to a doctor, who can examine her to ascertain the existence of any of the above conditions. The doctor's recommendation will then be taken for approval first to the senior medical officer, then to the directorate of health services.

11.11 SEXUAL DYSFUNCTION AND HIV

Health care workers should always be nonjudgmental and respectful of patients' sexual health concerns. People living with HIV may experience changes in sex drive (libido).

These changes can be due to many factors:

- Psychological factors (worrying about transmission, depression, anxiety).
- Side effects of medications, including ARVs (stomach problems, nausea, changes in body shape).
- The use of non-HIV related medications (such as antidepressants), whose side effects include a reduction in libido.

Compared to men who are HIV negative, men living with HIV may have slightly lower testosterone levels, which can also reduce libido. Men with advanced HIV disease and low CD4 counts may have conditions that cause or contribute to erectile dysfunction.

Encourage patients on ARVs to continue to adhere to their care and treatment regimens, and reassure them that no single HIV medication is consistently linked to impotence.

Continue counselling patients experiencing sexual dysfunction, and attempt to resolve any psychological factors that may contribute to the dysfunction. Provide referrals to a specialist if possible (although as of January 2010, the nearest are in South

Africa).

11.12 SEXUAL AND REPRODUCTIVE HEALTH ISSUES FOR ADOLESCENTS

It is important to discuss SRH issues with adolescents, even if they do not report sexual activity. Health care workers should consider the needs of both adolescents who were infected with HIV from birth and those who were infected as children or adolescents. Giving all adolescents, regardless of HIV status, information on sexual and reproductive health and allowing them to develop personal goals and prepare strategies for achieving those goals is crucial.

Health care workers should also be prepared to:

- Supply support and services to adolescents who have experienced sexual or other forms of violence.
- Develop strategies to meet adolescents' HIV care needs, including creative ways to engage and maintain them in care and to address their sexual and reproductive health needs without judgment and as a critical component of their HIV care.
- Furnish postabortion case services to young women, including family planning counselling.
- Provide youth-friendly services relating to STIs, sex education, positive prevention, and family planning.
- Offer referral to life skills development and other formal and informal educational opportunities.

Adolescents and Contraception

Adolescents have special needs when choosing a contraceptive method. Social and behavioural issues are important considerations. For example, methods that do not require a daily regimen may be more appropriate because of adolescents' sporadic patterns of intercourse or the need to conceal sexual activity and contraceptive use. In addition, sexually active adolescents who are unmarried have very different needs from those who are married and want to postpone, space, or limit pregnancy.

However, whether married or unmarried, adolescents have been shown to be less tolerant of side effects and to have high FP discontinuation rates. Expanding the number of methods to choose from can improve adolescents' satisfaction and increase contraceptive acceptance and use. Proper education and counselling—both before and at the time a method is selected—can help adolescents address their concerns and make informed, voluntary decisions.

-minimum, all adolescents should be counselled on correct condom use and clearly instructed that condoms or abstinence are the only ways to prevent HIV infection. Every effort should be made to prevent the cost of services or contraceptive methods from limiting options.

Chapter 12: MENTAL HEALTH AND SUBSTANCE ABUSE

Key Reference Documents

- American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders.* 4th ed. Washington, DC: American Psychiatric Association. 1994.
- Kübler-Ross, E. On Grief and Grieving: Finding the Meaning of Grief Through the Five Stages of Loss. New York: Scribner. 2005.
- New York State Department of Health AIDS Institute. *Clinical Resources: HIV and Mental Health* [Web site]. Available at: http://www.hivguidelines.org/Content.aspx?PageID=261.
- Swaziland Ministry of Health. *Swaziland Psychiatric Treatment Guidelines.* 2007.
- Swaziland Ministry of Health and Population Services International. *HTC/VCT Referral Directory and Guide*. 2007.

12.1 THE IMPORTANCE OF ADDRESSING MENTAL HEALTH ISSUES

Mental health conditions, such as depression, anxiety, and substance misuse and abuse are often underdiagnosed and therefore not properly managed. Although health care workers at clinic level are not expected to diagnose and manage mental health conditions, they should conduct basic mental health screening and refer patients who may have mental health issues or who are at risk of suicide. In addition, health care workers should be cautious when seeking informed consent from patients who may have mental health issues.

Importantly, there is a strong connection between mental health issues and adherence. Health care workers should ensure that patients with mild, moderate, or severe mental health conditions have adequate support at home to take their medications. They should work with caregivers, treatment supporters, and RHMs to ensure adherence to medications—through directly observed treatment, when indicated.

Health care workers should also screen for and manage signs and symptoms of neurological and cognitive problems such as dementia and delirium, often related to AIDS. See Chapter 13 for further guidance on psychosocial support for clients experiencing mild anxiety, grief, and mild depression.

In the United States, the American Psychiatric Association and the New York State Department of Health AIDS Institute have developed a number of guidelines for screening and treatment of mental health disorders in adults and children (see the Key References, above). Although these guidelines and screening assessment tools have not been validated in Swaziland, they can provide a useful springboard for adaptation. Simple additional screening tools are included in the tables below

12.2 ANXIETY DISORDERS

Anxiety is common among PLHIV and their families. It may be related to a specific diagnosis, stigma and discrimination, loss of a loved one, or other family or life events. If the anxiety is chronic, the patient may have an anxiety disorder. Common anxiety disorders include:

Generalised Anxiety Disorder: This interferes with daily life, causing tenseness, restlessness, trembling, headaches, shortness of breath, trouble sleeping, and heart palpitations.

Panic Disorder: Periodic attacks of extreme anxiety and/or fear are accompanied by fast heartbeat, trouble breathing, and fears of death or 'going mad'.

TABLE 12.1. SCREENING AND MANAGEMENT OF ANXIETY IN ADULTS AND ADOLESCENTS

Screen patients for anxiety: Ask:

- ❑ Do you experience palpitations?
- ❑ Do you have a choking sensation or shortness of breath—do you hyperventilate?
- ❑ Do you have clammy hands and sweat profusely?

'Yes' to one or more of these questions? Follow up by asking:

- ❑ Have the above symptoms lasted for more than six months on and off?
- ❑ Do you have a feeling of impending doom?
- ❑ Do you experience intrusive thoughts (obsessions)?
- ❑ Do you perform repeated behaviours (compulsions) in an attempt to relieve the intrusive thoughts (obsessions)?
- ❑ Do you have an unexplained or irrational fear?
- ❑ Do you have vivid recollection or nightmares of a past trauma?

'Yes' to these questions? The patient may have generalised anxiety disorder, panic disorder, obsessive–compulsive disorder, a phobia, or post-traumatic stress disorder.

- ❑ Refer the patient to a psychologist if available, or provide basic counselling *(see below* and Chapter 13).
- ❑ Explain that these symptoms are part of an illness called anxiety, which is common and treatable.
- ❑ Acknowledge the patient's distress by stating that you understand and want to help
- ❑ Identify current life problems and stressors, and focus on small steps the patient might take to manage these problems.
- ❑ Begin amitriptyline 50 mg daily at bedtime. It takes two weeks to work optimally. The dose can be gradually increased to 100mg daily. If no improvement, refer to a psychiatrist.
- ❑ If patient cannot tolerate side effects of amitriptyline (dry mouth, blurry vision, sleepiness), consider switching to fluoxetine 20 mg daily in the morning. It takes two weeks to work optimally. The dose can be gradually increased to 60 mg daily. During the first two weeks, there may be an increase in agitation or insomnia, which can be treated with a benzodiazepine (eg, diazepam 10 mg at bedtime).
- ❑ If patient is taking efavirenz, ensure that it is taken at bedtime. Symptoms usually resolve within first month of treatment. Benzodiazepines are contraindicated with efavirenz.
- ❑ Teach the person interventions to control an anxiety attack:
  - —*Relaxation:* Sit upright in a chair with the feet flat on the ground, hands on knees. Relax the whole body.
  - —*Controlled breathing:* When seated (as above), breathe in; hold breath for 10 seconds; breathe out and hold the breath for 10 seconds. Repeat until the palpitations have stopped and the person feels relaxed.
  - —*Rebreathing:* If the patient is too agitated to sit still, obtain a paper bag and have her cover her nose and mouth with it and breathe in and out of the paper bag until she is relaxed.
- ❑ *If no improvement:* Refer the patient to a psychiatrist or medical officer at the nearest hospital.
- ❑ *If the patient has phobia:* Refer to a clinical psychologist.

TABLE 12.2. SCREENING AND MANAGEMENT OF DEPRESSION IN ADULTS AND ADOLESCENTS

Screen patients for depression: Ask:

- ❑ Do you feel sad or depressed?
- ❑ Have you felt little interest or pleasure in doing things you usually enjoy?
- ❑ Do you have less energy than usual?

'Yes' to one or more of these questions? Follow up by asking about:

- ❑ Disturbed sleep, or sleeping most of the day.
- ❑ Appetite loss or increase.
- ❑ Reduced or increased weight.
- ❑ Reduced interest in day-to-day activities.
- ❑ Reduced pleasure in day-to-day activities.
- ❑ Decreased desire for sex.
- ❑ Poor concentration.
- ❑ Feelings of hopelessness and helplessness.
- ❑ Thoughts of suicide or death.
- ❑ Delusions or hallucinations.

Five or more of the above symptoms for more than two weeks? The person may have major depression.

- ❑ *Refer to counselling if available:* Alternatively, provide basic counselling *(see* Chapter 13).
  - —Explain that these symptoms are part of an illness called depression, which is common and treatable.
  - —Acknowledge the patient's distress by stating that you understand and want to help.
  - —Identify current life problems and stressors; focus on small steps the patient can take to manage them.
  - —Encourage the patient to resist pessimism and self-criticism.
- ❑ *Begin amitriptyline* (50 mg daily at bedtime). It takes two weeks to work optimally. The dose can be gradually increased to 100 mg daily. If there is no improvement, refer the patient to a psychiatrist.
  - —If the patient cannot tolerate amitriptyline's side effects (dry mouth, blurry vision, sleepiness), consider switching to fluoxetine (20 mg daily in the morning). It takes two weeks to work optimally. The dose can be gradually increased to 60 mg daily. During the first two weeks, there may be an increase in agitation or insomnia, which can be treated with a benzodiazepine (eg, diazepam 10 mg at bedtime).
- ❑ *If the patient is taking efavirenz:* Make sure it is taken at bedtime. Symptoms usually resolve within first month of treatment. Benzodiazepines are contraindicated with efavirenz.
- ❑ *If the patient has suicidal thoughts* **:** Ask if she has a plan, and determine if she has the means to carry it out. If yes, consider the patient at high risk. *See* Table 12.2, *below.*
  - —Do not leave the patient alone.
  - —Provide a referral to the hospital or make arrangements for her to stay with family or friends.
  - —Remove harmful objects.
  - —Ensure there is supervision of medications.
- ❑ *If the patient has a history of manic episodes:* Consult the Swaziland national psychiatric treatment guidelines for management of bipolar mood disorder.

Fewer than five of the above symptoms? More than two months' bereavement and impaired functioning?

- ❑ Counsel to counter depression.
- ❑ Give amitriptyline if there is a serious problem with functioning.
- ❑ Follow up in one week.

Fewer than five of the above symptoms but able to function from day to day?

- ❑ Counsel and assure psychosocial support *(see* Chapter 13).

- ❑ *If there is insomnia:* Consider short-course amitriptyline (25 mg at bedtime or diazepam 5 mg at bedtime for one week).

TABLE 12.3. ASSESSING RISK FOR SUICIDE

Screen patients for suicide: Ask:

- ❑ Do you feel like harming yourself?
- ❑ Did you want to die when you harmed yourself?
- ❑ Have you attempted to kill yourself in the past?

'Yes' to the last question above? Follow up by asking:

- ❑ Is the suicide attempt planned?
- ❑ Do you perceive the outcome of the suicide attempt as death?
- ❑ Have you written a suicide note?
- ❑ Have you written a will or made arrangements to disperse personal effects?
- ❑ Do you have a reason for no longer being suicidal?

'Yes' to any of the above? The person may have a high risk of attempting suicide again. Provide a referral to a psychologist if possible, and provide basic counselling *(see* Chapter 13):

- ❑ Acknowledge the patient's distress by stating that you understand and want to help.
- ❑ Identify current life problems and stressors; focus on small steps the patient can take to manage them.
- ❑ Encourage the patient to resist pessimism and self-criticism.
- ❑ Do not leave the patient alone.
- ❑ Remove any harmful objects from the home.
- ❑ *If the underlying problem is depression:* Manage according to the guidelines in Table 12.1.
- ❑ *Before giving medication:* Ensure that relatives are available to store the medication and administer it to the patient—at least during the first two weeks of treatment.
- ❑ *If no relatives are available:* Give a three-day prescription to keep tablets to a minimum in case suicidal thoughts return. Frequent consultations and counselling are advised when there is no other social support.
- ❑ *If patient has a history of manic episodes:* Consult the Swaziland national psychiatric treatment guidelines for management of bipolar mood disorder.

12.3 DEPRESSION

Health care workers should screen patients for depression upon enrolment in care, biannually, and whenever symptoms of depression are reported, and treat according to the guidelines in Table 12.2.

Note that efavirenz has been associated with some mental health disturbances, such as bad dreams and feelings of being in an altered state. These side effects are most common when a person starts taking efavirenz and are usually temporary. Health care workers should encourage patients to take efavirenz before bedtime.

Assess adult and adolescent patients with major depression or those who have harmed themselves in the past for risk of suicide, and manage them appropriately. For guidance,
see Table 12.3, above.

TABLE 12.4. SCREENING AND MANAGEMENT OF ORGANIC PSYCHOSIS IN ADULTS AND ADOLESCENTS

Screen patients for organic psychosis: Ask about:

- ❑ *Auditory hallucinations:* Do you hear voices inside your head or ears?
- ❑ *Visual hallucinations:* Do you see things others do not see?
- ❑ *Paranoid delusions:* Do you have suspicions that people around you feel are excessive?
- ❑ *Disorganised behaviour:* Do you have periods of abnormal behaviour that concern the people around you?

'Yes' to one or more of these questions? Follow up by observing whether:

- ❑ The client has symptoms of immunosuppression.
- ❑ She is unkempt.
- ❑ The client's behaviour is disorganised at times.
- ❑ Her speech is incoherent.
- ❑ Thoughts are disorganised.
- ❑ The client talks to herself.
- ❑ Consciousness is impaired.
- ❑ Orientation in time, place, and person is poor.
- ❑ There is forgetfulness.

'Yes' to any of the above?

- ❑ Consider an antipsychotic medication, such as sulpiride (100 mg twice daily, increasing dosage gradually to 200 mg twice daily); haloperidol (2.5 mg twice daily, increasing dosage gradually to 5 mg twice daily); olanzapine (5 mg twice daily); or risperidone (2 mg twice daily). Allow 10 days for optimal results; if no improvement, refer the patient to a psychiatrist.
- ❑ *If symptoms worsen—especially visual hallucinations:* Consider a seizure disorder. Refer the patient to a psychiatrist.
- ❑ *For side effects of the antipsychotic medication:* For tremors, muscle stiffness, drooling, or other side effects, add anticholinergic medication such as orphenadrine, Benzhexol (trihexyphenidyl), or biperiden.
- ❑ *When psychosis resolves:* Refer to ongoing counselling or provide basic counselling *(see also* Chapter 13).

12.4 SEVERE MENTAL ILLNESS

Such severe mental illnesses as schizophrenia and schizoaffective disorder fall into this category along with mental illnesses such as bipolar disorder, which can have psychotic features. People with severe mental illness often exhibit impaired social and occupational functioning that can result in social isolation. Psychotic illnesses are assumed to be primarily the result of neurotransmitter imbalances in the brain; however, psychotic disorders can also result from or be precipitated by reactions to outside stressors or medications.

The most easily recognised symptoms of serious mental illness include bizarre delusions, hallucinations, agitation, suspicion, hostility, or an exaggerated sense of self. In talking with patients, health care workers may deduce mental illness from patients' bizarre ideas or delusions or by their disorganised thinking and language.

When considering ART, do not discriminate against patients with severe mental health disorders. Adherence will likely be improved if psychiatric symptoms are stabilized and treatment is directly observed by a caregiver or treatment supporter. Refer patients for a psychiatric evaluation when they present with symptoms of psychosis

that are not attributable to delirium or dementia. For more information on screening and managing psychosis, see Table 12.4 , above.

12.5 ALCOHOL AND DRUG ABUSE

Health care workers should watch for signs of alcohol misuse and abuse among their patients and provide necessary counselling and referrals for detoxification. Patients abusing alcohol can be referred to the Council on Substance Abuse and Drugs (COSAD) in Manzini, the National Mental Health Hospital, or Alcoholics Anonymous (AA) in Manzini or Mbabane. Table 12.5 provides guidance on screening for and managing alcohol dependency.

TABLE 12.5. SCREENING FOR AND MANAGING ALCOHOL DEPENDENCY

- ❑ Use the CAGE questionnaire:
- ❑ Have you ever felt that you should **c**ut down on your drinking?
- ❑ Have people **a**nnoyed you by criticizing your drinking?
- ❑ Have you ever felt bad or **g**uilty about your drinking?
- ❑ Have you ever had an **e**ye-opener—a drink first thing in the morning to steady your nerves or get rid of a hangover?

- ❑ 'Yes' to two or more of the above questions? The patient may have alcohol dependency.
- ❑ Give feedback about the results of the screening.
- ❑ Supply information about the hazards of drinking (including poor adherence to HIV care and treatment).
- ❑ Emphasise the benefits of changing, and assess the patient's level of motivation to change. (*See* Annex 4.)
- ❑ If the patient wants to change drinking behaviour, discuss goals and provide advice and encouragement.
- ❑ Contact one of the facilities listed in the *HCT/VCT Referral Directory and Guide* to find a facility that may be able to help the patient overcome physical dependency and delirium tremens (severe alcohol withdrawal).

Other Drugs

Health care workers should watch for signs that patients are abusing other drugs. Be extra vigilant in screening adolescents for drug use. In addition to alcohol, marijuana, glue (sniffing), and methamphetamines are commonly used in Swaziland. In addition, there is increasing evidence that some ARVs are being abused; for instance, efavirenz is crushed and smoked.

If drug abuse is suspected, provide supportive counselling and make referrals for ongoing counselling and detoxification. Both are available at COSAD in Manzini as well as at the National Mental Health Hospital.

12.6 A NOTE ON ADOLESCENT MENTAL HEALTH

Very often, adolescents are grouped with adults or with children when, in fact they are a distinct group with distinct mental health and other needs. As children transitioning to adolescence, their mental adjustment will be influenced by disclosure, stigma, relationships with other family members, and loss in the family, among other factors.

HIV-related issues can affect the pressing issues of normal adolescent development, including desires for autonomy, employment, social networking, and sexual development. Psychological conditions can further complicate the developmental process. Recognition of the complex issues of adolescence is critical to ensure a healthy transition to adolescence and adulthood and continued adherence to care and treatment.

TABLE 12.6. COMMON MENTAL HEALTH DISORDERS AFFECTING ADOLESCENTS

DISORDER TYPE	SYMPTOMS AND ASSESSMENT	TREATMENT
MOOD AND ANXIETY DISORDERS	**MAJOR DEPRESSION** *(see Table 12.2)* **ANXIETY DISORDERS** *(see Table 12.1)*	A combination of medication and therapy
DISRUPTIVE BEHAVIOUR DISORDERS *These disorders are marked by poorly regulated and socially unacceptable behaviours, which interfere with the child's ability to carry out daily activities.*	**ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)** ADHD is a condition characterised by impulsivity, hyperactivity, or a combination of these. Adolescents with ADHD may have a history of not performing well in school, may have difficulty concentrating, and may appear to be 'lazy'. *Screening:* Inattention, hyperactivity, and impulsivity are symptoms.	Best treated with a combination of psychotropic medication (stimulants) and behavioural therapy.
	OPPOSITIONAL DEFIANT DISORDER (ODD) Adolescents with oppositional defiant disorder (ODD) have problems controlling their temper and often seem to harbour anger beyond that of their peers. *Screening:* At least four of the following behaviours should be present within a six-month period: loss of temper, arguments with adults, refusal to follow rules, deliberately annoying people, blaming others for misbehaviour, easily annoyed, and resentful or vindictive.	Pharmacological therapies are of limited effectiveness for disruptive behaviour disorders. Counselling and therapy focusing on improvements in self-regulation and a structured environment are most helpful. *For more information: Refer to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR).*
	CONDUCT DISORDER (CD) Adolescents with CD display more severe oppositional behaviours that violate the rights of others. *Screening:* At least three of the following behaviours should be present for six months: aggression towards people or animals, destruction of property, deceitfulness or theft, serious violations of rules.	

Chaprer 13: PSYCHOSOCIAL AND PSYCHOLOGICAL SUPPORT

Key Reference Documents

- Kidd R, Clay S, and Chiiya C. *Understanding and Challenging HIV Stigma: Toolkit for Action.* 2nd ed. Washington, DC, and Hove, United Kingdom: Academy for Educational Development, International Center for Research on Women, and International HIV/AIDS Alliance; 2007. Available at: http://www.icrw.org/docs/stigma-toolkit/intro-a.pdf.
- Kübler-Ross, E. On Grief and Grieving: *Finding the Meaning of Grief Through the Five Stages of Loss.* New York: Scribner. 2005.
- Lesotho Ministry of Health and Social Welfare and the International Center for AIDS Care and Treatment Programs. Adherence and Psychosocial Support Implementation Workshop for Multi-Disciplinary HIV Care Teams. Facilitator and Participant Manual. 2008.
- Swaziland Ministry of Health. ARV Treatment Literacy Training Course, Trainee's Manual. 2005.
- Swaziland Ministry of Health and Population Services International. HTC/VCT Referral Directory and Guide. 2007.
- Swaziland Ministry of Health, Swaziland National AIDS Program, and the International Center for AIDS Care and Treatment Programs. Peer Education in HIV/AIDS Prevention, Care, and Treatment: A Comprehensive Training Course for Expert Clients in the Kingdom of Swaziland. 2007. Available at: http://www.columbia-icap.org/wherewework/swaziland/ trainersmanual092507.pdf and http://www.columbia-icap.org/wherewework/swaziland/participantsmanual092507.pdf.

13.1 THE IMPORTANCE OF ONGOING PSYCHOSOCIAL SUPPORT

Because HIV affects all dimensions of a person's life—physical, psychological, social, and spiritual—clients' need for support is wide-ranging. A woman who has just learned her HIV status during prenatal HIV testing, for example, needs support not only in understanding and adjusting to this information, but also in planning what comes next for herself and her infant.

Psychosocial support addresses the full range of ongoing concerns and needs of people living with HIV and their partners and family members and is an important component of comprehensive HIV care. It should be provided at the facility both by health care workers and by expert clients. In addition, clients should be referred and linked to community-based sources of support—for home-based care, nutritional support, legal support, support groups, etc.

Benefits of Psychosocial Support

- It can help clients cope more effectively with HIV and enhance their quality of life.
- It can help clients gain confidence in themselves and their skills in dealing with long-term illness, with stigma or discrimination, and with taking medications every day, etc.
- It can help clients advocate for care for themselves and their families and improve efficacy in self-care.
- It can sometimes prevent more serious mental health issues (anxiety, depression, or withdrawal).
- The improved mental health and feelings of well-being it yields can benefit physical health and well-being as well.
- It can help people prepare for poor health or death.
- The problem-solving and mutual support involved in the provision of psychosocial support can inspire movements for change, acceptance, and advocacy within the community.

13.2 POTENTIAL PSYCHOSOCIAL SUPPORT NEEDS OF CLIENTS LIVING WITH HIV

- Empathy and acceptance from care givers and family members.
- Support in understanding and coming to terms with their HIV status.
- The chance to discuss their feelings and concerns about their HIV status and the effect it has on their own life and the lives of family members.
- An opportunity to talk about taking medication, especially during pregnancy—including the fact that many pregnant women do not feel sick, which affects their ability to adhere to medication and come regularly to the clinic for care.
- Peer support from other pregnant women and mothers.
- Strategies to disclose their HIV status to their partner and other family members.
- Strategies to encourage their partner and other family members to learn their status and, if appropriate, to enrol into care and treatment programs.
- Strategies to more actively advocate for comprehensive care and support self-care.
- Access to social welfare services and to community-based organisations (CBOs) that support income-generating activities (IGAs).
- Spiritual support and referrals to spiritual counselling.
- Knowledge about their legal issues and rights.
- Substance abuse management.

When Clients Need Extra Support

Clients may need extra support in dealing with their feelings when changes occur in their lives or when they are faced with difficult issues, such as:

- After learning they or a family member is HIV infected.
- When preparing to disclose to friends or family members or a child.
- When initiating ART.
- When they become pregnant.
- When they are about to lose a loved one or are grieving the loss of a loved one.
- When they face stigma, discrimination, or violence.

13.3 THE STAGES OF GRIEF

After HIV diagnosis, loss of a loved one, or other critical times such as those listed above, health care workers should be that their patients may go through different stages of grief:

- Denial and isolation: 'This is not happening to me—this can't be real—can't be the truth.'
- Anger: 'Why me? It's not fair—why did this happen to me? I hate this world.'
- Bargaining: 'Just give me a few more years to see my children off, God—just give me three more years and I will be a good man.'
- Depression: 'I am so sad—why bother trying? I am just going to die anyway. Poor me.'
- Acceptance: 'Everything is going to be okay—I can fight this. I have a lot of living to do.'

Each person is different; not all individuals go through all these stages or in this order.

Clients' acceptance of the need for care and their adherence to care and treatment will be influenced by their stage of grief.

Psychosocial Assessment

All adults, adolescents, and pregnant women should have an individual psychosocial assessment upon enrolment into care and again—because their needs may have changed—upon initiating ART. Psychosocial support should be guided by these two assessments and should include referral and linkages to community-based sources of support.

See chapters 3 and 13 for guidelines for psychosocial assessment and Annex 2 for a sample psychosocial assessment tool.

13.4 SUPPORTING CLIENTS WITH MILD ANXIETY AND DEPRESSION

Anxiety and depression are the common reactions when clients and their family members have to cope with HIV and its impact. Anxiety and depression may be trig

gered by:

- Fear (of suffering or dying, of disclosure, of rejection or abandonment, of what the future holds, etc.).
- Guilt (of surviving loved ones with HIV or passing HIV to partners or children).
- Financial or other economic worries.
- Rejection, stigma, and discrimination at home, in the community, and at health facilities.

Anxiety and depression are especially common among clients who do not get the support they need from family, friends, and community members but can usually be managed with ongoing counselling, support, and assistance in implementing coping mechanisms.

TABLE 13.1: RECOGNIZING AND HELPING CLIENTS WITH MILD ANXIETY AND DEPRESSION

	HOW TO HELP
SIGNS OF ANXIETY ❑ Cannot eat. ❑ Cannot breathe. ❑ Shaking and sweating. ❑ Heart pounding fast. ❑ Tingling of the hands or feet. ❑ Cannot sleep. ❑ Cannot concentrate on anything. ❑ Feel jumpy or stressed. ❑ Worrying about many things. **SIGNS OF DEPRESSION** ❑ Feel like you just do not know what to do (helpless or hopeless). ❑ Really tired with no energy. ❑ Cannot find good in anything. ❑ Do not enjoy the things you used to. ❑ Sleep too much or not enough. ❑ Get angry for no reason. ❑ Cannot eat—or eat too much. ❑ Do not feel like being social with friends or family. ❑ Do not feel like having sex. ❑ Talk about running away. ❑ Think about suicide.	❑ Provide continuous supportive counselling to the client so he feels heard. Use good communication skills, such as reflection—repeat what the client has said to you, rephrased in your own words. ❑ Encourage the person to join a PLHIV association and a support group to meet other people living positively with HIV. ❑ Encourage the client to pursue physical activity. ❑ Encourage the client to seek out social and spiritual support. ❑ Link the person with community support services, including groups that provide spiritual support, counselling, home care, or nutritional support. RHMs may be able to help. ❑ Remind clients not to use alcohol or drugs, which will only heighten the difficult feelings. ❑ Make a plan with the person to stay hopeful and feel good again. ❑ Encourage the client to continue religious and spiritual practices that brings him peace. ❑ Encourage relaxation techniques, such as prayer, meditation, massage, or listening to music. ❑ *If sleep is disturbed:* Suggest that the client avoids coffee or tea in the evenings. ❑ With the client's permission, talk with family members—they may be need support, too. Remind them to give the client ongoing support and love. ❑ Remind the client that his feelings are normal and assure him that he will eventually feel better. ❑ See Chapter 12 for guidelines on managing chronic and severe anxiety and depression.

When to Call a Professional for Help

When basic counselling and support at the health facility and in the community do not relieve a client's anxiety and depression, there may be serious, chronic mental health issues that require clinical intervention by physicians and trained counsellors.

Health care workers should seek help from a professional counsellor, psychologist, or psychiatrist right away if:

- The client might hurt himself or another person.
- The anxiety or depression is so bad that the client is thinking about suicide.
- The family cannot cope with the individual anymore and wants to throw him out.
- For an extended period of time, the client has not been able to eat or sleep.
- There is an emotional crisis.

13.5 DISCLOSURE SUPPORT

Disclosure—when PLHIV tell one or more other individuals about their HIV status—is a process, not a one-time event: A person may start by disclosing to only one person and then over time disclose to others. The need for disclosure support—both at the health facility and in the community—is ongoing. The benefits and drawbacks of disclosure are outlined in Table 13.2.

TABLE 13.2. POSSIBLE BENEFITS AND DRAWBACKS OF DISCLOSURE

BENEFITS OF DISCLOSING	DRAWBACKS AND PROBLEMS CONNECTED WITH DISCLOSURE
❑ An end to the burden of secrecy and hiding. ❑ An end to anxiety over the risk of accidental or unwanted disclosure. ❑ Access to emotional and practical support. ❑ Ability to talk about symptoms and concerns. ❑ Easier access to health care. ❑ Enhanced ability to adhere to a care and medication regimen, ultimately enhancing his health and ability to live positively with HIV. ❑ Ability to discuss safer sex and family planning choices with partners. ❑ Ability to refer partners and children for HIV counselling and testing and to care and treatment if needed. ❑ Freedom to ask a friend or relative to be a treatment buddy. ❑ Access to patient support groups and community organisations. ❑ Can serve as a role model for other people on disclosure. ❑ *For pregnant women:* The ability to get support for safer infant feeding from family members and friends, and linkages to food support programs when she wants to wean the baby.	❑ Blame by partner or family for 'bringing HIV into the household'. ❑ Distancing, fear, rejection, or abandonment by partner, family, or friends. ❑ Loss of economic or subsistence support from a working partner. ❑ Stigmatisation and discrimination in the community. ❑ Stigmatisation and discrimination at work, including possible job loss. ❑ Assumptions made about sexuality, promiscuity, or lifestyle choices. ❑ Rejection of children at school or in the community. ❑ Reluctance on the part of partner to have more children. ❑ Physical violence.

Levels of Disclosure

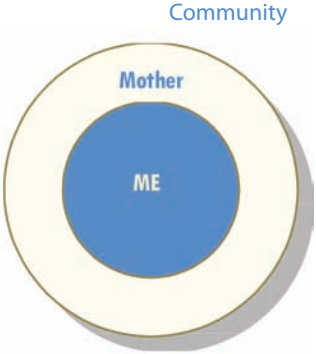
Whether to one person or many people, disclosure usually works best when it is planned and when the client feels comfortable and ready to deal with any reaction.
Partial Disclosure: This involves a client's sharing his HIV status with one person or a few people—but not to everyone. As a first step, most PLHIV opt for partial disclosure. For example, a person may want to tell his close family members about his HIV status, but not people at work or in the community.

Full Disclosure: Clients who fully disclose are open with everyone about their HIV status. PLHIV who opt for full disclosure can have a big impact on reducing stigma and advocating for other PLHIV, but there are also risks; no one should fully disclose without being well prepared and well supported.

Planning for Disclosure

A good way to help people decide who they will disclose to is by creating 'disclosure circles'.

- The centre of the circle is the person himself.
- The next circle out is one individual (or several) that the PLHIV is very close to, such as a parent or partner.
- The next circle includes larger groups of people that the PLHIV is not as close to, including colleagues at work and acquaintances in the community.
- There can be many other layers to the circles of disclosure.



When an adult or adolescent client is ready to disclose, help him develop a disclosure strategy—planning for potential responses and scheduling a time to return to the clinic for postdisclosure follow-up and counselling. In addition, health care workers should assess the risk of violence postdisclosure and, as much as possible, ensure the physical safety of clients. Referrals can be provided to community-based sources of support, such as PLHIV support groups.

For clients who are not yet ready to disclose:

- Reassure the PLHIV that his HIV status will remain confidential.
- Explore barriers to disclosure.
- Offer to assist in disclosure.
- Offer referral to expert clients.
- Offer referral to a PLHIV support group.
- Continue to assess disclosure readiness.

Chapter 14: POSITIVE PREVENTION INTEGRATED INTO CARE AND TREATMENT

Key Reference Documents

- Swaziland Ministry of Health and Population Services International. *HTC/VCT Referral Directory and Guide*. 2007.
- Swaziland Ministry of Health. National Family Planning Service Delivery Guidelines. 2007.
- Swaziland Ministry of Health. Management of Sexually Transmitted Infections. 2007.
- Swaziland Ministry of Health. *Prevention of Mother to Child Transmission of HIV Guidelines.* 2nd ed. 2006. Available at: http://www.unicef.org/swaziland/sz_publications_2006pmtctguidelines.pdf.
- World Health Organization Integrated Management of Adolescent and Adult Illness and Integrated Management of Childhood Illness. *Chronic HIV Care with ARV Therapy and Prevention: Interim Guidelines for Health Workers at Health Centre or District Hospital Outpatient Clinic.* Geneva, Switzerland: WHO. April 2007. Available at: http://www.who.int/hiv/pub/imai/Chronic_HIV_ Care7.05.07.pdf.

14.1 THE FOCUS OF POSITIVE PREVENTION

Prevention counselling and prevention activities are key components of care and treatment. HCW should always consider and discuss options to prevent the spread of HIV to the sexual partners and children of PLHIV, via:

- Partner disclosure and testing.
- Sexual risk reduction and sexual health.
- Prevention and treatment of STIs.
- PMTCT (see Chapter 9).
- Prevention of blood-borne HIV transmission.

14.2 PREVENTION OF SEXUAL TRANSMISSION

Partner Disclosure and Testing

Health care workers should ask clients about the HIV status of their partners and children. Ask PLHIV to encourage their sex partners to be tested for HIV and to bring their children for testing; both partners and children are at high risk for becoming infected. HIV-negative partners should be retested each year. Couples counselling can be particularly effective for clients and their partners.

Health care workers should counsel PLHIV on the important benefits of partner testing:

- *If the partner tests HIV negative:* He or she can learn how to avoid HIV infection.
- *If testing shows the partner to be HIV infected:* He or she can:
  —Learn how to prevent spreading HIV through sexual contact and mother-to-child transmission.
  —Obtain HIV care and treatment, which may mean a longer and healthier life.

Ask patients whether they have disclosed their HIV status to their sex partners, and provide information and counselling covering key facts:

- Partners of PLHIV may still be HIV negative.
- HIV is not transmitted on every exposure.
- HIV-negative partners in discordant couples are at high risk of infection (that is, couples in which one partner is HIV negative and the other is not).
- Discordant couples can reduce risk via condoms, abstinence, and treating STIs.
- Circumcision of HIV-negative male partners can reduce risk.

If the person has not disclosed to his or her partner, encourage patients to do so—providing it is safe—and provide disclosure counselling (see Chapter 13). In addition, remind clients that couples counselling is available.

Sexual Risk Reduction

Ways to Reduce the Risk of HIV Transmission: PLHIV should be counselled so that they to understand the risks involved in different sexual activities and adopt safer sex behaviour, which may include:

- After HIV testing, both partners agreeing to remain mutually faithful.
- Reducing the number of sexual partners.
- Reducing concurrent sexual partnerships.
- Using condoms every time for every sexual activity that would allow semen, fluid from the vagina, or blood, to enter the mouth, anus, or vagina.
- Practicing safer sex—choosing sexual activities that do not allow semen, vaginal fluid, or blood to enter the mouth, anus, or vagina.
- Abstaining from sex.

Health care workers should dispel any myths on cleansing of HIV infection through sex with minors or others.

Reasons to Use Condoms: PLHIV should be counselled on the benefits of using male or female condoms for each sexual activity or encounter, covering the fact that condoms can:

- Prevent the spread of HIV to sex partners.
- Prevent the spread of sexually transmitted infections between partners.
- Prevent PLHIVs' reinfection with newer, potentially stronger, drug-resistant HIV strains.
- Prevent the spread of HIV to the unborn or breastfeeding baby, especially

when the mother is HIV-negative and has a sexual partner living with HIV.

Discordant couples may require additional counselling and support to practice safer sex over the long term. All clients on ARVs should be reminded that they can still pass HIV to their sexual partner even if their VL is low or undetectable.

Offer condoms to PLHIV at every clinic visit.

Condom Availability and Instruction: Make condoms available to PLHIV every time they come to the clinic. Also provide condoms in waiting areas, examination rooms, in bathrooms, and during meetings with Expert Clients. In addition, demonstrate condom use to each client, and discuss any potential barriers to consistent and correct condom use.

14.3 PREVENTING AND TREATING SEXUALLY TRANSMITTED INFECTIONS

Screening and Physical Examination: At every visit, ask clients about STI symptoms. If the answers to any question is 'yes', perform a physical examination that includes the steps outlined in Table 14.1.
Ensure that there is privacy during all physical examinations.
Diagnosis and Treatment: A thorough physical examination is key to diagnosing STIs. Health care workers should use information from the physical examination in combination with the client's history to make a syndromic diagnosis and manage it according to the flow charts in the national STI guidelines.
Treat clients diagnosed with an STI syndrome for all of the possible STIs that could cause that syndrome. In addition:

- Counsel clients to avoid sexual intercourse, if possible, while being treated for the STI syndrome and to use condoms with every sexual encounter after sexual activity resumes.
- Counsel clients diagnosed with STIs to inform their sexual partners to seek medical care so that they can be evaluated and treated for STIs as well; use the contact tracing slip and coding system specified by the Ministry of Health in the national STI guidelines.

14.4 PREVENTION OF NONSEXUAL TRANSMISSION

Injection Drug Use

Sharing injection drug use equipment or 'works', including needles, syringes, cotton, and the like, puts people at great risk to acquire or spread HIV. Health care workers should ask clients about injection drug use and pass on these messages to clients who inject drugs:

- Avoid passing on or sharing needles and syringes with others.

- Use new injection equipment each time.
- If a new syringe is not available, reuse your own equipment (rather than someone else's).

TABLE 14.1. SCREENING AND EXAMINING CLIENTS FOR SEXUALLY TRANSMITTED INFECTIONS

SCREENING QUESTIONS	PHYSICAL EXAMINATION
	WOMEN
❑ Do you have vaginal discharge that is not normal for you (colour, amount, smell)? ❑ Do you have pain when you urinate? ❑ Do you have any sores or bumps in or around your genitals? ❑ Do you have any pain in your lower abdomen?	Ask the woman to undress from the waist down and lie on an exam table, or if she is wearing a skirt, she can leave it on and take off her underpants. Be sure to cover her with a sheet and expose only those parts that you examine. **External Examination** ❑ *Skin examination:* Inspect the skin of the genitals, perineum, inguinal areas, thighs, lower abdomen, buttocks, chest, back, soles of feet, and palms of hands. Look for vesicles, ulcers, warts, other growths, and rashes. ❑ *External genital examination:* Inspect and palpate the external genitalia, then inspect the perineum and anus. Look for ulcers, vesicles, warts, and discharge. ❑ *Inguinal examination:* Examine the inguinal area and palpate for inguinal lymph nodes. ❑ *Abdominal examination:* Palpate the abdomen, checking for guarding, tenderness (particularly deep in the pelvis), rebound tenderness, and masses. **Internal Examination** ❑ *Internal genital examination:* Have the woman lie with her legs bent at the knees, keeping her feet and knees separated. Separate the labia and insert a bivalve speculum lubricated with warm water. With a bright light shining on the area, inspect the vaginal walls and the cervix. Look for ulcers, warts, and cervical and vaginal discharge. ❑ *Bimanual pelvic examination:* Remove the speculum and insert the lubricated index and middle fingers of your hand into the vagina. Place your other hand on the lower abdomen and examine the pelvis for swelling and tenderness. Move the cervix laterally and check for cervical motion tenderness. Check for tenderness and masses around the uterus and ovaries.
	MEN
❑ Do you have any discharge from your penis? ❑ Do you have any pain when you urinate? ❑ Do you have any sores or bumps around your genital area or your anus?	Ask the man to undress from the waist down and lie on an exam table. ❑ *Skin examination:* Inspect the skin of the genitals, perineum, anus, inguinal areas, thighs, lower abdomen, buttocks, chest, and back, soles of feet, and palms of hands. Look for vesicles, ulcers, warts, other growths, and rashes. ❑ *External genital examination* —Inspect the penis, including the opening of the urethra, by retracting the foreskin. Look for ulcers, vesicles, and urethral discharge. If the patient complains of discharge and none is present, give the urethra a gentle squeeze and massage it forward to try and express any discharge. —Inspect in and around the anus. —Palpate the scrotal contents and note presence of ulcers or buboes. ❑ *Inguinal examination:* Palpate the groin, feeling for enlarged lymph nodes and the presence of buboes.

- Sterilize any previously used equipment before using it: Rinse both syringe and needle with clean water to remove all blood. Fill with full-strength bleach. Shake. After 30 seconds, squirt it out through the needle. Rinse with clean water to remove all bleach.
- Before injecting, clean the injection site—with an alcohol swab, if possible.
- Wash hands before and after injecting.
- Inject yourself, rather than allowing someone else to inject you.
- Use condoms during sex for the protection of both partners.

When possible, provide clients who inject drugs with clean needles and syringes, and provide referrals to drug treatment programs. See the Swaziland Ministry of Health/Population Services International HTC/VCT Referral Directory and Guide for the names of programs in each region.

Health care workers should provide risk-reduction counselling to injection drug users, and integrate HIV care with drug substitution and other drug treatment and support services.

Infection Prevention at Home

Health care workers should advise clients to cover any open sores, cuts, or blisters with gauze to prevent cross-infection.
Caregivers should be advised to wear gloves when the patient has open sores or when handling any type of bodily fluids or waste, such as blood, pus, fluids from childbirth, faeces, and urine.

Advise clients and their family members to burn or bury clothing, bedding, towels, bandages, and other surfaces and materials that contain bodily fluids and that will not be reused. Materials that will be reused should be disinfected for at least 10 minutes with a 0.5% bleach solution; washed in boiling water and detergent for at least 20 minutes; rinsed well; and hung in the sun to dry. See also Chapter 16.
Surfaces can be disinfected with a 0.5% bleach solution. When using Jik (bleach) to clean and disinfect soiled linens and surfaces, dilute one part Jik with 10 parts water.

14.5 POSTEXPOSURE PROPHYLAXIS

PEP involves the immediate provision of ARVs following an exposure to blood or other body fluids that are known to be HIV infected or are potentially so, in order to minimise the risk of acquiring infection.
Health care workers should follow the national PEP guidelines.

Health Care Workers

In Swaziland, PEP should be made available to anyone that comes in contact with blood-borne pathogens in a health care facility or other workplace. In the health care setting, occupational exposures include needle sticks (small, medium, or large bore

needle), cuts with a scalpel blade, splashes with blood or blood products on nonintact skin, and splashes on the mucous membranes.
Report any occupational exposure right away, following standard operating procedures. Exposed health care workers should be evaluated immediately and receive pre-test counselling, an HIV test, and post-test counselling.

Victims of Sexual Abuse

PEP is also advised for survivors of sexual abuse. People who have been raped should be encouraged to seek health care right away (before taking a bath or shower). Doctors should conduct an examination, and counselling should be provided, as well as an HIV test.

The decision about which ARVs to use for PEP will depend on the exposure type and the HIV status of the other person (if known). A combination of two or three ARVs should be given and follow-up counselling and testing should be conducted at two weeks, one month, three months, and six months.
Health care workers should follow the national PEP guidelines.

Chapter 15: NUTRITION EDUCATION, ASSESSMENT, AND SUPPORT

Key Reference Documents

- Swaziland Ministry of Health. *Food and Nutrition Policy [draft].* 2008.
- Swaziland Ministry of Health and PSI. *HTC/VCT Referral Directory and Guide.* 2007.
- Swaziland Ministry of Health. National Guidelines for Integrated Management of Acute Malnutrition [draft]. 2009.
- Swaziland Ministry of Health. Nutrition and HIV Guidelines for Service Providers. August 2008.
- Swaziland Ministry of Health. *Prevention of Mother to Child Transmission of HIV Guidelines.* 2nd ed. 2006. Available at: http://www.unicef.org/swaziland/sz_publications_2006pmtctguidelines.pdf.
- World Health Organization Integrated Management of Adolescent and Adult Illness and Integrated Management of Childhood Illness. *Chronic HIV Care with ARV Therapy and Prevention: Interim Guidelines for Health Workers at Health Centre or District Hospital Outpatient Clinic.* Geneva, Switzerland: WHO. April 2007. Available at: http://www.who.int/hiv/pub/imai/Chronic_HIV_ Care7.05.07.pdf.
- World Health Organization. *Consultation on Nutrition and HIV/AIDS in Africa: Evidence, Lessons, and Recommendations for Action.* Presented at: WHO Conference on Nutrition; April 10–13, 2005; Durban, South Africa. Available at: http://www.who.int/ nutrition/topics/consultation_nutrition_and_hivaids/en/index.html.

15.1 THE GOALS OF NUTRITIONAL SUPPORT

There are three major goals for nutritional support among PLHIV:

- Prevent weight loss and maintain optimal nutrition status.
- Restore nutritional status for severely malnourished patients in order to optimise health.
- Support overweight patients to lose weight and reduce associated health risks.

Nutritional problems can be seen in both asymptomatic and symptomatic PLHIV. The effect of HIV on the body's nutritional status begins early in the course of the infection, even before symptoms are seen. Good nutrition has the greatest impact at the early stages of HIV, strengthening the immune system to fight OIs and delaying the progression of the disease. Good nutrition can play an important role in the care and management of HIV.

Influencing the nutritional needs of PLHIV are the HIV infection itself as well as OIs

and changes in the body's metabolism. To meet their increased nutritional needs, PLHIV need a diet that provides all the essential nutrients (carbohydrates, protein, fat, minerals, and vitamins).

Many factors can affect a person's nutritional status, including poverty, food distribution within the household, drug side effects, and disease symptoms, such as mouth sores). The specific goals of nutrition support vary with disease stage and whether or not a patient is taking ART and OI prophylaxis such as CTX.

Nutritional Needs at WHO Stage 1: At this stage of HIV infection, the goal is to sustain body weight and the ability to fight infections by maintaining a normal, healthy eating pattern. Health care workers should:

- Provide advice and support to help clients hold their weight steady and to prevent food- and water-borne infections. Check weight at least every two months in adults.
- In food-insecure areas, provide food rations or supplements, especially to nutritionally vulnerable pregnant and lactating women.

Nutritional Needs at WHO Stage 2: Patients may lose <10% of their body weight. Infections such as oral thrush, sore mouth, and diarrhoea can occur, resulting in decreased food intake and decreased absorption of nutrients. Patients may also experience nausea and vomiting. Health care workers should:

- Refer clients to a physician or treat the medical conditions, and counsel patients on management of common nutrition-related symptoms of HIV.
- Check weight at least once per month.
- Refer the patient to a dietician or nutritionist, where services are available.

Nutritional Needs at WHO Stages 3 and 4: Patients may lose >10% of their body weight. Weight loss and wasting may become serious problems, and diarrhoea occurs more frequently and for longer periods. Patients may need assistance with food preparation and food supplements. Health care workers should:

- Provide therapeutic feeding for moderately and severely malnourished patients according to national guidelines. Use therapeutic formulations—eg, F75 or F100 therapeutic milk or ready-to-use therapeutic foods (RUTF) such as Plumpy'Nut.
- Where services are available: Refer the patient to a dietician or nutritionist.

15.2 THE RELATIONSHIP BETWEEN NUTRITION AND HIV

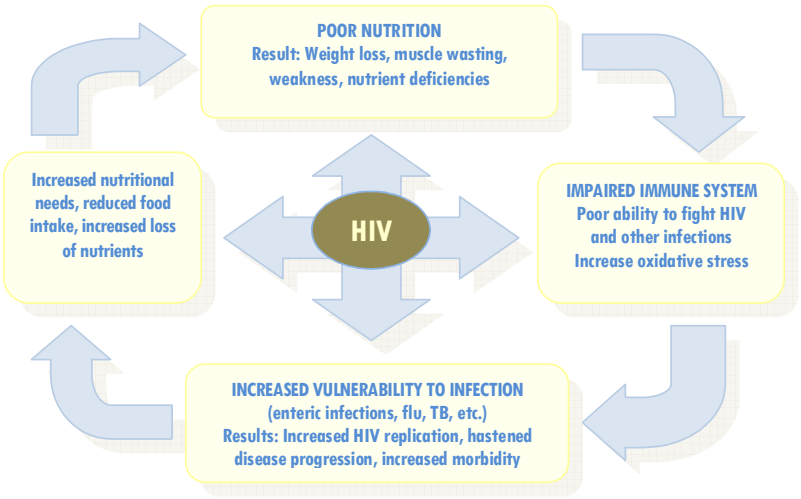
The relationship between nutrition and HIV is cyclical:

- HIV infection increases nutrient requirements and reduces nutrient intake and absorption.
- This increases the risk of malnutrition.
- Malnutrition increases risk of opportunistic infections and progression

of HIV to AIDS.

Poor nutrition and HIV together create a vicious cycle that weakens the immune system, as illustrated in Figure 15.1 below

FIGURE 15.1: THE CYCLE OF MALNUTRITION AND INFECTION IN THE CONTEXT OF HIV AND AIDS



Source: http://www.fantaproject.org/downloads/preservice/Mod2-Link%20Nutrition%20and%20HIV.ppt

15.3 GENERAL NUTRITIONAL RECOMMENDATIONS AND ASSESSMENT

General Nutrition Recommendations

Target nutritional education and recommendations to individual clients' clinical and social situations. Although there are specific recommendations for adults, adolescents, and pregnant women, the following nutritional recommendations apply to all PLHIV:

- Increase caloric intake, especially with high-energy and high-protein foods.
- Eat a well-balanced diet that includes a variety of fresh foods, based on what is locally available and affordable.
  - —Make starches the basis of the meal.
  - —Eat proteins with every meal; include nonanimal proteins.
  - —Eat fruits and vegetables every day.
  - —Use fats and oils in small amounts.

- Try to eat small meals frequently.
- Drink at least eight glasses of clean water each day.
- Take multivitamins daily.
- Practice good food hygiene to avoid food-borne illness (see Chapter 16).
- Maintain physical exercise (walking, jogging, and light household chores) to build muscles and improve appetite.
- Inform health care workers if you are taking any traditional remedies or supplements.

Ongoing General Nutritional Assessment

Health care workers should:

- Weigh patients at each visit, record their weight, and look for changes.
- Regularly conduct anthropometric, biochemical, clinical, and dietary assessments.
  See Table 15.2 and the nutrition assessment tool in the Swaziland Nutrition and HIV Guidelines for Service Providers.
- Provide linkages to community- and home-based support.
- Refer severely malnourished patients for counselling and therapeutic feeding support.
- Treat all OIs, especially those that interfere with food intake, absorption, and utilization.
- Manage food–drug interactions and medication side effects, using dietary measures as appropriate.

The goal of nutritional assessment is to determine the severity of nutritional problems and probable causes. Health care workers should consider the high incidence of food insecurity for families in Swaziland, especially those affected by HIV. Every nutritional assessment should include a discussion of the ability of the client and his family to buy or grow enough healthy foods to eat.

Nutritional counselling, education, and advice should always be adapted to the realities of clients' situations.
At ART Initiation: Clients initiating ART should also receive education and counselling on food recommendations for ARVs and the management of food–drug interactions. For details on the above topics, see the Swaziland Nutrition and HIV Guidelines for Service Providers.

15.4 NUTRITIONAL MANAGEMENT OF COMMON SYMPTOMS AND ILLNESSES

When PLHIV develop more symptoms and more severe nutritional problems, specialised nutrition support and interventions should be provided. See Table 15.1, next page, for examples of nutritional support for specific illnesses and symptoms, and the *Swaziland Nutrition and HIV Guidelines for Service Providers* for additional information.

TABLE 15.1: NUTRITIONAL MANAGEMENT OF SYMPTOMS RELATED TO ADVANCED HIV INFECTION

ILLNESS/SYMPTOM	NUTRITIONAL RECOMMENDATIONS AND MANAGEMENT
DIARRHEA	❑ Drink sufficient fluids (safe water; diluted, unsweetened fruit juices, rice water; thin sorghum porridge). ❑ Drink oral rehydration solution. Severe dehydration may require rehydration with intravenous fluids. ❑ Eat salty foods or add extra salt. Once diarrhoea stops, restore normal salt intake. ❑ Eat small, frequent meals. ❑ Eat fermented foods like *emahewu* and sour porridge. ❑ Decrease fatty and fried foods; instead, steam or boil foods. ❑ If milk and dairy products cause cramps, use fermented products like yoghurt and *emasi.* ❑ Include soluble fibre (pectin) by eating foods like bananas, peeled apples and pears, oats, carrots, pumpkin, paw paws, and potatoes. ❑ Avoid insoluble fibre, such as is found in whole grain foods and beans. ❑ Avoid tea, coffee, and other sources of caffeine; alcohol; and sugary foods.
MOUTH AND THROAT SORES OR INFECTIONS	❑ Eat food at room temperature, not hot. Try it cold, as well—cold food can be soothing. ❑ Avoid acidic food, such as citrus fruit and vinegar; also shun hot-and-spicy and very salty foods. ❑ Avoid alcohol—spirits, in particular—as well as sweet or sugary food and drinks. ❑ Clean mouth frequently, at least twice a day—preferably after every meal. ❑ Use cinnamon tea as a mouthwash. ❑ Rinse mouth with salty warm water; use clean boiled water. ❑ Eat soft foods, such as scrambled eggs, custard, mashed potatoes, mashed carrots, pureed pumpkin, paw paws, porridge, and soups. ❑ Use a straw to drink liquids to ease swallowing, and avoid contact with affected parts of the mouth. ❑ Avoid foods that are rough (toast, raw vegetables) or sticky (peanut butter). ❑ Use fermented products such as yoghurt. ❑ Drink nourishing liquids (eg, beef broth or lentil or pea soup). ❑ *For thrush:* Eat soft foods, *emahewu,* sour milk, yoghurt. Suck on ice to relieve pain, practice good oral hygiene, and rinse the mouth with a mix of baking soda and water every day.
WASTING	❑ Eat balanced meals regularly; include a source of protein with each meal. ❑ Eat high-protein snacks between meals (roasted peanuts, boiled eggs, avocado). ❑ Exercise regularly. ❑ Increase foods' nutrient density without visibly increasing meal volume by adding peanut butter, skimmed milk powder, or eggs to soups or porridge. ❑ Add fat, oil, peanut butter, peanut powder, and *ludvonca* to food and in cooking if tolerated.
POOR APPETITE OR TASTE CHANGES	❑ Eat small, frequent meals and nutritious snacks between meals. ❑ Take walks before meals where possible—fresh air stimulates appetite ❑ Avoid smoking—it reduces appetite. ❑ Add a variety of seasonings to food, especially herbs, for more flavour. ❑ Try different textures and varieties of food. ❑ Rinse the mouth after meals. ❑ To stir taste buds, use lemon, raw tomatoes, or tonic water; chew food well and move around mouth. ❑ Don't prepare meals or stay in the kitchen during meal preparation; smells can bring on satiety. Have family or friends help with food preparation.

TABLE 15.2: KEY COMPONENTS OF A NUTRITIONAL ASSESSMENT

MEASURES	INTERPRETING RESULTS AND NEXT STEPS
ANTHROPOMORPHIC ASSESSMENT	
WEIGHT AND HEIGHT	❑ In patients who have lost 10% of body weight or 6 or 7 kgs in a month: Assess ART eligibility. ❑ If loss >5% of body weight over two to three months, associated with OIs: Treat underlying conditions. ❑ If loss of >10% of body weight over two to three months associated with wasting syndrome (WHO Stage 4): Start ART.
BMI = WEIGHT (KG) / HEIGHT (M^2) *BMI 18.5–24.9:* Normal weight *BMI 25–29.5:* Overweight *BMI 30 and above:* Obese *Does not apply to pregnant women*	❑ *If BMI <18.5:* Provide counselling and supply therapeutic food supplements. ❑ *If BMI >30:* Recommend weight loss without compromising nutrition status.
MUAC (mid-upper arm circumference) *Recommended for adults who cannot stand up for weight and height measurements and for pregnant women.*	**Adults** ❑ <16 cm: Severe malnutrition. ❑ 16–18.5 cm: Moderate malnutrition. **Pregnant Women** ❑ < 17 cm: Severe malnutrition. ❑ 17–21.9 cm: Moderate malnutrition.
CLINICAL ASSESSMENT—WHAT TO LOOK FOR	
❑ GI problems (diarrhoea, nausea, vomiting). ❑ OIs that may interfere with food intake and absorption. ❑ Concurrent medical conditions (diabetes, hypertension, lipid problems). ❑ Medication profile (medications taken, side effects that may affect food intake or absorption).	
DIETARY ASSESSMENT—WHAT TO ASK ABOUT	
❑ Eating patterns, food regularly consumed, and frequency of meals. ❑ What foods are available and affordable. ❑ Food intolerance, allergies, and aversions. ❑ Dietary problems (eg, poor appetite, difficulty chewing and swallowing). ❑ Food preparation and handling practices. ❑ Psychological factors that may contribute to inadequate food intake (eg, depression). ❑ Physical activity. ❑ Use of mineral or vitamin supplements. ❑ Living environment and functional status.	
BIOCHEMICAL ASSESSMENT *(where available)*	
What to Test For or Evaluate ❑ Serum albumin and/or proteins. ❑ Micronutrient deficiencies (eg, anaemia). ❑ Glucose and lipid profile.	❑ *If low serum albumin:* Advise a high protein diet. ❑ *If haemoglobin (Hb)<10:* Advise diet high in iron and folic acid. ❑ *If abnormal blood glucose:* Profile for diabetes. ❑ *If abnormal lipid profile:* Do further clinical evaluation.

15.5 NUTRITIONAL NEEDS, ASSESSMENT, AND RECOMMENDATIONS FOR SPECIFIC GROUPS

Asymptomatic and Symptomatic Adults and Adolescents

Asymptomatic PLHIV: To stay healthy, asymptomatic PLHIV require between 10% and 15% more energy than people without HIV. Therefore, PLHIV should try and take in more calories each day, including an extra snack if possible. Generally, if asymptomatic PLHIV eat a balanced diet with adequate calories, there is no need for greater protein or fat intake than that recommended for healthy adults and adolescents.

Symptomatic PLHIV: These individuals need between 20% and 30% more energy than people without HIV. This increase in daily intake is significant and can be difficult to achieve for some patients, especially those who are anorexic and/or do not have the means to buy the extra food. For adults, this increase in energy requirement translates to the equivalent of another full meal each day, or an additional two to three snacks.

Nutritional Assessment: All adults and adolescents living with HIV should have their weight and BMI routinely monitored and recorded. If there are changes in either or other indications of nutritional problems, conduct a nutritional assessment as described above. For clients initiating ART, their nutritional resources should be assessed as part of the psychosocial assessment and assistance provided as needed, including linkages to nutritional support—ideally before treatment begins.

Routine Nutrition Education and Counselling: Adults living with HIV should receive nutritional education and counselling as a part of post-test counselling and at all HIV care appointments. PLHIV should be encouraged to follow general nutritional advice (see Section 15.3, above).

Routine Nutritional Supplements: Micronutrient deficiencies can occur, so all PLHIV should be given a daily multivitamin supplement as a routine part of care.

Patients with Advanced HIV Infection

Advanced HIV infection often intensifies nutritional issues, and more specialised nutritional support should be provided. Nutrition supplementation can be provided at health facilities; in some areas, Plumpy'Nut is given to malnourished adults. Health care workers should follow the WHO therapeutic feeding guidelines (see Key Reference Documents, above) and offer inpatient therapeutic feeding (ITP) for malnourished adults.

Pregnant and Lactating Women

Good maternal nutrition during pregnancy and lactation is vital for the woman's health and the survival and well-being of the developing infant. Maternal nutrition may also affect HIV transmission to the infant.

TABLE 15.3. ENERGY AND PROTEIN REQUIREMENTS FOR PREGNANT AND LACTATING WOMEN

EXTRA DAILY NEEDS		EXAMPLES	ENERGY	PROTEIN
ENERGY	PROTEIN			
HEALTHY PREGNANT WOMEN				
FIRST TRIMESTER +150 kcal	0.7 g	100 g *emadumbe*	142 kcal	0.6 g
		1 cup soft porridge + 1 tsp margarine	147 kcal	2.4 g
		2 tsp oil + 1 T full-cream milk powder added to normal diet	149 kcal	4.2 g
		2 slices brown bread	154 kcal	5.2 g
		1 cup full-cream milk	156 kcal	8 g
		1 cup *emasi*	160 kcal	8 g
		1 cup stiff pap + 2 tsp margarine	167 kcal	2.1 g
		1 slice bread + 1 level T peanut butter	170 kcal	6.3 g
		1-1/2 cups *emahewu*	170 kcal	3.9 g
		15 g peanuts (about a handful)	187 kcal	7.9 g
SECOND TRIMESTER +300 kcal	3.3 g	1 slice bread + 1/4 avocado	174 kcal	2.4g
		2 slices bread + 1 level spoon peanut butter + 1 tsp margarine	284 kcal	8.9 g
		2 cups soft porridge + 1 heaped spoon ground nuts	316 kcal	8 g
		2 cups soft porridge + 2 tsp margarine	294 kcal	4.8 g
THIRD TRIMESTER +300 kcal	5.8 g	2 cups soft porridge +1 heaped spoon ground nuts	316 kcal	8 g
		2 cups soft porridge +1 heaped spoon full-cream milk powder	283 kcal	9 g
LACTATING WOMEN				
FIRST SIX MONTHS +500 kcal	16 g	2 handfuls of peanuts + 1 cup *emahewu*	493 kcal	18.4 g
		2 cups soft porridge + 1 T full-cream milk powder + 1 tsp margarine + 1 cup *emasi*	488 kcal	17.1 g
		4 slices bread + 2 level spoons peanut butter	496 kcal	17.5 g
UNDERWEIGHT *or* **LOW PREGNANCY WEIGHT GAIN** +600 kcal	21g	2 cups stiff pap + 2 heaped spoons tinned fish + 4 tsp margarine + 1-1/2 cups *emahewu*	580 kcal	20.9 g
		4 slices bread + 2 boiled eggs + 1/4 avocado	568 kcal	19.2 g
		2 cups stiff pap + 1/2 cup beef stew + 15 g peanuts + 100 g *emadumbe*	583 kcal	22 g

[a] In addition to requirements of all adults

T = Tablespoon

tsp = teaspoon

In all women, regardless of HIV status, nutritional requirements increase to meet demands for gestational weight gain, fetal growth and development, and milk production during pregnancy and lactation; in symptomatic women, energy and protein requirements increase by 20% to 30%. Normal energy and protein requirements for pregnant and lactating women are summarised in Table 15.3, *preceding page.*

Pregnant women are vulnerable to iron deficiency. Daily multivitamins, iron, and folic acid supplementation are recommended for all pregnant and lactating women, regardless of HIV status

Nutritional Assessment: At every ANC visit, pregnant women's weight gain should be monitored and a complete nutritional assessment carried out. Pregnant women should gain weight according to their baseline BMI:

- BMI ≤19.8: Gain 12.5 to 18 kg.
- BMI between 19.9 to 25.9: Gain between 11.5 and 16 kg.
- BMI between 26 to 29: Gain between 7 and 11.5 kg.

Women with a normal BMI at baseline should gain 1 kg each month from the second trimester until delivery.

Women should also be weighed at every postpartum follow-up visit.

Routine Nutrition Education and Counselling: Pregnant women living with HIV should receive nutritional education and counselling at every ANC visit and all postpartum follow-up visits. Cover general nutrition points (see Section 15.3, above) as well as those below:

- Supply practical advice on eating a balanced diet and eating foods high in energy.
- Encourage mothers-to-be and new mothers to get additional rest, especially during the third trimester of pregnancy.
- Provide accurate information to pregnant clients regarding cultural foods and traditional therapies and practices that are beneficial or harmful during pregnancy and lactation, such as:
  —If the woman is eating soil (pica): Craving soil is related to depletion of iron stores in the body. Ensure that she is taking iron and folic acid, and urge her to stop consuming substances like dirt that can be hazardous to her health.
  —Eating eggs, peanuts, and Vitamin A-rich foods: Contrary to Swazi myths, these foods are healthful for pregnant woman.
- Give advice on how to manage diarrhoea, nausea, vomiting, loss of appetite, and mouth and throat problems, which may prevent weight gain and affect the woman's nutritional status.
- Recommend iron and folic acid supplementation during pregnancy and Vitamin A during lactation (but only within eight weeks of delivery), according to national guidelines.

- Encourage new mothers and mothers-to-be to use iodised salt to prevent iodine deficiency.
- Give advice on deworming after the first trimester and preventing hookworm infestation.
- Discuss safe infant feeding and offer advice and information (see chapter 9).
  Routine Nutritional Supplements: All pregnant women, regardless of HIV status, should take multivitamins, iron, and folic acid. To prevent exposure to micronutrient toxicities, multivitamins should cover only 100% of recommended daily allowances, not more.

Therapeutic and prophylactic doses of iron are different:

- For women with Hb< 7.0: Prescribe a therapeutic dose of 120 mg of elemental iron one tablet twice a day of ferrous sulphate).
- For other women: Prescribe a prophylactic dose of 60 mg of elemental iron (one tablet once a day of ferrous sulphate).

Inadequate Weight Gain During Pregnancy or Too Much Weight Lost Postpartum: Encourage the woman to eat more foods that are high in protein and fats, such as peanut butter, avocados, eggs, fatty fish, and nuts, and to have five or six small meals per day, if she can. Adding powdered milk, margarine, and oils to food can help as well. She should also try to get additional rest.

15.6 HOUSEHOLD FOOD SECURITY AND LINKAGES TO COMMUNITY NUTRITION RESOURCES

Food security includes three components—the availability of food, the accessibility of food, and the utilization of food for an individual or a family. More susceptible to food insecurity, people and families affected by HIV may not be able to follow the nutrition recommendations because they are unable to grow crops, to access food, or to spend household earnings on it. Health care workers can help PLHIV and their families to learn about and access nutritional support services available in the community, such as:

- Supplementary food baskets, through the World Food Programme (WFP) or MOH facilities.
- NGO or other support programs, a listing of which is available for each region in the HTC/VCT referral directory (see Key References, above).
- Neighbourhood care points, where children can go to receive meals and support.

Chapter 16: HYGIENE, SANITATION, AND SAFE WATER

Key Reference Documents

- Conant, Jeff, and the Hesperian Foundation. Sanitation and Cleanliness for a Healthy Environment. New York, NY: United Nations Development Programme, Bureau for Development Policy, Energy and Environment Group. 2005. Available at: http://www.energyandenvironment.undp.org/undp/indexAction. cfm?module=Library&action=GetFile&DocumentAttachmentID=1533.
- Food and Agriculture Organization (FAO) of the United Nations. Living Well with HIV/AIDS: A Manual on Nutritional Care and Support for People Living with HIV/AIDS. Rome, Italy: WHO and Food and Agriculture Organization of the United Nations. 2002. Available at: http://www.who.int/nutrition/publications/hivaids/y4168E00.pdf.
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- World Health Organization, HIV/AIDS Programme. Essential Prevention and Care Interventions for Adults and Adolescents Living with HIV in Resource-Limited Settings. Geneva, Switzerland: WHO. 2008. Available at: http://www.who.int/hiv/ pub/prev_care/OMS_EPP_AFF_en.pdf.

16.1 PERSONAL HYGIENE AND INFECTION PREVENTION

Hand Washing

Diarrhoea is a major cause of morbidity and mortality among people living with HIV. All PLHIV should receive health and hygiene education to prevent the spread of diarrheal and other infections. Health care workers should promote hand washing with soap and provide soap as needed to people with HIV and their households. Follow up regularly in home-based or clinic-based care programs to reinforce handwashing behaviour.

Patients and caregivers should wash their hands with soap often, especially:

- After using the toilet.
- Before preparing any food or eating.
- After sneezing or coughing.
- After touching the genitals.

- After handling garbage.
- After touching animals.
- After touching any blood, semen, vaginal fluid, or faeces.

During a cholera outbreak, PLHIV should be particularly careful about contact with other people and should wash their hands more frequently.

Cleaning Wounds After Washing

Health care workers should recommend that patients keep a local antiseptic at home (such as Savlon, Dettol, or gentian violet) to apply to minor wounds after washing them. Instruct clients to follow the instructions on the bottle closely. A concentrated saltwater solution (a teaspoon of salt diluted in a cup of water) can also be used to disinfect wounds. Also advise that clients:

- Never put gentian violet on mucous membranes or in the mouth.
- Never use undiluted Dettol on open wounds. Instead, it should be diluted according to the instructions.
- Never crush tablets and put them on wounds.
- Never put soil or animal dung on open wounds to close them.
- Never use Jeyes Fluid on an open wound or on any part of the body; never drink it.

Regular Bathing

Health care workers should encourage clients and caregivers to keep their bodies clean by washing regularly. When clients are bedridden, recommend that caregivers give bed baths and help prevent pressure sores by gently moving the person to another position in the bed.

Oral Health

Encourage clients to keep their mouths clean by brushing teeth, mouth, and tongue regularly with a toothbrush and toothpaste (or, alternatively, a saltwater solution). Advise clients with severe oral lesions to use gauze soaked in salt water to clean the mouth.

Infection Prevention and the Use of Gloves

Counsel clients on the importance of infection prevention practices at home. Many are covered in this chapter.

If possible, caregivers should use gloves when helping a patient with diarrhoea or when they come into contact with an open wound or bodily fluids. If no gloves are available, urge caregivers to use plastic bags on their hands to minimise contact with bodily fluids as well as with linen contaminated by bodily fluids, and on their feet when cleaning bodily fluids from the floor.

16.2 HOUSEHOLD HYGIENE AND SANITATION

Good household hygiene and sanitation can prevent the spread of diarrhoea and other infections.

Latrines

One of the most important aspects of household hygiene is access to a hygienic latrine.

Encourage all PLHIV and household members to use a hygienic latrine. Young children should be supported to use the latrine, and caregivers should be trained to dispose of very young children's waste hygienically in a latrine.

People who do not have indoor plumbing and are too sick or too weak to use a latrine may need special equipment or supports. Advise clients to place appropriate handwashing facilities, including soap and water, near the latrine.

Disinfecting Surfaces and Materials

Advise clients and family members to disinfect surfaces and materials that contain bodily fluids, including clothing, bedding, towels, and bandages. Separated from other household laundry, these items should be soaked in detergent for four hours; it is best to disinfect them for at least 10 minutes with a 0.5% bleach solution first, although the detergent soaking often removes stains and kills HIV (because HIV cannot live outside of the human body for a long time).

Recommend that when clients use Jik to make their bleach solution, they should use one part Jik to 10 parts water. Items disinfected with a bleach or Jik solution can be washed with detergent (ideally in hot water), rinsed well, and hung in the sun to dry. Clothing and materials that contain bodily fluids and that will not be reused should be burned or buried.

To disinfect instruments (such as blades, needles, etc.), use one part Jik to six parts of water; soak at least 10 minutes.

Waste Management

Advise clients and family members on the importance of waste management at home.

Garbage, including food refuse, should be kept in a covered container. All waste should be burned or buried far away from the home, away from areas where children play or animals graze, and away from sources of drinking water. Special care should be taken to dispose of soiled clothing, bedding, or other objects by burning or burying.

Overcrowding

Make sure that clients and family members understand the dangers of overcrowding

at home.

Overcrowding increases the risk of transmission of TB, for example, especially if the client or a family member has active TB. For such a family, good ventilation and cough hygiene at home are also important, among other measures to prevent TB transmission.

Standing Water

To prevent malaria, recommend that clients empty standing pools of water near the home (where mosquitoes breed) or fill the holes with sand or dirt. Insecticide sprays and insecticide- treated bednets also help prevent malaria.

16.3 SAFE FOOD PREPARATION AND STORAGE

Proper food hygiene can help prevent the spread of infection.
In the Kitchen or Food Preparation Area

- Keep all food preparation surfaces clean. Use clean dishes and utensils to store, prepare, serve, and eat food.
- Wash vegetables and fruit with clean water.
- Cover food to prevent both flies and dust from contaminating the food.
- Keep rubbish in sealed plastic bags or in a covered bin, which should be emptied once a day) so as not to cause offensive smells or attract flies, which can contaminate food with microorganisms.

When Cooking and Storing Food

- Microorganisms multiply more quickly in warm food. Storing food in a refrigerator or cool place slows down this growth. Cooking food on high heat also kills most germs.
- Put food in covered containers and store away from insects, rodents, and other animals.
- Store fresh food in a cool place or refrigerator, where available.
- Cook food thoroughly—particularly meat, poultry, and fish; meat should have no red juices. However, remember that overcooking vegetables causes them to lose nutritional value.
- Eat food as soon as it is cooked. To avoid bacterial growth, do not let food stand at room temperature before eating.
- Do not store raw and cooked foods together; use separate containers.
- Don't store leftovers unless they can be kept in a refrigerator or a cool place. Even then, do not store them for more than one or two days. Always reheat them at a high temperature.
- Wash utensils and surfaces touched by animal products with hot water and soap before preparing other foods.
- Eggs should be hard boiled. Do not eat soft-boiled eggs, raw eggs, cracked

eggs, or any foods containing raw eggs.

16.4 SAFE WATER

An adequate supply of water is important for personal and household hygiene (bathing, cleaning, etc.). In addition, drinking clean water—and enough of it—is a key to good health.

It is important to be careful about drinking water. Water that is unsafe, contaminated, or dirty can spread diarrhoea and other infections.

Advise clients and caregivers to use only safe, clean water from protected sources, such as treated, piped water supplies; boreholes (pumps); and protected wells. If the water is not from a protected source, it should be boiled for at least 10 minutes or treated before consumption with chlorine (eg, WaterGuard™ liquid or tablets).

To prevent contamination, care must be taken to use clean collection and storage containers and to properly store water that has been boiled or treated. Water containers in the home can easily become contaminated by dirty cups or unwashed hands. Water should be stored in a covered container with a lid and a tap. If there is no tap, a cup with a long handle (eg, *a siphungo*) should be designated as a serving cup and the household admonished never to drink from it directly. The long handle prevents the person holding the cup from touching the surface of the water and possibly contaminating it.

Chapter 17: END-OF-LIFE CARE AND SUPPORT

Key Reference Documents

- Swaziland Ministry of Health and World Health Organization Integrated Management of Adolescent and Adult Illness. *Palliative Care: Symptom Management and End-of-Life Care. Interim Guidelines for First-Level Facility Health Workers. Geneva*, Switzerland: WHO. 2004. Available at: http://www.who.int/3by5/publications/documents/en/ genericpalliativecare082004.pdf.
- Van Den Berg M, and Sebuyira LM. Chapter 13: End-of-life care. In: Gwyther L, Merriman A, Sebuyira LM, and Schietinger H, eds. A Clinical Guide to Supportive and Palliative Care for HIV/AIDS in Sub-Saharan Africa. Alexandria, VA: Foundation for Hospices in Sub-Saharan Africa; 2006:197–205. Available at: http://www.fhssa.org/i4a/pages/index.cfm?pageid=3359.

17.1 COMPONENTS OF END-OF-LIFE CARE

Health care workers play a critical role in preparing clients and their family members for end-of-life care and helping to identify and relieve symptoms and manage pain. Major components of end-of-life care include:

- Psychosocial support to the client and his family.
- Management of pain and physical symptoms.
- Teaching the client and/or the family about preventive and home-based care, including comfort measures.
- Referrals to help with logistical and financial preparations for death, including succession planning, will writing, etc.
- Referrals for community-level bereavement support.

17.2 PSYCHOSOCIAL SUPPORT AT THE END OF LIFE

Swazi culture often avoids discussion of death and dying. Denial, stigma, and secrecy around HIV in the family can make end-of-life care even more difficult.

However, health care workers can provide psychosocial support to clients and family members in the clinical setting and referrals for ongoing logistical, psychosocial, and spiritual support in the community. Health care workers should encourage and empower caregivers to provide end-of-life care to their loved ones and can:

- Help families decide where end-of-life care will take place. Generally, people prefer to provide end-of-life care at home instead of in the hospital. Care at home permits involvement of community health workers and better integration of spiritual care.

- Work with caregivers to ensure that patients are comfortable during their last days of life.
- Understand and respect the knowledge and values of patients and their families during the end of life, and communicate using simple and clear language. Health care workers should never offer false comfort and should always give a truthful assessment of the situation.
- Always acknowledge and respect the emotions and fears expressed by patients and their family members; provide continual reassurance.
- Set reasonable and achievable goals with families to maintain hope—for example, 'We hope to reduce the amount of pain today' rather than 'She will feel much better soon.'
- Focus on preparations for a comfortable death instead of on the cause of death, if possible.
- Encourage open, honest communication within the family, and encourage discussion about issues such as custody of the children, family support, funeral plans, and wills.
- Encourage clients and their families to seek spiritual support in the community, if that would be helpful.
- Provide bereavement counselling or referrals to help family members manage grief, accept the death of their loved one, and plan for the future—especially the care of orphaned children.

Support for Caregivers

Caring for a loved one at the end of life can be physically and emotionally draining. Health care workers should provide psychosocial support to caregivers and refer caregivers to community-based sources of emotional and spiritual support. In addition, if appropriate:

- Suggest practical solutions, such as having different family members take turns caring for the patient while others rest, prepare food, or take care of other matters.
- Watch for signs of fatigue and depression among caregivers.
- Provide counselling and referrals as needed.

17.3 ASSESSING AND MANAGING PAIN

Assess for Pain

Using WHO guidelines on pain management, health care workers should try to:

- Determine the cause of the person's pain by history and examination.
- Attempt to identify any changes in the pain.
- Determine the type and grade of pain the person is experiencing. If the patient is alert, grade the pain using the WHO Face Pain Scale or by using your fingers (see figure 17.1, next page).

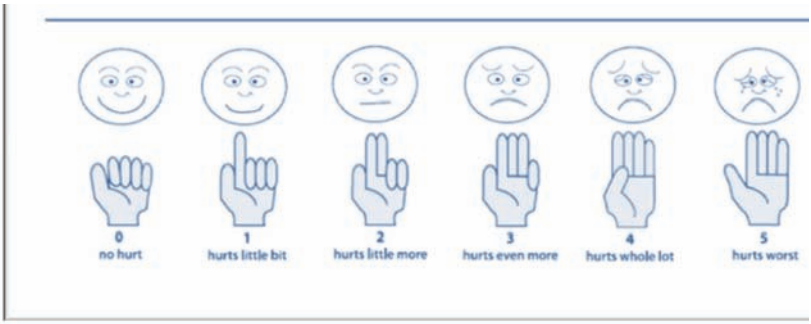
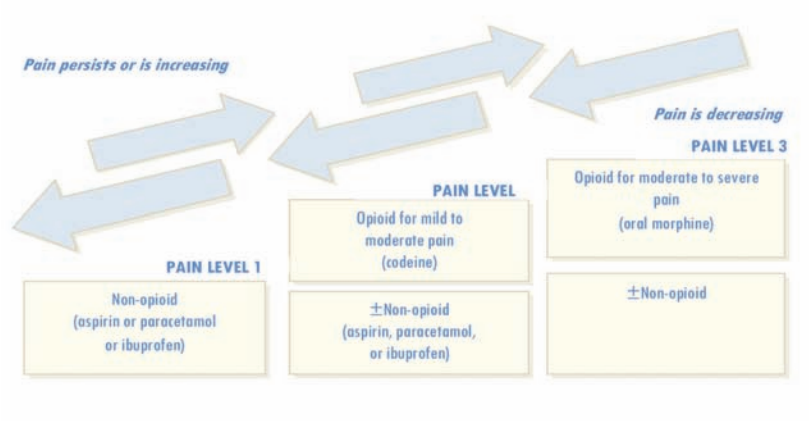


FIGURE 17.1. THE WHO FACE PAIN SCALE

Treat the Pain

To determine the best treatment for the pain, use the WHO analgesic ladder (see Figure 17.2, below). Always be sure to explain the reason for treatment and possible side effects. If possible, give pain medication by mouth and 'by the clock'—that is, at fixed intervals, starting with a small dose which is titrated until the person is comfortable. Recommend that the next dose of pain medication be taken before the effect of the previous dose wears off.

FIGURE 17.2. THE WHO ANALGESIC LADDER



Using Opioids and Non-Opioid Analgesics: Give only one drug from the opioid and non-opioid group at a time.

- For mild to moderate pain, start by giving an NSAID (eg, ibuprofen, indomethacin) or paracetamol.
- If there is no response, give codeine (eg, paracodeine).
- For severe pain, which common during the end of life, give oral morphine if it is available. If not, refer the patient to a hospital or to Hospice at Home, which has morphine in both tablet and syrup form.

Remember that codeine and oral morphine should not be given to pregnant women.

Teach the Family How to Give Pain Medications at Home: Patients' comfort is very important during end-of-life care, and health care workers can teach patients and family members how to manage pain at home. Explain how often drugs should be taken, and emphasize the importance of regular dosing and not waiting for pain to return before giving the next dose.

Although morphine is available in tablets, it is much easier to administer and adjust the dosage of morphine syrup. As with all pain medications, regularity of dosing is important (usually every four hours, with a double dose before bedtime). Caregivers can pour a small amount of morphine syrup into a clean cup, draw up the appropriate dose with a syringe, and then drop the syrup from the syringe into the person's mouth.

Morphine side effects can also usually be managed at home as well. However, advise the family to bring the patient to a health care facility if the person develops difficulty breathing or if the pain worsens. Common side effects of oral morphine include:

- Nausea: Expect it to go away after a few days.
- Constipation: Give liquids and high-fibre foods, take a spoonful of vegetable oil before breakfast, chew dried paw paw seeds at night, put Vaseline into the rectum, or offer a laxative.
- Dry mouth: Give the patient sips of clean water or ice chips.
- Drowsiness: Although this usually goes away after a few days, the family may want to consider lowering the dose (in consultation with a health care worker).
- Sweating or muscle jerks: Advise the family to alert a health care worker.

Health care workers can also counsel families on additional methods for pain control, such as:

- Emotional support.
- Physical methods, such as touch, massage, heat or ice, and deep breathing.
- Gentle stretching or light exercise.
- Cognitive methods, such as distraction from pain with music, talking, or visualisation.

- Prayer or meditation.
- Traditional pain relief practices.

17.4 MANAGING COMMON SYMPTOMS AT THE END OF LIFE

Symptoms should be managed according to the Swaziland palliative care guidelines. When the end of life is imminent, health care workers should meet with family members and review all medications with end-of-life goals in mind. Symptom management at the end of life differs somewhat from routine symptom management in that the goal is to simplify the treatment plan and to focus on keeping the patient comfortable and reducing pain. Family members often want to do everything clinically possible to keep the person alive longer; the role of the health care worker is to help the family understand risks and benefits of different treatments at this stage of the disease.

Goal for End-of-Life Care and Treatment: The most important goal when death is imminent is to improve the quality of life, to keep the patient comfortable, and to allow the patient to die peacefully.

In consultation with the patient and family members, health care workers may want to discontinue treatments for concurrent conditions. At the end of life, ART may also be discontinued. Medications for pain and to prevent convulsions as well as any others that improve the quality of life should be continued. In general, at the end of life, aggressive medical interventions and surgery, chemotherapy, and changing ART regimens are not appropriate.

17.5 PREVENTIVE AND COMFORT MEASURES

Preventive Interventions: Health care workers can work with patients and family members to encourage preventive interventions in the home, such as:

- Oral care: Use a soft toothbrush and toothpaste to gently clean the teeth, tongue, and gums. Also, help the patient rinse his mouth with salt water after eating and at bedtime.
- Preventing bedsores: Help the patient change positions and sit up in bed—at least every two hours. Keep bedding clean and dry, with padding underneath the body. Finally, look for areas of damaged skin on back, shoulders, and hips.
- Bathing: Help the patient bathe or give a bed bath, ensuring as much privacy as possible. Provide light massage if it feels good. Also, help with use of the toilet or put plastic sheeting on the bed to keep it dry.
- Preventing muscle stiffness: Help the patient get up and move around each day if possible, or assist with light exercises of the arms and legs in bed.

Infection Prevention: Urge caregivers to take precautions when cleaning up spills,

covering or cleaning wounds, and cleaning soiled clothing.

To provide comfort near the end of life, advise caregivers to:

- Moisten the patient's lips, mouth, and eyes with clean water.
- Keep him clean and dry.
- Give only essential medications, such as those for pain.
- Encourage sips of water every hour or so, but don't force the person to eat.
- Gently adjust the person's position every two hours.
- Ensure that pain is being controlled.
- Be constantly present with the person—do not leave him alone.
- Reassure the patient that he is loved and appreciated.
- Provide physical contact and reassurance with a light touch, hand holding, and quiet talk.

Chapter 18: MONITORING AND EVALUATING DELIVERY OF THE COMPREHENSIVE HIV PACKAGE OF CARE

Key Reference Documents

- Swaziland Ministry of Health. *Health Sector Strategic Plan 2008–2013.*
- Swaziland Ministry of Health. *The Monitoring and Evaluation (M&E) Framework 2008–2013.*
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18.1 ENSURING THAT HIV PACKAGE OF CARE OBJECTIVES ARE ACHIEVED

Various types of data are to be collected and reported to the Monitoring and Evaluation Department of the Swaziland National AIDS Programme (SNAP) in the Ministry of Health. This collection and reporting protocol, together with the specific flow of information, are designed to ensure that the objectives of the Comprehensive HIV Package of Care are achieved.

18.2 GOALS AND OBJECTIVES OF THE COMPREHENSIVE HIV PACKAGE OF CARE

The POC's overall goal, as noted in Chapter 1, is to support a continuum of HIV care for adults, pregnant women, adolescents, infants, and children living with HIV.

Specific Goals of the Package of Care

Specifically, the goals are to:

- Improve the quality of life, health, and well-being of all people living with HIV, both those who have not yet initiated ART and those already receiving ART.
- Provide quality, comprehensive clinical and psychosocial care and support services through the HIV continuum—from the time HIV is diagnosed through the person's entire life.
- Provide regular clinical and psychosocial patient follow-up in pre-ART care (in

cluding laboratory tests) to monitor disease status and guide timely initiation of ARVs, once a patient has become eligible.
- Create awareness and uptake of HIV services not related to ARVs, in support of positive living.
- Actively support patient understanding of and participation in the care plan, including adherence to care and medications.
- Provide family-focused care and support, with special attention to testing and enrolment of patients' family members, including children and partners.
- Provide psychosocial support to patients and their families with facility- and community-based services.
- Increase community knowledge of, and participation in, HIV care services available to patients themselves, their families, and other community members.

Objectives of the Package of Care

The rollout of the comprehensive HIV package of care aims to achieve the following major objectives:
- Increase the proportion of ART-eligible patients initiated on CTX prophylaxis.
- Increase the proportion of PLHIV enrolled in pre-ART care.
- Increase the proportion of pre-ART patients have baseline and follow-up CD4 count results.
- Increase the proportion of ART patients have follow-up CD4 count results at six and 12 months after ART initiation.
- Increase the proportion of newly enrolled pre-ART patients that are screened for TB.
- Increase the proportion of newly enrolled ART patients that are screened for TB.
- Increase the proportion of newly diagnosed HIV positive pregnant women attending ANC registered for pre-ART care.
- Reduce the proportion of pre-ART and ART patients lost to follow-up.
- Increase the retention of patients on ART.

18.3 TRACKING PROGRESS ON PACKAGE OF CARE IMPLEMENTATION

Core Indicators

See Table 18.1, next page, for a summary of objectives, performance indicators, and definitions used to track progress in delivering the comprehensive HIV package of care.

Additional Suggested Indicators: The MOH collects monthly indicators for various programmatic areas. The following list of suggested indicators draws upon existing data sources to report on key components of the POC. These indicators, listed in Table 18.2, will be reported quarterly to complement and add to the indicators listed in Table 18.1, which are collected monthly.

TABLE 18.1. MONTHLY PERFORMANCE INDICATORS FOR ROLLOUT OF THE COMPREHENSIVE HIV PACKAGE OF CARE

OBJECTIVE	INDICATOR	DATA SOURCE	TARGET	REPORTING FREQUENCY
Increase proportion of ART-eligible patients initiated on CTX prophylaxis	Number of PLHIV enrolled in pre-ART care who have received CTX prophylaxis	Pre-ART tally sheet	**80%** of pre-ART encounters	Monthly
Increase proportion of PLHIV enrolled in pre-ART care	Number of health facilities providing pre-ART services	SNAP	**100%** of health facilities	Monthly
	Number of PLHIV newly enrolled into pre-ART	Pre-ART register, data from testing at facility or PSI	**100%** of those testing HIV+	Monthly
	Number of PLHIV who have ever received pre-ART at the end of the month	EMR (electronic medical records) for baseline, then pre-ART reports for continuity	**90%** of all receiving HIV test results	Monthly
Ensure that pre-ART patients have baseline and follow-up CD4 count results	Number of PLHIV newly enrolled into pre-ART care who had a baseline CD4 count AND received results	Pre-ART register	**90%** of enrolees	Monthly
Ensure that ART patients have follow-up CD4 count results six and 12 months post-ART initiation	Number of PLHIV enrolled in ART who had a CD4 count and picked up results at six and 12 months after enrolment into ART	ART register, EMR	**90%** of ART enrolees	Monthly
Ensure screening for TB of newly enrolled pre-ART patients	Number of patients enrolled in pre-ART screened for TB	Pre-ART register	**100%** of pre-ART enrolees	Monthly
Ensure screening for TB of newly enrolled ART patients for TB	Number of patients newly enrolled in ART screened for TB	ART register, EMR	**100%** of ART enrolees	Monthly
Ensure pre-ART care registration of all pregnant women living with HIV attending ANC for the first time	Number of pregnant women living with HIV attending ANC for the first time enrolled into pre-ART	ANC register	**100%** of HIV-infected pregnant women	Monthly
Reduce ART patients' rate of ARV discontinuation	Number of patients ever on ART who have discontinued (died, lost to follow-up, or stopped) during the reporting period	ART reports	**80%** of patients on treatment after a year	Monthly

TABLE 18.2. ADDITIONAL INDICATORS TO MONITOR THE COMPREHENSIVE HIV PACKAGE OF CARE

PACKAGE OF CARE COMPONENT(S)	SUGGESTED INDICATORS	DATA SOURCE
HIV CARE/PRE-ART	Number of PLHIV with advanced HIV infection newly enrolled on ART	EMR
	Number of PLHIV who have enrolled in the pre-ART program	Pre-ART registers, monthly pre-ART report
ART AND ADHERENCE	Percentage of PLHIV still alive and known to be on treatment 12 months after initiating ART	EMR
	Percentage of ART patients on first-line regimen at 12 months after initiating treatment	
	Percentage of health care facilities with the capacity and conditions to provide advanced HIV/AIDS care and support services, including ART	SNAP
TB SCREENING AND TREATMENT	Number of newly registered TB patients who are tested for HIV	TB program
	Number of newly registered TB patients who are HIV-infected	
HIV TESTING AND COUNSELLING	Number of individuals tested for HIV	VCT, DBS/ANC, testing register, PSI
	Number of individuals tested for HIV who had positive results	
FAMILY PLANNING	Number of PLHIV who received any family planning commodity	HMIS
NUTRITION	Number of PLHIV assessed for malnutrition	TBD
	Number of malnourished PLHIV provided with therapeutic supplements	TBD
PMTCT	Number of pregnant women living with HIV who received ART	EMR
	Number of HIV-exposed infants initiated on CTX prophylaxis within six to eight weeks of birth	PMTCT monthly report
	Number of pregnant women living with HIV initiated on CTX prophylaxis	
ADHERENCE AND PSYCHOSOCIAL SUPPORT	Number of PLHIV on ART receiving individual adherence counselling and psychosocial support	Expert Client monthly reports

18.4 RESPONSIBILITY FOR MONITORING THE COMPREHENSIVE PACKAGE OF CARE

At Facility Level

Indicators selected for monitoring pre-ART care are found in a number of registers and other clinical management tools.

Record Keeping: Facility-level staff will be responsible for filling in the following registers and tools every day:

- The pre-ART register.
- The HTC register.
- Appointment registers.
- Patient pre-ART files.
- Patient ART files.
- Electronic medical records.

Reporting: Facility-level staff will be responsible for submitting the following monthly reports to SNAP M&E:

- A pre-ART report.
- An ART report.

At National Level

The M&E staff in the Ministry of Health will be responsible for compiling and analyzing all monthly facility reports and tracking progress toward the indicators listed in tables 18.1 and 18.2, above.

Progress meetings will be held at least two times a year to assess progress towards achieving the indicators; to identify necessary program modifications; and to consider operational research questions.

ANNEX 1

ART READINESS ASSESSMENT FORM

Clinic Name: _____
Date: _____
Client Name: _____
Client #/ART #: _____

1. Have you attended group education sessions at the clinic?
☐ Yes → *How many?*

☐ No

2. Can you explain why you think you need to take ARVs?

3. What do you expect from taking ARVs?

4. Do you feel confident that you can take (or give children) medicines every day for the rest of your life?
☐ Yes
☐ No → *Counsel on lifelong adherence*

5. For caregivers: Who else takes care of the child other than you? Have these caregivers been trained on giving medications?
☐ Yes
☐ No → *Counsel on training all caregivers*

6. Have you had any challenges taking other medications (TB treatment, CTX, etc.) every day at the same time?
☐ Yes
☐ No

7. Can you tell me the names of the ARVs you will be taking and what time you will take each?
→ *List*

8. Can you tell me some of the side effects of your medicines?

9. What will you do if you have side effects?
→ *Counsel on side effect management*

10. Do you know what can happen if you do not take all of your ARVs every day, at the same time, for life?

→ *Counsel on lifelong adherence*

11. Do you have a treatment supporter?

☐ Yes
☐ No

Name and contact number:

Has he/she been to the clinic with you?

☐ Yes
☐ No

12. Do you have any difficulties coming to this clinic for appointments?

☐ Yes
☐ No → *Counsel on adherence to care*

13. How will you remember to come for your clinic appointments?

14. How will you remember to take your pills on time every day?

15. Are you taking any medicines other than those your doctor prescribed? → *Include traditional and herbal medicines*

☐ *Yes*

☐ No → *Counsel to be cautious of other medicines*

16. How and where will you store your medication?

17. Do you have any questions about your care and treatment plan?

Assessment of Patient Readiness to Start ART

☐ Patient ready to start ART
☐ Patient requires more preparation and counselling

Other Issues and Notes

ANNEX 2

ART READINESS ASSESSMENT FORM

Clinic Name: _____
Date: _____
Client Name: _____
Client #/ART #: _____

1. Who lives with you at home? → *List*

2. Have you disclosed your HIV status to your family?

- ☐ Yes
- ☐ No → *Counsel on disclosure*

3. Have you disclosed your status to your partner(s)?

- ☐ Yes
- ☐ No → *Counsel on disclosure*

3. Is your partner taking ARVs?

- ☐ *Yes* → *Note from which hospital*
- ☐ *No*

4. Has your partner(s) been tested for HIV?

- ☐ Yes
- ☐ No → *Counsel on partner(s) testing*

5. Do you have any children?

- ☐ *Yes* → *Note ages*
- ☐ No

6. Have they been tested for HIV?

- ☐ Yes
- ☐ No

Probe if any of the children are sick and counsel on HIV testing and early infant diagnosis

7. Are any of your children taking ART?

- ☐ *Yes*
- ☐ *No* → *Counsel on paediatric treatment*

8. Have you told your children their HIV status (if infected?)

- ☐ Yes
- ☐ No → *Counsel on disclosure to children*

9. Do you have a treatment supporter?

- ☐ *Yes*
- ☐ *No* • *Counsel on treatment support*

Name and contact number:

Has he/she been to the clinic with you?

- ☐ Yes
- ☐ No

10. Who do you go to for support at home or in the community (list)?

11. Do you belong to a community organisation, support group, or religious group?

- ☐ Yes → *Name of organisation or group*
- ☐ No → *Counsel on support groups*

12. Do you ever fear discrimination or violence at home or in the community?

- ☐ Yes
- ☐ No → *Counsel and refer for support*

13. Who is your Rural Health Motivator?

Would it be okay if the RHM visited you at home if you miss an appointment at the clinic?

- ☐ Yes
- ☐ No

14. Do you face financial challenges, like not having enough food to eat or not being able to pay for transport to the clinic?

- ☐ Yes
- ☐ No → *Refer to community support*

Specific Challenges

Other Issues and Notes

ANNEX 3

ADHERENCE FOLLOW-UP ASSESSMENT FORM

Clinic Name: _____

Date: _____

Client Name: _____

Client #/ART #: _____

Reason for Visit *(two-week follow-up, refill, etc.)*: _____

Individual Counselling Session

1. Can you tell me more about how you took your medications this month?

2. How many pills did you miss or take late during the last seven days?

3. Can you tell me more about any changes or problems you had with your medicines this month?

4. Can you tell me more about any changes or problems you had with your health this month?

5. Can you tell me more about the support you have at home to take your medications and live positively with HIV?

Results of Pill Count → *If applicable*

Review of Medicine Diary or Calendar → *If applicable*

Chart Review → *Include CD4 count and viral load, if available*

Specific Adherence and Psychosocial Challenges Identified

Agreed-Upon Next Steps

ANNEX 4

BEHAVIOURAL CHANGES: PHASES

When grappling with the need to implement behavioural change, individuals have been shown to go through a number of distinct stages. The movement is gradual and dynamic; regressions and even relapses inevitably occur and should be anticipated and planned for.

Understanding this model, health care workers can target interventions to stimulate the client to move along the continuum of change.

TABLE A4.1. STAGES OF CHANGE

STAGE	CHARACTERISTICS AND MANAGEMENT
PRECONTEMPLATION	☐ No thought of changing behaviour, now or in the future. ☐ Oblivious or underaware that behaviour is an issue. ☐ Client may be argumentative or in denial; strong attempts to convince yield resistance. ☐ 'Ignorance is bliss.' ☐ Helpful questions to ask: 'Have you tried to change before?' 'How will you recognize when this behaviour is a problem—what signs would you expect?'
CONTEMPLATION	☐ Aware of the problem. ☐ Thinking seriously about overcoming it. ☐ Barriers to change assessed, evaluated. ☐ Considering costs and benefits of change; ambivalent. ☐ No commitment to action. ☐ Helpful questions to ask: 'Why do you want to change?' 'What is standing in your way?' 'How could you avoid that barrier?'
PREPARATION	☐ Planning to act within a month. ☐ Unsuccessful at actions taken during the preceding year. ☐ Small experimental changes being made. ☐ Helpful questions to ask: 'What obstacles do you face in implementing your new behaviour? What coping strategies will help you deal with those obstacles?' 'Who can help you change?'
ACTION	☐ Acting to change. ☐ Behaviour, environment, and experiences modified in order to overcome problems. ☐ Commitment of energy and time. ☐ Approach: Revisit long-term benefits of change.
MAINTENANCE	☐ Maintaining new behaviour; commitment holding fast. ☐ Activities to avoid relapse. ☐ Consolidation of gains; eventually, the old behaviour will become atypical. ☐ Approach: Anticipate relapse; prepare strategies to cope. Maintain support.
RELAPSE	☐ Fall from grace—inevitable. ☐ Demoralisation; sense of failure. ☐ Approach: Reminder that change is a process and relapse is a part of it; reiterate past successes; encourage a return to maintenance.

ANNEX 5

THE HAMILTON RATING SCALE FOR DEPRESSION

To be administered by a health care professional

*Clinic Name:*_____

*Date of Assessment:*_____

Client Name: _____

*Client #/ART #:*_____ *TOTAL SCORE* _____

To rate the severity of depression in patients who are already diagnosed as depressed,

administer this questionnaire. The higher the score, the more severe the depression.

For each item, write the correct number on the line next to the item. Only one response per item.

_____ 1. **DEPRESSED MOOD** (sadness, hopeless, helpless, worthless)

- 0 = Absent.
- 1 = These feeling states indicated only on questioning.
- 2 = Communicates feeling states nonverbally—ie, through facial expression, posture, voice, and tendency to weep.
- 3 = In his spontaneous verbal and nonverbal communications, patient reports of these feeling states are virtual only.

_____ 2. **FEELINGS OF GUILT**

- 0 = Absent.
- 1 = Self reproach; feels he has let people down.
- 2 = Ideas of guilt or rumination over past errors or sinful deeds.
- 3 = Present illness is a punishment; delusions of guilt.
- 4 = Hears accusatory or denunciatory voices and/or experiences threatening visual hallucinations.

_____ 3. **SUICIDE**

- 0 = Absent.
- 1 = Feels life is not worth living.
- 2 = Wishes she were dead; thoughts of possible death to self.
- 3 = Suicidal ideas or gesture.
- 4 = Attempts at suicide *(any serious attempt rates 4).*

4. **INSOMNIA EARLY**

- 0 = No difficulty falling asleep.
- 1 = Complains of occasional difficulty falling asleep—ie, more than ½ hour.
- 2 = Complains of nightly difficulty falling asleep.

Adapted from: Hedlung and Vieweg. The Hamilton rating scale for depression, *Journal of Operational Psychiatry1979;10(2):149–165.*

5. **INSOMNIA MIDDLE**

0 = No difficulty.
1 = Patient complains of being restless and disturbed during the night.
2 = Waking during the night *(any getting out of bed rates 2, except for purposes of voiding).*

6. **INSOMNIA LATE**

0 = No difficulty.
1 = Waking in early hours of the morning but goes back to sleep.
2 = Unable to fall asleep again if he gets out of bed.

7. **WORK AND ACTIVITIES**

0 = No difficulty.
1 = Thoughts and feelings of incapacity, fatigue, or weakness related to activities, work, or hobbies.
2 = Loss of interest in activity, hobbies, or work—either directly reported by patient or indirect in listlessness, indecision, and vacillation (feels she has to push self to work or activities).
3 = Decrease in actual time spent in activities or decrease in productivity
4 = Stopped working because of present illness.

8. **RETARDATION: PSYCHOMOTOR** (slowness of thought and speech, impaired ability to concentrate, decreased motor activity)

0 = Normal speech and thought.
1 = Slight retardation at interview.
2 = Obvious retardation at interview.
3 = Interview difficult.
4 = Complete stupor.

9. **AGITATION**

0 = None.
1 = Fidgetiness.
2 = Playing with hands, hair, etc.
3 = Moving about; can't sit still.
4 = Hand wringing, nail biting, hair pulling, biting of lips.

10. **ANXIETY—PSYCHOLOGICAL**

0 = No difficulty.
1 = Subjective tension and irritability.
2 = Worrying about minor matters.
3 = Apprehensive attitude apparent in face or speech.
4 = Fears expressed without questioning.

11. **ANXIETY—SOMATIC** (physiological concomitants of anxiety—ie, effects of autonomic overactivity, 'butterflies', indigestion, stomach cramps, belching, diarrhoea, palpitations, hyperventilation, paresthesia, sweating, flushing, tremor, headache, urinary frequency). Avoid asking about possible medication side effects (ie, dry mouth, constipation).

0 = Absent.
1 = Mild.
2 = Moderate.
3 = Severe.
4 = Incapacitating.

12. **SOMATIC SYMPTOMS—GASTROINTESTINAL**

0 = None.
1 = Loss of appetite but eating without encouragement from others; food intake about normal.
2 = Difficulty eating without urging from others; marked reduction of appetite and food intake.

13. **SOMATIC SYMPTOMS—GENERAL**

0 = None.
1 = Heaviness in limbs, back, or head; backaches, headache, muscle aches; loss of energy; fatigability.
2 = *Any clear-cut symptom rates 2*

14. **GENITAL SYMPTOMS** (eg, loss of libido, impaired sexual performance, menstrual disturbances)

0 = Absent.
1 = Mild.
2 = Severe.

15. **HYPOCHONDRIASIS**

0 = Not present.
1 = Self-absorption (bodily).
2 = Preoccupation with health.
3 = Frequent complaints, requests for help, etc.
4 = Hypochondriacal delusions.

16. **LOSS OF WEIGHT** *(when rating by history)*

0 = No weight loss.
1 = Probably weight loss associated with present illness.
2 = Definite weight loss (according to patient).
3 = Not assessed.

17. **INSIGHT**

0 = Acknowledges being depressed and ill.
1 = Acknowledges illness but attributes cause to bad food, climate, overwork, virus, need for rest, etc.
2 = Denies being ill at all.

18. **DIURNAL VARIATION**

Note whether symptoms are worse in the morning or evening

0 = No variation.
1 = Worse in the AM.
2 = Worse in PM.

When present, mark the severity of the variation

0 = None.
1 = Mild.
2 = Severe.

19. **DEPERSONALIZATION AND DEREALIZATION** (eg, feelings of unreality, nihilistic ideas)

0 = Absent.
1 = Mild.
2 = Moderate.
3 = Severe.
4 = Incapacitation.

20. **PARANOID SYMPTOMS**

0 = None.
1 = Suspicious.
2 = Ideas of reference.
3 = Delusions of reference and persecution.

21. **OBSESSIONAL AND COMPULSIVE SYMPTOMS**

0 = Absent.
1 = Mild.
2 = Severe.

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WHO CLINICAL STAGING OF HIV DISEASE IN ADULTS AND ADOLESCENTS AGE 14 AND OLDER
CLINICAL STAGE 1
❑ Asymptomatic infection.
❑ Persistent generalised lymphadenopathy (PGL).
❑ Acute retroviral infection.
CLINICAL STAGE 2
❑ Unintentional weight loss (<10% of presumed or measured body weight).
❑ Minor mucocoetaneous manifestations (eg, seborrhoeic dermatitis, prurigo, fungal nail infections of fingers, recurrent oral ulcerations, angular cheilitis).
❑ Herpes zoster within the past five years.
❑ Recurrent upper respiratory tract infections (RTIs; eg, sinusitis, bronchitis, otitis media, pharyngitis).
CLINICAL STAGE 3
❑ Unintentional weight loss (>10% of presumed or measured body weight).
❑ Unexplained chronic diarrhoea for longer than one month.
❑ Unexplained persistent fever, intermittent or constant, for longer than a month.
❑ Oral candidiasis (erythematous or pseudomembranous).
❑ Oral hairy leukoplakia.
❑ Pulmonary tuberculosis, atypical or typical, within the previous year.
❑ Severe bacterial infections (eg, pneumonia, empyema, pyomyositis, bone or joint infection, meningitis, bacteraemia).
❑ Vulvovaginal candidiasis, chronic (ie, for longer than one month) or poorly responsive to therapy.
CLINICAL STAGE 4
❑ HIV wasting syndrome.
❑ Pneumocystis pneumonia.
❑ Toxoplasmosis of the brain.
❑ Cryptosporidiosis with diarrhoea, for longer than one month.
❑ Isosporiasis with diarrhoea, for more than a month.
❑ Extrapulmonary cryptococcosis including meningitis.
❑ Cytomegalovirus (CMV) infection (retinitis or of an organ other than liver, spleen, or lymph nodes).
❑ Chronic herpes simplex infection mucocoetaneous (> one month) or visceral (any duration).
❑ Progressive multifocal leukoencephalopathy (PML).
❑ Any disseminated mycosis (eg, histoplasmosis, coccidioidomycosis, penicilliosis).
❑ Candidiasis of trachea, bronchi, lungs, or oesophagus.
❑ Disseminated nontuberculous mycobacteria infection.
❑ Extrapulmonary TB.
❑ Nontyphoidal salmonella septicaemia.
❑ Lymphoma (cerebral or B cell non-Hodgkin's).
❑ Kaposi's sarcoma.
❑ HIV encephalopathy.

TB SCREENING	
Clinic or ART site:	
Patient surname:	Name:
Pre-ART number:	ART number:

ADULTS AND ADOLESCENTS												
	FIRST VISIT		SECOND VISIT		THIRD VISIT		FOURTH VISIT		FIFTH VISIT		SIXTH VISIT	
VISIT DATE												
SYMPTOM												
SCREENING QUESTIONS	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
1. Cough for two or more weeks?												
2. Night sweats for two or more weeks?												
3. Noticeable weight loss in last four weeks?												
4. Fever for two or more weeks?												
5. Any chest pain?												

NOTES

'Yes' to question 1 only: The person is a pulmonary TB suspect. Do the sputum and refer to the doctor for further evaluation.

'No' to question 1 but 'yes' to two or more questions: The person is a TB suspect. Do the sputum and refer to the doctor for further evaluation.

'No' to all questions: The person is not a TB suspect. Repeat the screening at next visit.

CHILDREN												
VISIT DATE												
SYMPTOM												
SCREENING QUESTIONS	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
1. History of TB contact in the household?												
2. Cough for two or more weeks?												
3. Sweats for two or more weeks?												
4. Noticeable weight loss in last four weeks?												
5. Fever for two or more weeks?												

NOTES

'Yes' to question 1 or 2 only: The person is a pulmonary TB suspect. Do the sputum/CXR/PPD and refer to the doctor
for further evaluation.

'No' to question 1 but 'yes' to two or more questions: The person is a TB suspect. Do the CXR/PPDb and refer
to the doctor for further evaluation.

'No' to all questions: The person is not a TB suspect. Repeat the screening at next visit.