2023

Guideline for Vertical Transmission Prevention of Communicable Infections

South African National Department of Health

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FOREWORD

It is my great pleasure to introduce a new name for the programme that was formally known as Prevention of Mother-to-Child Transmission of Transmissible Infections, the name stigmatising the mother as being responsible for the infant being infected.

From now onwards the programme will be called the Vertical Transmission Prevention (VTP) programme. This guideline will be a component of the Maternity Care guidelines and the National Consolidated ART guidelines. Furthermore, it will include recommendations from the PrEP guidelines for use of PrEP as an HIV prevention intervention for HIV-negative pregnant and breastfeeding women, the STI guidelines for screening and management of pregnant women with syphilis, and the viral hepatitis guidelines for screening and management of pregnant women with viral hepatitis B.

All pregnant and breastfeeding women must be on DTG-based regimens unless contraindicated to ensure that they are virally suppressed as soon as possible to prevent vertical transmission.

Viral load monitoring and management of elevated viral loads remains key in preventing vertical transmission of HIV. Clinicians are reminded to monitor the viral load as per these guidelines and use the EGK codes appropriately for monitoring of maternal viral load coverage and suppression rates.

Early infant diagnosis and timely treatment are critical in reducing mortality under 1-year; hence clinicians are reminded to continue testing HIV-exposed infants at birth, 10 weeks, and six months. Clinicians are further reminded that the HIV test at 18 months of age is universal, meaning all infants, regardless of HIV exposure, must be tested for HIV at 18 months.

Integration of services remains critical in achieving better health outcomes and this guideline provides resources to guide integration, especially with EPI services and maternal contraception, to enhance follow-up of HIV-exposed infants and support continued engagement in care.

I urge all clinicians at PHC clinics, community health centres and hospitals across the board to use these guidelines diligently to offer quality, comprehensive services to the public.

I would like to sincerely thank all the internal and external stakeholders who actively contributed to developing these guidelines.

Dr SSS Buthelezi

Director-General: Health

Date: 21-08-2023

CONTENT

What's new in this guideline?

Terminology	**TLD 1**	• Clients on a DTG-containing regimen, who have **never failed** any other regimen (previous "first-line" terminology)
	TLD 2	• Clients on a DTG-containing regimen, who **have failed** an earlier regimen (previous "second-line" terminology)
ART Regimens	**All adult and adolescent women ≥ 30 kg and ≥ 10 years of age, including pregnant and breastfeeding women**	• The preferred first-line ART regimen is **tenofovir disoproxil fumarate-lamivudine-dolutegravir (TLD)** for all adult and adolescent women initiating ART. • TDF weight-related eligibility criteria for TDF decreased from **35 kg to 30 kg** • All women already on ART and not on dolutegravir (DTG), whether on first-line or second-line regimens, should be evaluated for a switch to a dolutegravir-containing regimen.
		• TDF may safely be **reused in 2nd-line therapy** following 1st-line failure with TDF-containing regimens. TLD will therefore be used as both first (TLD 1) and second line (TLD 2) regimens and in certain cases, 3rd line regimens as well • Simplified **switching from TEE to TLD not dependant on VL**
Monitoring on ART	**VL monitoring and management of elevated viral loads**	• **If VL ≥ 50 c/mL**, do ABCDE assessment and repeat VL in 4-6 weeks • **Focus on improved adherence:** Resistance to DTG is very uncommon. If other reasons for an unsuppressed VL (including drug interactions) have been addressed or excluded, suboptimal adherence remains the most probable cause for non-suppression. The highest probability of improving adherence would be to remain on a once-daily, well-tolerated, fixed-dose combination regimen (TLD) while identifying and addressing the underlying root causes of non-adherence.
HIV-Exposed Infant	**Definition of "higher-risk" HIV exposure at birth**	• The VL threshold for defining an HIV-exposed infant as "higher-risk" moves from ≥ 1000 c/mL to **≥ 50 c/mL** • **Dual prophylaxis** (AZT twice daily and NVP once daily) will be provided for all HIV-exposed infants at birth until delivery VL result is known
	Cotrimoxazole Prophylaxis (CPT)	• HIV-exposed infants are **no longer eligible for CPT** • HIV-infected infants remain eligible for CPT
Syphilis	**Syphilis testing frequency**	• A pregnant woman should be screened and tested for syphilis ◆ At her 1st/booking visit in antenatal care. ◆ If she tests negative, syphilis testing should be repeated • At scheduled antenatal visits, at approximately 4-weekly intervals, e.g., for BANC+ clients, this could be at 20, 26, 30, 34, and 38 weeks gestation • During her labour/delivery admission • At the time of diagnosis of an intrauterine death • At any time, if the mother has clinical symptoms or signs suggestive of syphilis • Syphilis testing should be aligned with the HIV testing schedule
	Type of syphilis tests	• **Rapid syphilis tests** (specific/treponemal) are preferred as first-line tests in pregnancy to facilitate immediate treatment. ◆ Dual rapid tests that test for both syphilis and HIV using the same drop of blood should be used for women with unknown HIV status; ◆ Single syphilis rapid tests (syphilis only) should be used for WLHIV • All positive rapid tests must be confirmed using an RPR test
	Notifications	All stillbirths related to syphilis should be **notified**
Other updates	The following sections have been added/updated/enhanced • Visit Schedule for Integrated Care: Mother living with HIV and her HIV-exposed Infant • Involving fathers in antenatal and postnatal services • PrEP Job Aids • Visit Schedule for Integrated Care: Mother taking PrEP • EGK Job Aid	

ABBREVIATIONS

3TC	Lamivudine
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARVs	Antiretrovirals
AZT	Zidovudine
BANC	Basic Antenatal Care
BANC Plus	Basic Antenatal Care Plus
bd	Twice Daily
CBP	Childbearing Potential
CHW	Community Health Worker
CM	Cryptococcal Meningitis
CPT	Cotrimoxazole Prophylaxis Therapy
CrAg	Cryptococcal Antigen
CS	Congenital Syphilis
CTX	Cotrimoxazole
DHIS	District Health Information System
DST	Drug Sensitivity Testing
DTG	Dolutegravir
EFV	Efavirenz
EGK	Electronic Gate Keeping
EML	Essential Medicines List
EPI	Expanded Programme on Immunization
FGR	Foetal Growth Restriction
FTC	Emtricitabine
FTIC	Fast Track Initiation Counselling (DMOC SOP 1)
GXP	Gene Expert TB Test
Hb	Haemoglobin
HCW	Health Care Worker
HEI	HIV-exposed Infant
HEU	HIV-exposed but uninfected
HIV	Human Immunodeficiency Virus
HTS	HIV Testing Services
IM	Intramuscular
INH	Isoniazid
IPT	Isoniazid Preventative Therapy
IPV	Intimate Partner Violence
IRIS	Immune Reconstitution Inflammatory Syndrome
IUCD	Intrauterine Contraceptive Device
IV	Intravenous
LAM	Lipoarabinomannan
LP	Lumbar Puncture
LPA	Line Probe Assay
LPV/r	Lopinavir/ritonavir
LTBI	Latent TB Infection
MCR	Maternity Case Record
MDO	Missed Diagnostic Opportunity
MIP	Mother-infant Pair
MNCWH&N	Maternal Neonatal Child Women's Health and Nutrition
MTCT	Mother to Child Transmission of HIV
NHLS	National Health Laboratory System
NVP	Nevirapine
NSA	Non-suppression Algorithm
NTD	Neural Tube Defect
OD	Once Daily
OI	Opportunistic Infection
PCG	Parent/Caregiver
PCP	*Pneumocystis jirovecii* Pneumonia
PCR	Polymerase Chain Reaction
PEP	Post Exposure Prophylaxis
PHC	Primary Health Care
PICT	Provider Initiated Counselling and Testing
PNC	Postnatal Club
PO	Per os (per mouth)
PrEP	Pre-Exposure Prophylaxis
RfA	Results for Action NHLS Reports
RPR	Rapid Plasma Reagin
RTHB	Road to Health Booklet
Rx	Treatment
SA	South Africa
SOP	Standard Operating Procedure
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infections
sd	Single dose
TB	Tuberculosis
TDF	Tenofovir
TEE	ART Regimen containing Tenofovir, Emtricitabine, and Efavirenz
TLD	ART Regimen containing Tenofovir, Lamivudine, and Dolutegravir
TPHA	Treponema pallidum haemagglutination assay
TPT	TB Preventative Therapy
TST	Tuberculin Skin Test
UTI	Urinary Tract Infection
VMMC	Voluntary Medical Male Circumcision
VL	Viral Load
VLS	Viral Load Suppression
VTP	Vertical Transmission Prevention
WASH	Water, Sanitation and Hygiene
WLHIV	Woman Living with HIV
WHO	World Health Organization

OVERVIEW OF THE STRUCTURE OF THIS GUIDELINE

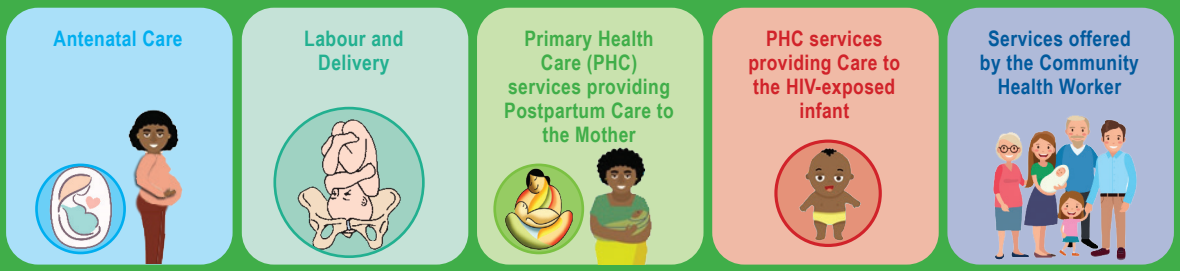
The guideline is divided into four parts:

1 **Part One: Introduction** provides an introduction and background to this guideline.

2 **Part Two: Prevention** gives guidance around the universal measures to prevent transmission of infections during pregnancy and breastfeeding, prevent HIV, prevent unintended pregnancies, as well as safe conception.

3 **Part Three: Charts per Service Delivery Area** is structured by service delivery point across the continuum of care. It deals with the care and treatment of the woman, her partner and children, and preventing vertical transmission to her exposed infant.

START BY SELECTING THE SERVICE POINT AT WHICH SERVICES ARE PROVIDED



For each service delivery point **in the facility** the following components of care are outlined:

1. HIV testing,
2. Antiretroviral therapy (ART) as treatment or prophylaxis,
3. HIV viral load (HIV VL) monitoring and management,
4. Tuberculosis (TB) screening, TB Preventative Therapy (TPT), and opportunistic infection (OI) prophylaxis,
5. Prevention of vertical transmission of syphilis, hepatitis B virus (HBV) and other infections, and
6. Other care required, e.g. basic antenatal care (BANC) services, immunization services (EPI), growth monitoring and nutrition.

For care provided by the **community** health worker (CHW) at home the following components of care are outlined:

7. Care of the non-pregnant woman of childbearing potential (CBP) at home,
8. Home-based care during the antenatal period, and
9. Home-based care after delivery for the mother and infant

Where additional information is needed you will be redirected to the relevant sections in Part Four.

4 **Part Four: Algorithms and Decision Tools** provides algorithms and decision tools that may apply to any service point, e.g. how to manage an elevated HIV VL, how to screen for TB and initiate TPT, important adherence messages, etc.

1 PART 1 – INTRODUCTION

BACKGROUND

Infections during pregnancy are a major contributing factor to perinatal morbidity and mortality. In utero infections may directly affect the foetus and can lead to intrauterine deaths and stillbirths. The foetus may also be affected indirectly as a consequence of maternal infection leading to premature birth or foetal growth restriction (FGR). Infections that are asymptomatic at birth may present later in life, often within the first five years. In general, primary infections during pregnancy are substantially more damaging than re-infections or reactivations of infection. Likewise, infections acquired at an earlier gestational age tend to lead to more serious infections.[1] HIV, syphilis, TB, HBV, malaria, and more recently, listeriosis, are all infections with significant impact on maternal and child health outcomes in SA. Although all these infections are important, this guideline will focus mainly on preventing vertical transmission of HIV, syphilis and TB.

OVERALL GUIDELINE OBJECTIVE

This guideline aims to outline the four pillars for routine care for women of childbearing age and their families relating to:

- the prevention of new HIV cases, TB cases, syphilis cases, and other infections
- the prevention of unintended pregnancies
- the prevention of vertical transmission of HIV, syphilis, and other infections, and
- the care and treatment of the women living with, and their children exposed to HIV, syphilis and other infections

The four pillars embed a family-centered approach, acknowledging the role of partners in primary prevention, pregnancy prevention, and preventing vertical transmission.

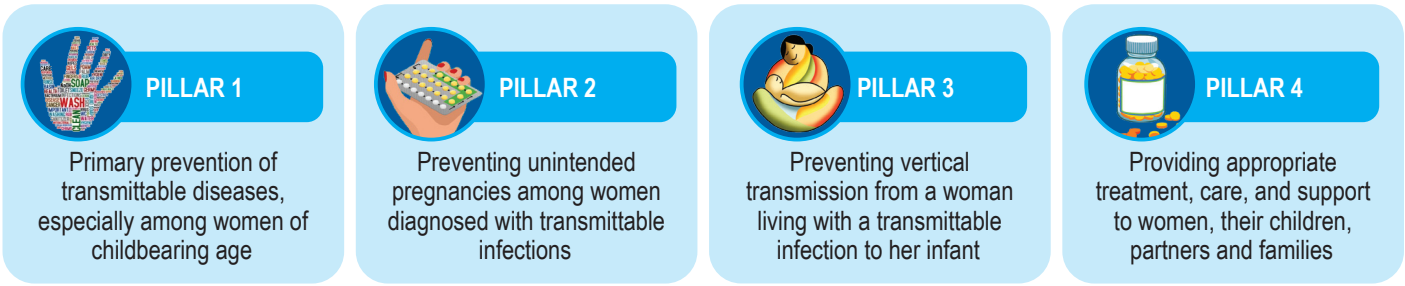


Figure 1 *The four pillars of prevention of vertical infections*

OVERVIEW OF TRANSMITTABLE INFECTIONS DURING PREGNANCY AND THE BREASTFEEDING PERIOD

OVERVIEW OF VTP OF HIV

South Africa (SA) is committed to achieving the elimination targets outlined in the Last Mile Plan. Whilst significant progress has been made in preventing HIV infections in children, HIV remains the third leading cause of maternal mortality[2], and a significant contributor to under-five deaths in SA. Therefore, managing the health of women living with HIV and preventing vertical transmission of HIV remains a critical intervention for ensuring that women and children survive and thrive in South Africa. PMTCT Option B Plus entailed initiating ART for life in all pregnant and breastfeeding women regardless of CD4 count or clinical stage and was launched in SA in January 2015. As the programme continues to evolve, it is necessary to reflect on new evidence, both scientific and operational, to ensure that SA's HIV VTP programme remains relevant, practical, and evidence based.

SYPHILIS IN PREGNANCY

Syphilis remains a significant cause of preventable perinatal death in SA.[3] According to the 2019 National Antenatal HIV Sentinel Survey, the prevalence of syphilis is estimated at 2.6% (95% CI: 2.4%−2.9%) at national level. Compared to the prevalence of syphilis in 2015 (2.0%), the current syphilis prevalence represents a 30% increase in prevalence between 2015 and 2019. Maternal syphilis screening coverage at first antenatal visit was 96.4% at national level. However, despite good antenatal attendance and early maternal syphilis testing, there has been a resurgence of congenital syphilis (CS) cases in many provinces in South Africa[3]. Adverse pregnancy outcomes occur in up to 80% of syphilis seropositive, untreated pregnant women. South Africa has committed to dual elimination of both HIV and syphilis, and greater emphasis is therefore needed on the process of screening and effectively treating mothers, their partners, and their infants affected by syphilis.

TUBERCULOSIS IN PREGNANCY

Non-pregnancy-related infections remain the leading cause of maternal mortality in South Africa. Within this category, respiratory infection remains the most common cause of death, and TB the most common underlying disease. Yet, deaths from TB are likely to be unrecognized, with many deaths due to pulmonary or disseminated TB being attributed to other causes.[4] Furthermore, maternal TB may result in premature birth, low birth weight, and congenital or neonatal TB infection or disease.[5] Preventing, diagnosing and treating women for TB must receive greater emphasis if maternal and child outcomes are to be improved in SA.

OTHER INFECTIONS

MALARIA IN PREGNANCY

Pregnant women, particularly in the second and third trimesters of pregnancy, are more likely to develop severe malaria and have a higher malaria-related mortality rate than other adults. Malaria in pregnancy is more frequently associated with complications such as cerebral malaria, hypoglycaemia, anaemia, and pulmonary oedema/adult respiratory distress syndrome. In addition, maternal malaria increases the risk of spontaneous abortion, stillbirth, premature delivery, low birth weight (a leading cause of child mortality) and rarely, congenital malaria. Foetal distress may occur peripartum. The risk of severe malaria extends into the early postpartum period. Pregnant and breastfeeding women living in malaria-endemic areas should therefore be a focal group for malaria prevention interventions. It is important to follow up pregnant women treated for malaria, and their infants, more closely to promptly diagnose and adequately manage any complications of malaria in pregnancy.[6]

HEPATITIS B IN PREGNANCY

Worsening of liver disease in HBV-infected pregnant women is uncommon, but case reports have suggested that HBV reactivation, hepatic exacerbations and fulminant liver failure may occur. Furthermore, maternal HBV infection may result in higher rates of preterm births, lower APGAR scores, gestational diabetes and antepartum hepatitis. Whilst horizontal transmission during childhood remains the primary mode of HBV transmission, vertical transmission remains an important mechanism of infection in countries with high HBV prevalence.[7] In SA, a large proportion of HBV infected women are also living with HIV and will receive ART during pregnancy. The ART drugs tenofovir and lamivudine treat both HIV and HBV and reduce the risk of vertical transmission by decreasing the viral load of both HIV and Hepatitis B. Health care workers need to be aware of the required management of a HBV-infected mother and her infant as outlined in the National Maternity Care Guidelines.

LISTERIOSIS, ZIKA AND OTHER INFECTIONS

Listeriosis is a disease caused by ingesting food contaminated with the bacterium *Listeria monocytogenes*. Pregnant women, newborn infants and those with weakened immune systems are particularly at risk and the infection may result in sepsis or meningitis with high mortality. Vertical transmission may result in stillbirth, premature delivery or severe infection in the newborn.[1]

Zika virus in transmitted by mosquitos, sexual contact, and contaminated blood products. While the majority of Zika infections are asymptomatic, infected persons may present with a short-lived febrile illness. There is no evidence that pregnant women are more susceptible to Zika virus, or that they are more likely to develop complications of the disease. However, maternal Zika infection may result in congenital brain abnormalities including microcephaly in the infant.[8]

While Zika virus infections may not be an imminent threat in the South African context, the recent outbreak of Listeriosis highlights the importance of universal measures to prevent infections during pregnancy and the breastfeeding period to prevent any form of infection and their consequences during this vulnerable time.

POPULATIONS TO WHOM THIS GUIDELINE APPLIES

This guideline covers all settings where routine sexual and reproductive health (SRH) services and HIV care and treatment services are offered to HIV-uninfected and HIV-infected women, their partners and their families. It is to be used in all South African health care facilities, and by doctors, nurses and allied health workers at primary, secondary and tertiary care levels where clients may require uncomplicated VTP care. This guideline does not cover clients with complex care issues who may require individualised client care approaches.

2 PART 2 – PREVENTION

UNIVERSAL MEASURES TO PREVENT INFECTIONS DURING PREGNANCY

Table 2 below summarizes the universal preventative measures that all pregnant woman should observe to prevent transmission of infections to her infant during pregnancy or breastfeeding.

Table 2 *Universal Measures to Prevent Infections during Pregnancy*

The Health care provider should advise the pregnant or breastfeeding client about the following practices that may increase or decrease the risks for contracting infections	
Contact with Adults with Respiratory or Flu-Like Symptoms	• Avoid close or intimate contact with adults with communicable respiratory diseases, acute or recent fever or flu like symptoms. To prevent respiratory infections, avoid: - Kissing - Sharing food utensils, drinking from the same container • Wash hands frequently and, if available, use alcohol gel after shaking hands and before eating
Sexual Contact	• Use male latex condoms consistently and correctly. - Carefully handle the condom to avoid damaging. - Put the condom on after the penis is erect and before any genital, oral, or anal contact with the partner - To prevent the condom from slipping off, hold the condom firmly against the base of the penis during withdrawal, and withdraw while the penis is still erect. - Do not use the condom more than once • Use female condoms correctly • Avoid receptive oral sex with a partner with oral herpes or intercourse during the third trimester with men who have genital herpes. • Ensure that all sexual contacts of individuals treated for STIs are linked to care and receive STI treatment.
Blood Contact	• Mastitis or nipple fissures in a woman living with HIV may increase the risk of HIV transmission, especially if bleeding or discharging. Avoid breastfeeding from the affected breast. Express milk from the affected breast. If only one breast is affected, the infant can feed from the unaffected side, and feeding more often and for longer increases milk production. If both breasts are affected, she will not be able to feed from either side. The mother will need to express her milk from both breasts. Breastfeeding can resume when one or both breast/s have recovered. The healthcare worker may need to discuss other feeding options for her to use in the meantime. • Consider the risks if you are thinking about getting a tattoo or body piercing. Infected tools can transmit hepatitis B or other infections • Do not share personal care items that might have blood on them (razors, toothbrushes). • Avoid using drugs. Do not share needles or other equipment related to drug use.
Contact with Children with Respiratory, Flu-Like Symptoms or Skin Rash	• Careful hand washing with soap and running water and, if available at home, use alcohol gel rub after - exposure to a child's bodily fluids and diaper changes, - bathing the child or handling dirty laundry, - touching the child's toys and other objects • Avoid close or intimate contact with the child such as - kissing on the mouth or cheek (kiss them on the head or give them a hug) - sleeping together, - sharing towels and washcloths, • Avoid contact with baby's saliva while feeding - sharing or tasting foods with the same utensils (spoons, forks) - drinking from the same container
Consuming, Handling, and Processing of Food	• Avoid eating raw or undercooked lamb, pork, beef or poultry. Cook all meat until it is no longer pink, and the juices run clear. Reheat any processed meat until steaming • Do not eat food that has passed its expiry date • Do not eat unpasteurized dairy products (including all soft cheeses), • Peel or wash raw fruit and vegetables thoroughly. • Wash hands, knives, and cutting boards after handling uncooked foods or fluids from their packages. • Wash hands thoroughly after handling raw meat
Protection from Insects	• Always use Insecticide-treated bed nets if you live in a malaria endemic area.

Table adapted from 'Perinatal Infections transmitted by the Mother to her Infant', March of Dimes Foundation, Latin American Center for Perinatology / Women and Reproductive Health - Pan American Health Organization / World Health Organization1

PREVENTION OF HIV

Contraception and HIV testing services (HTS) should always be provided together. At every FP visit, offer HTS. At every HTS visit, offer FP.

All persons of reproductive age need access to comprehensive information, as well as non-judgemental, confidential, and (as necessary), youth friendly SRH services.

WHO should be offered HIV prevention services?

- All HIV negative women, including adolecent girls, young women, and sex workers
- HIV negative partners and other men
- HIV positive persons

WHAT HIV prevention options should be offered?

BASIC PREVENTION PACKAGE

HTS services
Couples Counselling and partner testing
Screen and treat STI's
Safe sex education*
Post Exposure Prophylaxis (PEP)
Pre-Exposure Prophylaxis (PrEP) as applicable & available #

BASIC PREVENTION PACKAGE + Voluntary Medical Male Circumcision (VMMC) and communication for men

TREATMENT AS PREVENTION

HTS, couples counselling and partner testing, Linkage to Care, ART and HIV VL suppression

Remember, condoms are recommended for all couples regardless of HIV status

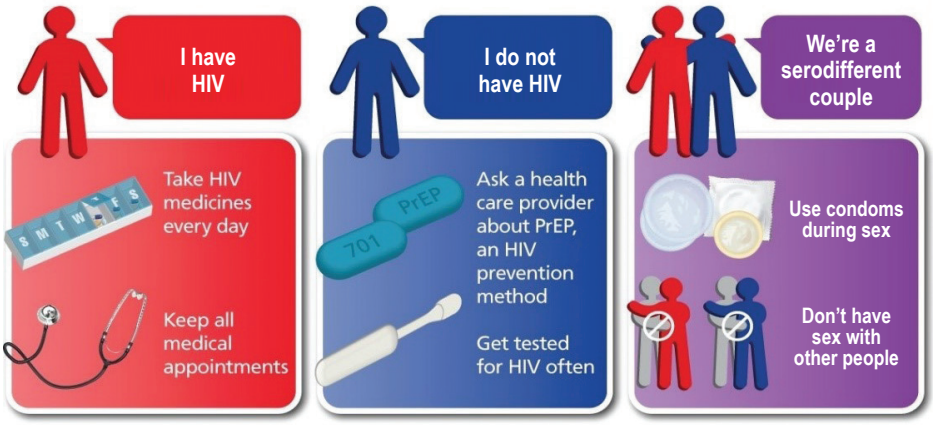
WHERE should HIV prevention services be offered?

At all contact points with the health system, including PHC, SRH services, MNCWH&N services, Chronic and Acute Care services (including hospitals)

Community-based services, including mobile/outreach services for sex workers and other working persons

School based prevention (in the context of comprehensive sexuality education)

Ways to prevent HIV transmission within a serodifferent couple



***Safe Sex Education:**
Counsel the women to avoid the following sexual practices that could put her at risk for contracting HIV and other STI's:

- The woman or her regular partner having new or multiple sexual partners
- Unreliable use of condoms
- Alcohol abuse

#PrEP is now routinely available for all PBFW including adolescent girls, young women and sex workers. It should be a priority prevention intervention offered to all PBFW with a negative HIV test result. See "PrEP Job Aid for Clinicians" on page 48 and the 2021 PrEP guidelines

PREVENTION OF UNINTENDED PREGNANCIES AND SAFE CONCEPTION IN WOMEN

Contraception should be an integral part of ART services!

Regularly discuss issues of childbearing and contraception to understand current fertility desires and health care needs

Ideally, engage the woman living with HIV and her current partner in a couples-based approach, as the health and cooperation of both partners are important for safe contraception or conception

Classify client

A. Currently wanting to conceive

Recommend, discuss, and agree on steps before conception

Optimise HIV treatment in the partner living with HIV (serodifferent couple), or in both partners living with HIV (sero-concordant couple).

- Continue to use condoms
- Document HIV status of both partners
- Identify and manage co-morbidities, including syphilis and other STIs
- Initiate ART and support good adherence
- Maintain an undetectable HIV VL, ideally for 4-6 months before conception
- Start folate supplementation and do an Hb if clinically pale
- Consider PrEP for the uninfected partner

Once viral load suppression is achieved in the partner(s) living with HIV, the following additional options are available should the couple still feel anxious about the risk of HIV transmission

- timed, limited, peri-ovulatory, sex without a condom
- intravaginal insemination
- male circumcision
- intra-uterine insemination
- sperm washing
- surrogate sperm donation

Not readily available in the public sector

If pregnancy is confirmed, counsel the mother to book at ANC before 14 weeks and to continue using condoms consistently during pregnancy and the breastfeeding period

B. Not currently desiring a child, but may do so in the future

Counsel about options for contraception including long-acting reversible contraceptives (IUCD and implants), and barrier methods

C. No desire for a child now or in the future

Counsel about options for contraception including permanent methods (male and female voluntary sterilisation), long-acting reversible contraceptives (IUCD and implants) and barrier methods. If permanent methods are not appropriate, proceed to an alternative dual method as outlined below

Dual method is always recommended:

A hormonal method (including implants) or intra-uterine contraceptive device to prevent pregnancy

A barrier method (male/female condoms) to augment the hormonal method, and prevent STIs and HIV

Discuss the different contraceptive options available for use in the women living with HIV (See PC101, and the National Contraceptive Clinical Guideline, 2018)
Available options include:

- Injectable progestins
- Combined oral contraceptive pills.
- Intra-uterine contraceptive device
- Emergency contraception

All hormonal methods including implants (e.g. Implanon NXT®) and the long-acting injectables (e.g. Depo Provera®) are effective when used with Dolutegravir. Women should be counselled about the possibility of reduced efficacy when using **progestin subdermal implants (e.g. Implanon NXT®)** with enzyme inducing drugs such as **Efavirenz, Rifampicin,** and certain epilepsy drugs. Women who are already using an implant should consider an alternative non-hormonal method for contraception e.g. the IUCD, and should continue to use condoms correctly and consistently.
A woman's choice of contraceptive method may be influenced by her ART service delivery model to allow for better visit alignment. See also the ***"Visit Schedule for Integrated Care for the Mother-baby Pair Living with HIV" on page 40***.

3 PART 3 – CHARTS PER SERVICE DELIVERY AREA

ALL SERVICE AREAS

All services areas that provide care for women of childbearing potential should include the following in their package of care:

- Ask if she is using reliable contraception, and if not, refer for contraceptive services
- Screen all woman of childbearing potential (CBP) for pregnancy and ask if she is breastfeeding. If she is not on reliable contraception or her period is late, provide/refer her for a pregnancy test.
- Encourage all women and girls to test for HIV if they are sexually active. Offer an HIV test to the woman and her partner if they have not tested in the last year.
- If she is a known to be living with HIV, ask if she is on ART and ask about her last VL.

ANTENATAL CLINIC

When caring for a pregnant woman, always be sure to:

- Recognise the pregnant client that requires urgent attention as outlined in BANC Plus and manage/refer as appropriate
- Identify the pregnant client who needs secondary level antenatal care as outlined in BANC Plus and manage/refer as appropriate
- Provide routine antenatal care to the woman not requiring urgent referral.

PRIMARY OBJECTIVES

1. Identify HIV infection and achieve viral suppression
2. Identify and treat syphilis and other infections

TESTING for HIV

HIV Testing: Provider Initiated Counselling and Testing (PICT) should be provided to all women with unknown or HIV-negative status:

- Offer an HIV test at ANC first/booking visit.
  - If she tests negative, HIV testing should be repeated at scheduled antenatal visits, at approximately 4-weekly intervals, e.g., for BANC+ clients, this could be at 20, 26, 30, 34, and 38 weeks gestation
  - During her labour/delivery admission
- Syphilis testing should be aligned with the HIV testing schedule (See ***"Syphilis" on page 34***).
  - If a woman tests positive for HIV, but tests negative for syphilis, repeat syphilis testing should continue at the intervals described above.
  - If a woman tests positive for syphilis but tests negative for HIV, repeat HIV testing should continue at recommended intervals
- Offer couple/partner testing to promote prevention, access to HIV care and treatment, and/or manage serodifferent results (when one partner has HIV and the other partner does not).
- If the woman and/or her partner test HIV-negative, provide **HIV prevention** information (Go to ***"Prevention of HIV" on page 6***).
- Women who choose not to be tested should be offered 'post-refusal' counselling and offered a re-test at every subsequent visit.
- If a woman tests HIV-positive at any stage, encourage testing of her other children, and linkage to HIV care and treatment as necessary.
- For the **HIV testing algorithm**, including the management of discrepant HIV test results, refer to the HTS Guideline.

TREATMENT for HIV

- All pregnant women newly diagnosed with HIV are eligible for lifelong ART regardless of gestation, CD4 count, or clinical stage.
- Creatinine and CD4 count should still be done to determine her renal function and the need for prophylaxis for *pneumocystis jerovecii* pneumonia (PJP) and cryptococcal meningitis (CM).
- TDF, 3TC, and DTG (as the fixed-dose combination TLD) is the preferred regimen for women who are newly initiating, or re-initiating, ART. ART should be initiated on the same day as HIV diagnosis[10], and after contra-indications to ART have been excluded (Go to ***"ART Initiation Algorithm" on page 18***).
- Pregnant women who are already on TLD at entry into antenatal care, should continue their current TLD regimen.
- Pregnant women who are already on ART at entry into antenatal care but not yet on DTG, should be transitioned to a DTG-containing regimen as a matter of urgency (see also ***"Switching Existing Clients to DTG-containing Regimens" on page 16***)
  - Pregnant women on efavirenz-containing ART, or women on AZT, 3TC and DTG (as a second-line regimen), should be switched to TLD at their first antenatal visit. The result of their 1st VL (to be done at entry into antenatal care as outlined below) will not influence the decision to switch, and outstanding VL results should therefore not delay her switch to TLD. If her VL is ≥ 50 c/mL, manage her as per the ***"VL Non-Suppression Algorithm" on page 21***).
  - Pregnant women on a LPV/r-containing regimen should await the results of their 1st VL to be done at entry into antenatal care, and be managed as per the Switching Existing Clients to DTG-containing Regimens table on page 14 of the ART Clinical Guideline.
  - If a woman who is already on ART at entry into antenatal care will now collect her ART from the antenatal service point, ensure that she is documented as a transfer-out from her former ART clinic, and not classified as lost-to-follow-up.
- Known HIV-positive women, who are not currently on ART, but are ART-experienced (e.g. previous VTP, or previous LTFU on ART) should re-initiate TLD*.
- Appropriate ART literacy education should be given to the woman before she leaves the facility. (Go to ***Key Adherence Messages on page 19***)
- All women living with HIV should be referred to a CHW to support adherence, breastfeeding and retention in care pre- and post-delivery.

* Unless previously already on a 3rd line regimen or unsuppressed on a PI-based regimen for over 2 years before interrupting treatment. These clients should be discussed with an expert before re-initiating.

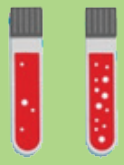
Remember to put the VTP code: **C#PMTCT** in the EGK code field of the laboratory form for each VL done to ensure the electronic gatekeeping rules (EGK) do not lead to sample rejection

! Pregnant adolescents are at a higher risk for poor adherence and poor viral suppression and require more intense support. Go to **"Care of the Pregnant Adolescent Living with HIV" on page 23**

! Remember to insert the laboratory barcode sticker and record all VL, TB, and syphilis results in the Maternity Case Record/ANC Card, and the ART Clinical Stationery (if available in that facility)

VL MONITORING and Management

(Go to ***"Viral Load Monitoring Schedule" on page 20***)



Newly diagnosed and initiated ART for the first time:
- Do 1st VL at 3 months on ART.
- If VL < 50 c/mL, repeat VL at delivery.

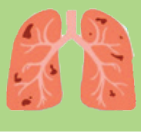
Known HIV-positive women already on ART:
- VL at first/booking visit in ANC,
- If VL < 50 c/mL, repeat VL at delivery.

✓ Early referral to community-based services improves adherence to ART, exclusive breastfeeding and retention in care

Known HIV-positive women, who are not currently on ART, but are ART exposed (e.g. previous VTP, or ART LTFU) and who are initiating a DTG-containing regimen:
- Do 1st VL at 3 months on ART.
- If VL < 50 c/mL, repeat VL at delivery.

If the VL is ≥50 c/mL in any of the above scenarios, go to ***"VL Non-Suppression Algorithm" on page 21.***

SCREENING for TB and other OI's



Screen for TB at every visit regardless of HIV status and consider TPT if eligible. Ensure any woman diagnosed with TB is adherent to TB treatment and that she is aware that her newborn may require TB prophylaxis (Go to ***"TB Screening and TPT during Pregnancy, Labour, and the Breastfeeding Period" on page 29***).
Initiate Cotrimoxazole Prophylaxis (CPT) if CD4 count ≤ 200 cells/μL, or WHO clinical stage 2, 3, or 4.

If CD4 ≤100 cells/uL the laboratory will automatically perform a Cryptococcal Antigen test (CrAg). CrAg-positive clients who are pregnant should be offered an LP (regardless of symptoms) and discussed with an expert before a decision is made regarding management.

PREVENTION of transmission of syphilis, HBV and other infections

Syphilis: All pregnant women need to be screened and tested for syphilis
- At her 1st/booking visit in antenatal care.
- If she tests negative, syphilis testing should be repeated:
  - At scheduled antenatal visits, at approximately 4-weekly intervals, e.g., for BANC+ clients, this could be at 20, 26, 30, 34, and 38 weeks gestation
  - During her labour/delivery admission
  - At the time of diagnosis of an intrauterine death
  - At any time, if the mother has clinical symptoms or signs suggestive of syphilis

The frequency of syphilis testing should be aligned with the HIV testing schedule.
- If a woman tests positive for HIV, but tests negative for syphilis, repeat syphilis testing should continue at the intervals described above.
- If a woman tests positive for syphilis but tests negative for HIV, repeat HIV testing should continue at recommended intervals

Rapid syphilis tests are available as a **single** rapid diagnostic test (RDT) that tests only for syphilis, and a **dual** RDT which tests for both syphilis and HIV using the same drop of blood. **Dual syphilis-HIV rapid tests should only be used in clients:**
- Whose HIV status is negative or unknown AND
- Who have not had a previous syphilis infection

For more detail on the types of syphilis tests available, their interpretation and the clinical management of syphilis, go to ***"Syphilis" on page 34***

HBV: All women living with HIV will automatically be treated for HBV when they start routine ART containing TDF and 3TC /FTC. Any woman who is HIV/HBV coinfected and cannot use TDF due to renal dysfunction should be discussed with an expert. If an HIV-negative pregnant woman is known to have HBV infection, she should be referred to a high-risk clinic for further tests to determine eligibility for treatment. Mothers who are Hepatitis B infected should deliver at a facility where both hepatitis vaccine and anti-Hep B Immunoglobulin can be given to the baby on the day of birth.

Malaria: Although vertical transmission is rare, malaria in pregnancy poses serious risks for both the mother and the baby. Malaria presents as a febrile illness and is often unrecognized or misdiagnosed with severe consequences. The most important aspect of making a diagnosis of malaria is having a high index of suspicion. If a woman presents with a fever during pregnancy, always ask about her travel history. Refer any woman with signs of severe illness or danger signs as outlined in PC101. Comprehensive information on Malaria in Pregnancy is available in the Guideline for Maternity Care in South Africa, and the National Guideline for the Treatment of Malaria SA.

Other Care

- Routine antenatal care according to the BANC Plus guideline.
- If indicated, a Pap smear can be done during antenatal care at the first visit if the woman is < 20 weeks gestation. If an abnormality is detected, there should be prompt referral for a colposcopy. A Pap smear can be done at 6 weeks post-delivery, if indicated.
- Encourage male partner involvement throughout antenatal care. (Go to ***"Involving Fathers* in Antenatal and Postpartum Care" on page 42***)
- Nutritional screening for mother. Refer any woman with a MUAC of less than 23cm to a dietician
- Counselling on infant feeding. See the Infant and Young Child Feeding Policy
- Mental health screen for mother
- Assist the mother to register on MomConnect

! TB and other non-pregnancy related infections remain an important cause of maternal and neonatal mortality

LABOUR AND DELIVERY

PRIMARY OBJECTIVES

1. Safe delivery for mother and infant
2. Prevent vertical transmission during labour

TESTING for HIV

PICT should be provided to all women presenting in labour ward who are not known to be HIV-positive (including born-before-arrivals [BBAs]):

- Offer couples counselling and partner testing. For the management of the serodifferent couple, go to ***the HIV Prevention section on page 6***.
- Women who choose not to be tested should be offered 'post-refusal' counselling and offered a re-test at every subsequent visit.
- If a woman tests positive at any stage, encourage testing of her other children, and linkage to HIV care and treatment as necessary.
- If a woman has indeterminate or discrepant HIV test results, treat the baby as a high-risk HIV-exposed infant until mother's HIV status can be confirmed. Communicate clearly to the mother and document the results and plan of action in the maternal record and RTHB.

Antiretrovirals

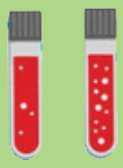
Pregnant women already on ART should continue their current ART regimen at usual dosing times during labour.

Newly diagnosed, or known HIV positive women not on ART:

- Give a stat single fixed dose combination tablet of TDF, 3TC and DTG (TLD) and a stat single dose of NVP.
- Lifelong ART should be initiated the following day after contra-indications to ART have been excluded (Go to ***ART Initiation Algorithm on page 18***). TLD is the preferred regimen. A contraceptive method is recommended. Provide her with a choice of contraceptive options as desired.
- Appropriate ART literacy education should be given to the women before she leaves the facility. (Go to ***Key Adherence Messages on page 19***).
- Mothers must understand and anticipate the adherence challenges that may be experienced in the postpartum period.

> **!** An elevated viral load at delivery increases the risk for poor maternal outcomes and vertical transmission during labour and through breastfeeding.

VL MONITORING and Management

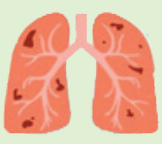


- All women must have a VL test done at the time of delivery.
- Remember to insert the laboratory barcode sticker into the postnatal discharge form and the RTHB.
- The results of the delivery VL will determine the infant's risk-profile. Until the results are known, all infants will receive dual prophylaxis with NVP and AZT.
- The results of the delivery VL must be checked within 3 to 6 days, and the management of the mother-infant pair adjusted accordingly.
- If the mother's delivery HIV VL < 50 c/mL
  - Affirm and encourage good adherence
  - Repeat maternal VL 6 monthly during breastfeeding
  - The infant should be re-classified as low-risk
- If the mother's delivery HIV VL ≥ 50 c/mL
  - The mother should be managed as per ***"Management of a High Maternal Viral Load after Delivery" on page 24***.
  - The infant should be re-classified as higher-risk and managed as per ***"Prophylaxis for the HIV-Exposed Infant at Birth" on page 25***.

Remember to put the correct VTP code in the EGK code field of the laboratory form for each HIV VL done to ensure the electronic gatekeeping rules (EGK) do not lead to sample rejection.
Use the code **C#Delivery** for all VLs done at the time of delivery.

SCREENING for TB and other OI's

- Screen all women for TB at entry to the labour ward, and initiate TPT for women living with HIV before discharge, if eligible (Go to ***"TB Screening and TPT during Pregnancy, Labour, and the Breastfeeding Period" on page 29***).
- Initiate Cotrimoxazole Prophylaxis before discharge if CD4 count ≤ 200 cells/uL, or WHO clinical stage 2, 3, or 4.



Other Care for the Mother living with HIV at delivery

For **all pregnant women**, including those living with HIV, provide routine, safe and respectful care during labour and delivery according to the Maternity Care Guidelines of SA. This includes:

- avoiding unnecessary episiotomies
- avoiding unnecessary assisted deliveries
- avoiding unnecessary rupture of membranes
- avoiding excessive suctioning of the infant
- If a C/section is required, provide prophylactic antibiotics, unless sepsis in the mother requires the use of therapeutic antibiotics

Within 1 hour of delivery

- Encourage skin-to-skin contact with baby and initiate exclusive breastfeeding. Hospitals and labour wards can support mothers to breastfeed by following the WHO ***"The Ten Steps to Successful Breastfeeding" on page 31***. In addition, counsel mother on ***"Breastfeeding Plus" on page 32***.

At discharge

- Ensure contraception has been administered after appropriate counselling (go to ***"Contraception and Safe Conception" on page 7***).
- Provide the mother with two-months' supply of ART and six-weeks supply of infant prophylaxis.
- Communicate follow-up appointment dates for the six-day post-natal visit at a named facility. Provide necessary referral letters. Provide an ART transfer-out letter, if she will receive her ART at a different facility. However, it is recommended that the mother-baby pair continue to receive integrated care within the maternal and child health stream until the baby is two years old or no longer breastfeeding.

Care of the HIV-exposed Infant at Delivery

- All HIV-exposed Infants should receive **a birth HIV-PCR** to identify HIV transmission that occurred in-utero.
- All HIV-exposed Infants should be initiated on **dual post-exposure prophylaxis with NVP and AZT** until the result of the delivery-VL can be reviewed.
  - If the mother-baby pair have already been discharged, this may be at the 3-6 day postnatal visit at the clinic. Clinicians working in postnatal clinics should therefore review the results of delivery VL.
  - If the baby is still admitted to hospital, ward staff should ensure that the results are reviewed.
- Once the result of the delivery VL is known, prophylaxis should be adjusted accordingly.
- If the mother's delivery HIV VL < 50 c/mL regardless of feeding choice:
  - Re-classify the infant as low-risk
  - Stop AZT
  - Continue NVP daily for six weeks
- If the delivery HIV VL ≥ 50 c/mL in a breastfeeding mother
  - Re-classify as higher-risk
  - Continue AZT twice daily for six weeks
  - Continue NVP daily for a minimum of 12 weeks. NVP should only be stopped when the breastfeeding mother has a HIV VL of less than 50 c/mL, or until four weeks after she has stopped breastfeeding.
  - The mother should be managed as per the ***"VL Non-Suppression Algorithm" on page 21***

All higher-risk infants who are exclusively formula fed should receive AZT for 6 weeks and NVP for 6 weeks. (Go to ***"Prophylaxis for the HIV-Exposed Infant at Birth" on page 25***)

Provide oral polio vaccine, BCG and other routine neonatal care as per the Maternity Care and Neonatal Care Guidelines. Do not give BCG if baby is TB-exposed, and will be receiving TB prophylaxis (Go to ***"Management of the Newborn exposed to TB" on page 30***).

PREVENTION of transmission of syphilis, HBV and other infections

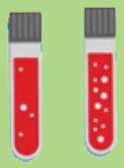
Syphilis: Examine the newborn of the mother who has confirmed or suspected syphilis (see ***"Congenital Syphilis" on page 39***). All symptomatic newborns will require admission for 10 days of treatment. If unable to admit at the current level of care, refer all babies with suspected congenital syphilis infection to the appropriate level of care for inpatient admission & work-up. The following babies should be treated:

1. **Any symptomatic baby** born to a mother with syphilis, regardless of the mother's treatment status. Admit/refer for admission and 10 days of treatment (see "Congenital Syphilis" on page 41).
2. Asymptomatic babies born to mothers with **inadequately treated or untreated syphilis:**
   a. mother did not complete three doses in full, or
   b. mother received three doses but there was a delay of > 14 days between weekly IM doses, or
   c. the last dose was less than 30 days before delivery, or
   d. the dose that the mother received was incorrect, or
   e. mother did not receive any treatment for syphilis, or
   f. mother was treated for syphilis with an antibiotic that was not penicillin

→ Treat with **single dose Benzathine Penicillin G 50 000 units/kg IM**

HBV: All babies born to mothers who are Hepatitis B infected should be delivered at a facility where both hepatitis vaccine and anti-HepB immunoglobulin can be given to the baby on the day of birth. The baby can then continue with the normal hepatitis B vaccination schedule in accordance with the EPI schedule (Go to ***"Management of the Infant Exposed to Hepatitis B" on page 44***).

CARE OF THE MOTHER AFTER BIRTH

	6 DAYS	6 WEEKS	10 WEEKS	6 MONTHS	18 MONTHS
TESTING for HIV 	Retest the HIV-negative mother if she was not retested in labour		Retest every HIV-negative mother at the **10-week visit** (~ three months postpartum), the **six-month visit**, and every **three months** whilst breastfeeding Remember to offer partner testing. If no longer breastfeeding, ensure that the mother receives an HIV test at least every year. Offer/continue PrEP as needed		
Antiretrovirals 	**Mother to continue ART** during the postpartum period and **for life**. If she is **newly diagnosed during the breastfeeding period**, initiate ART after contra-indications to ART have been excluded (Go to ***"ART Initiation Algorithm" on page 18***). Provide appropriate fast-track initiation counselling (FTIC) as per DMOC SOP 1. Initiate TDF, 3TC, and DTG (TLD) as the preferred regimen. This is a high-risk period for poor **adherence**. Ensure that the mother understands the importance of continued viral suppression for her own health and that of her baby. She must also understand and anticipate the adherence challenges that may be experienced in the postpartum period. Link the mother to MomConnect, a CHW, a mentor mother, or a support group/club if available. Whether continued ART care is provided at MNCWH services (preferred) or at PHC/Wellness services, ensure that mother is **retained in care, adherent to ART, and maintains a suppressed viral load**.				
VL MONITORING and Management 	Check ART adherence Follow-up on result of **delivery-VL**. (If not yet available, follow-up again in 1 week. If VL not done at delivery, do VL at this visit) **If VL ≥ 50 c/mL:** • Manage mother as per ***"VL Non-Suppression Algorithm" on page 21***. • Re-classify her infant as higher-risk and manage as per ***"Prophylaxis for the HIV-Exposed Infant at Birth" on page 25***) • If the mother and baby are not receiving integrated care at the same service point, ensure that the delivery VL result is communicated to the clinician caring for her baby	Check ART adherence Repeat VL if delivery-VL was ≥ 50 c/mL. Check mother's ART supply and confirm where she will be receiving her ongoing ART care **!** Viral Load suppression is critical for the health of the mother, her baby, her subsequent pregnancies, and her partner!	Check ART adherence Check, record and act on any earlier VL tests Check mother's ART supply and confirm where she will be receiving her ongoing ART care	Check ART adherence at every visit. Check, record and act on results of any earlier VL tests Do a VL for all HIV-positive mothers on ART at six months. Continue VL monitoring every six months (at 12,18, and 24 months) whilst breastfeeding. Ensure that the results of any VL test done is checked within 1 week. If VL ≥ 50c/mL: • Recall the mother-infant pair to the facility • Manage mother as per ***"VL Non-Suppression Algorithm" on page 21*** • Restart/extend infant prophylaxis if mother is still breastfeeding. Go to ***"Management of a High Maternal Viral Load after Delivery" on page 24***.
SCREENING for TB and other OI's	• Routine postpartum care as per the Maternity Care Guideline • TB screening, TPT, and CPT according to guidelines • Mental Health: Screen for postpartum depression • Contraception and STI screening • Infant feeding counselling and support according to the Infant and Young Child Feeding Policy • Counselling on safe use of water, sanitation and hygiene (WASH) • A Pap smear can be done from six weeks onwards if she is due for a routine papsmear, or if indicated by an earlier abnormal smear		• TB screening, TPT, and CTMX according to guidelines • Mental Health: Screen for postpartum depression • Contraception and STI screening • Infant feeding counselling and support according to the Infant and Young Child Feeding Policy • Counselling on safe use of water, sanitation and hygiene (WASH) • Papsmear (if indicated)	

PRIMARY OBJECTIVES

1. Prevent vertical transmission through Breastfeeding
2. Retain Mother in Care
3. Achieve and Maintain Viral Suppression

CARE OF THE HIV-EXPOSED INFANT AFTER BIRTH

HIV Testing and Early Infant Diagnosis

3-6 DAYS	6 WEEKS	10 WEEKS	6 MONTHS	18 MONTHS	OTHER TESTS (at any time)
Follow-up results of **birth HIV-PCR** and manage accordingly. Any HIV positive neonate should be discussed/referred to a clinician experienced in managing an HIV-positive neonate. ART should be initiated even if the infants weighs less than 2,5 kg.	Ensure that birth HIV-PCR and mother's VL results were checked, recorded and acted upon correctly.	**Do HIV-PCR** for all HIV-exposed infants who previously tested HIV-PCR negative.	**Known HIV-exposed infants:** • **Do HIV-PCR test** at 6 months in all HIV-exposed infants, except in those who previously tested positive and are on ART. **Infants not known to be HIV-exposed:** • At six months of age, establish the HIV status of all infants not already known to be HIV-exposed • Offer an HIV test to the mother. If she tests HIV negative, no infant test is required • If the mother is not available, or refuses an HIV test, get consent and do an HIV rapid test on the infant • All positive infant rapid tests need to be confirmed with an HIV-PCR.	**Universal HIV testing at 18 months** (HIV rapid test for **all** infants regardless of HIV exposure, except in those who previously tested HIV positive and are on ART)	Do an age-appropriate **HIV test 6 weeks post-cessation** of breastfeeding, even if breastfeeding continues beyond 18 months of age. Test a symptomatic child at any age according to IMCI guideline.

! The HIV-exposed but uninfected (HEU) child is at higher risk for poor outcomes and requires careful follow-up. Go to ***"Care of the HIV-exposed but Uninfected Infant" on page 33***

! Use the **NHLS Results for Action (RfA) Reports** to follow up on laboratory results (See ***page 45***). Any child with a positive, indeterminate, or not-resulted PCR should be traced to come back to the clinic urgently. A clinical audit can provide insight into reasons for the failed VTP.

Confirmatory test for HIV

Any child under two years with a positive HIV-PCR or a positive HIV rapid test should have their HIV status confirmed with an **HIV-PCR test on a new sample**. At the clinician's discretion, the HIV-PCR may be replaced by a viral load test which has the advantage of both confirming the HIV diagnosis and providing a baseline VL for monitoring the child's response to ART. **Any child who tests HIV positive should initiate ART** according to the Paediatric ART guideline as a matter of urgency. Do not wait for the confirmatory result before initiating ART **but ensure that this result is checked**. For the Management of Indeterminate HIV PCR results, go to ***"Management of Indeterminate PCR results and the Abandoned Infant" on page 28***.

AGE OF CHILD	HIV SCREENING TEST	HIV CONFIRMATORY TEST
Less than 18 months	PCR	PCR
18 months to 2 years	Rapid	PCR
More than 2 years	Rapid	Rapid

Infant Prophylaxis

Check **adherence**/ tolerance to NVP (and AZT, if applicable). Ask the mother to explain how she administers the infant's medication. Check result of mother's delivery-VL.

If necessary re-classify infant as higher / low-risk and adjust prophylaxis accordingly.

See ***"Prophylaxis for the HIV-Exposed Infant at Birth" on page 25***)

Low-risk infant:
Stop NVP if mother's VL at delivery was < 50 c/mL.

Higher-risk infants:
- **stop AZT**,
- **continue NVP** for a minimum of 12 weeks until maternal viral load suppression is obtained, or until four weeks after all breastfeeding has stopped.

Higher-risk infants:
Continue NVP prophylaxis. Review VL result if repeated at 6 weeks and stop/ extend NVP as necessary.

At every visit, check results of mother's most recent VL. An elevated VL may require higher-risk infant prophylaxis (6 weeks AZT twice daily and 12 weeks NVP daily) to be restarted or existing NVP prophylaxis to be extended. Go to ***"Management of a High Maternal Viral Load after Delivery" on page 24***.

! Remember to adjust NVP dosages according to weight

Stop NVP after 12 weeks only if mother's VL is < 50 c/mL. If the maternal VL is not suppressed by 12 weeks, continued NVP **until mother's VL is <50 c/mL**, or until four weeks after all breastfeeding has stopped.

If a child tests **HIV positive** at any stage, **stop NVP** prophylaxis, **initiate ART**, do a confirmatory HIV PCR, and initiate cotrimoxazole prophylaxis according to guidelines.

If mother diagnosed with HIV after delivery or during the breastfeeding period go to ***"Management of a High Maternal Viral Load after Delivery" on page 24***

! For any child who tests HIV-positive ensure that:
- Confirmatory testing has been done and the child is tracked and linked to care,
- The mother and other significant caregivers are counselled appropriately,
- CHWs are involved,
- The child is registered on Tier.net & retained in care.
- a nutritional assessment is done, and the breastfeeding mother is advised to continue breastfeeding her HIV positive baby

Other Routine Care

Routine growth monitoring, immunisations, nutritional support. Provide advice to support breastfeeding. Go to ***"Breastfeeding Plus" on page 32***

Routine growth monitoring, immunisations, vit A, deworming and nutritional support. Provide advice to support **breastfeeding**. Go to ***"Breastfeeding Plus" on page 32***

Early referral to community-based services improves adherence to ART, exclusive breastfeeding and retention in care

Care of the non-pregnant woman of childbearing potential (CBP) at home

- Ask if she is using reliable contraception, and if not, refer to the clinic. Discuss the advantages of planned parenthood.
- Screen all woman of childbearing potential (CBP) for pregnancy. If she is not on reliable contraception or her period is late, provide/refer her for a pregnancy test.
- Encourage all girls, boys, women, and men to test for HIV if they are sexually active. Offer an HIV test to the woman and her partner if they have not tested in the last year.
- Discuss healthy nutrition with the family.

Encourage pregnant women to attend at the antenatal clinic

- Identify pregnant woman early.
- Encourage booking at the antenatal clinic before 14 weeks.
- Encourage attendance of all 8 antenatal appointments.
- Track and trace any woman who missed their clinic appointments.

Identify the pregnant woman living with HIV

- Check that she has been offered an HIV test during this pregnancy.
- Encourage partner testing.
- Encourage testing of any other children living in the household if she tests positive for HIV.

Counsel all pregnant women on good nutrition and following a healthy lifestyle

- Discuss infant feeding.
- Follow a healthy diet.
- Avoid tobacco, alcohol, drugs and traditional remedies.
- Wash your hands after using the toilet, before and after preparing food, or after changing a baby's diaper/nappy.
- Practice safe sex and continue to use condoms.

Prevent vertical transmission of HIV, syphilis and TB

- Provide education on STI's, HIV, ART and the importance of viral load suppression.
- Encourage adherence to ART and all other treatment provided by the clinic.
- Counsel on the importance of exclusive breastfeeding.
- Screen all woman for TB and STI's.

Promote safety during pregnancy and delivery

- Educate her and her family on danger signs in pregnancy.
- Educate her on the signs of labour.
- Encourage the mother to deliver in a clinic or hospital.
- Encourage her to plan her mode of transport to the delivery site.

Postnatal care for mother and baby

- Check mother for bleeding, infections, mastitis (see ***"Universal Measures to Prevent Infections during Pregnancy" on page 5***), and depression. Screen the mother for TB.
- Refer mother or baby at any stage if ill, including the jaundiced (yellow-skinned) baby.
- Educate mother on universal infection control practices if either mom or baby are ill (Go to ***"Universal Measures to Prevent Infections during Pregnancy" on page 5***).
- Provide support for exclusive breastfeeding and advise on latching and positioning of baby whilst feeding.
- Educate on hygienic cord care and keeping the baby warm (thermal care).
- Continue to support good adherence to ART, cotrimoxazole (if indicated), and other treatment.
- Make sure that the mother is giving infant NVP (and AZT) correctly (NVP once daily and AZT twice daily).
- Make sure mother and baby attend all postnatal check-ups and immunisation appointments.
- Check that baby is growing well. Refer for an assessment by a clinician if there are any growth concerns.
- Educate mother on contents of RTHB, including infant nutrition and danger signs in infants and children.

4 PART 4 – ALGORITHMS AND DECISION TOOLS

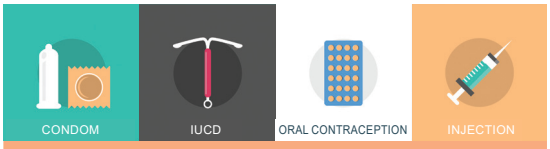
DOLUTEGRAVIR (DTG) IN PREGNANCY

BENEFITS OF DOLUTEGRAVIR[16]

- ✓ Superior Efficacy
- ✓ Side-effects are mild and uncommon
- ✓ High genetic barrier to resistance
- ✓ Cost effective
- ✓ Small tablet
- ✓ No interaction with hormonal contraceptives
- ✓ Can be used with TB treatment if boosted

Evolving evidence has found there to be no significant difference in neural tube defect (NTD) prevalence between DTG- and EFV-exposure at conception[17].

TLD is now the preferred first-line regimen in all WOCP, regardless of her intentions to conceive, her pregnancy status, or whether she is using contraception or not.



Concerns regarding neural tube defects (NTDs) on DTG in previous years created an important focus on the **integration of contraception into ART services.**
Contraception services should continue to be offered with ART and child health services in an integrated and patient-centred manner. This is especially urgent if the women's VL is not suppressed.

All Adult and Adolescent Females and Males ≥ 30 kg and ≥ 10 years of Age

TDF + 3TC + DTG (TLD)

SWITCHING EXISTING CLIENTS TO DTG-CONTAINING REGIMENS

Women who have already initiated ART on non-DTG containing regimens should be transitioned to a DTG-containing regimen as a matter of urgency. The table below provides guidance on non-VL dependent switching of existing clients to DTG-containing regimens.

NON VL-DEPENDENT REGIMEN SWITCHES
Regimens where the VL result will not influence nor delay the decision to switch to a DTG-containing regimen

Current Regimen	Criteria for switch	Regimen if change indicated
TEE ABC/3TC/EFV AZT/3TC/EFV AZT/3TC/DTG On any LPV/r or ATV/r regimen for less than 2 years duration	**Switch all to a DTG-containing regimen, regardless of VL result** Do VL at booking/1st ANC visit as for all pregnant women on ART. If VL at booking visit is not suppressed, continue to switch same day, but do ABCDE assessment and provide enhanced adherence counselling (EAC) if needed.	**TLD** provided no renal dysfunction and age > 10 yrs and weight > 30 kg If client does not qualify for TDF **ABC/3TC/DTG** If client does not qualify for TDF and has ABC hypersensitivity **AZT/3TC/DTG**

VL-dependent switches to DTG
Women who have been on PI-based regimens for more than two years also require a transition to a DTG-containing regimen. However, transitions in these women are VL-dependent: their VL result in the last 12 months will influence the decision of how and when to switch to a DTG-containing regimen. For further guidance, please refer to ***"Switching Existing Clients to DTG-containing Regimens" on page 15*** of the 2023 ART Clinical Guidelines

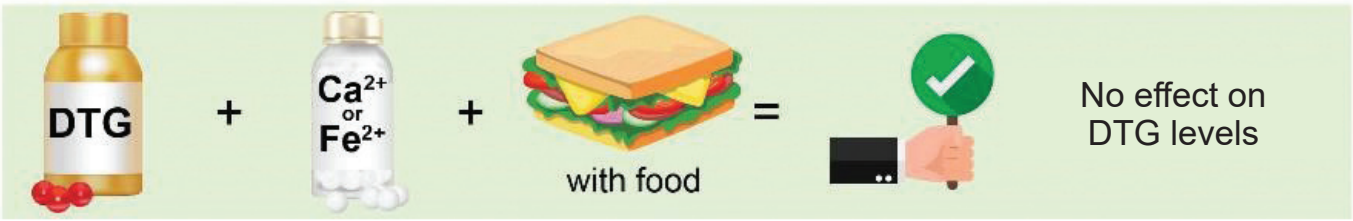
DRUG INTERACTION WITH DOLUTEGRAVIR

INTERACTING DRUG	EFFECT OF CO-ADMINISTRATION	RECOMMENDATION
Rifampicin	↓ Dolutegravir	Increase DTG dose to 50 mg 12-hourly. If on TLD FDC, add DTG 50 mg 12 hours after TLD dose
Polyvalent cations (Mg^{2+}, Fe^{2+}, Ca^{2+}, Al^{3+}, Zn^{2+}) e.g. antacids, sucralfate, multivitamin and nutritional supplements*	↓ Dolutegravir	Calcium supplements decrease DTG concentrations if taken together on an empty stomach. To prevent this, DTG and calcium supplements can be taken at the same time if taken with food. Iron supplements decrease DTG concentrations if taken together on an empty stomach. To prevent this, DTG and iron supplements can be taken at the same time if taken with food. However, calcium and iron supplements must be taken at least 4 hours apart. Magnesium/aluminium containing antacids decrease DTG concentrations regardless of food intake and should be taken a minimum of 2 hours after or 6 hours before DTG.

* Many over the counter (OTC) medications contain polyvalent cations. Clinicians should regularly ask clients about OTC medication use and advise about possible interactions.

Medications for **diabetes** and **epilepsy** also have important drug interactions. Pregnant women with co-morbidities, e.g., diabetes or epilepsy are a high risk group who should be discussed with an expert/referred.

See also *https://www.hiv-druginteractions.org/checker* as a useful resource to check for drug interactions or the SA HIV/TB Hotline smart phone application



However, Calcium (Ca^{2+}) and Iron (Fe^{2+}) must be taken 4 hours apart

ART INITIATION ALGORITHM

Any pregnant or breastfeeding women with a new HIV diagnosis, or any known positive woman (not currently on ART) with a new pregnancy diagnosis

* Known HIV positive women, who are not currently on ART, but are ART-exposed (e.g. previous VTP, or previous LTFU on ART) should initiate TLD.

! Timing of ART initiation in pregnancy is critical. Every week a mother is on ART further decreases her risk of vertical transmission[10]

Take a history and do a clinical examination:
Exclude contra-indications to starting ART on the same day. Ask about TB symptoms, or a history of renal disease. Determine the client's WHO Clinical Stage. Start cotrimoxazole (CPT) if eligible.
Do the following tests on **all** HIV positive pregnant women, regardless of symptoms or history:
CD4 count, s-Creatinine, sputum for TB Gene Expert (GXP), and urine dipstix

TB Symptoms with danger signs:
If the woman appears very ill with any of the following signs, **discuss with a doctor or refer for further assessment. Do not start ART until TB is excluded/diagnosed as these women may be at a higher risk of developing IRIS: difficulty breathing, respiratory rate >30/min, temperature > 38°C, pulse > 100min, BP < 90/60, coughing up blood, signs of meningitis (neck stiffness, visual disturbances), confusion, agitation, or unable to walk unaided.**.

TB Symptoms without danger signs

History of renal disease

If no abnormal history

Initiate ART same day: TDF, 3TC/FTC, and DTG preferred*
If TDF contraindicated due to history of/suspected renal disease replace TDF with ABC.
Review results in 3-7 days

Ensure a thorough evaluation for TB.
Remember to also consider extra-pulmonary TB

TB GXP negative, but still TB symptoms

Investigate with CXR, 2nd sputum for culture/line probe assay (LPA) +/- antibiotics as per National TB Guidelines. If CD4 <200, do a urine LAM.

TB GXP positive

TB Diagnosis confirmed → **Initiate TB Rx**

Review in 2 weeks. If stable and tolerating TB Rx, initiate ART (if not already initiated). DTG requires boosting with TB treatment to 50 mg twice daily. If TB symptoms worsen after ART initiation, consider TB IRIS and refer/discuss with the HIV hotline. If TB meningitis, defer ART for 4 to 6 weeks.

TB GXP negative (or unable to produce sputum), AND no TB symptoms

Continue ART: TDF, 3TC/FTC, DTG*

If the client is tolerating ART, **initiate TPT for 12 months,** if eligible.[15]
Ensure that active TB has been excluded, and check for other contra-indications to TPT. No TST necessary. (Go to ***"TB Screening and TPT during Pregnancy, Labour, and the Breastfeeding Period" on page 29***)

CD 4 ≤ 100

Do CrAG

CrAG neg

CrAG pos

Refer Urgently for LP

Creatinine > 85 umol/L

Continue/adjust ART to **ABC**, 3TC and DTG. Adjust dose of 3TC (and any other drugs) as needed. Discuss with an expert/HIV-hotline re further investigations and management.

No abnormal results and CD4 more than 100

Continue ART
Initiate TPT, if eligible (Go to *"TB Screening and TPT during Pregnancy, Labour, and the Breastfeeding Period" on page 29*).

For a *"Summary of 1st Line Art Regimens" on page 19*

KEY ADHERENCE MESSAGES
(DIFFERENTIATED MODELS OF CARE STANDARD OPERATING ROCEDURES, 2023)[11]

Step 1 Education about HIV

- What does HIV do to your body?
- How taking ART can help you?
- The importance of VL suppressions for mother and baby.
- Risks of poor adherence.
- Side-effects of ART.

Step 2 Identify Life Goals

- What are the things that make you want to stay healthy and alive?

Step 3 Identify Support Systems

- Who could support you in taking your treatment?
- Would you agree to have a CHW visit you at home?

Step 4 Coming to your appointments

- What will you do if something prevents you from coming to your appointment (such as no money for transport, raining when you usually walk, taxi strike or a sick child, or any other reason)?
- Go to the clinic as soon as possible if you do miss an appointment or run out of ART
- Always take your medication with you to your clinic appointments to enable the HCW to better assist you

Step 5 Assess readiness to start ART

- Do you feel ready to start treatment as soon as possible?

If not, stay supportive. Invite client to express their beliefs or concerns.Correct misconceptions (avoiding judgments).

! Do not turn away an ART client who reports to have run out of treatment and presents without a transfer letter!

Step 6 Medication schedule

- According to your schedule, what would be the best time for you to take your treatment?

Step 7 Reminders

- What could you use to remind you to take your medication? (e.g. alarm, someone to remind them, when "Generations" is starting on TV, etc.)

Step 8 Missed Doses

- What will you do if you miss a dose?

Advise them to take the treatment as soon as they remember.

Step 9 Storing your medication and extra doses

- Do you worry about people seeing or stealing your treatment?
- Which safe place could you identify to store your treatment? Check that it is outside the reach of children.
- In case you don't have access to your treatment at the time you are supposed to take it, how can you always carry 1 or 2 doses with you?

Step 10 Managing Side-effects

- Side-effects such as dizziness, nausea, headache or diarrhea can happen when starting treatment. Most side-effects go away after a few weeks. If you vomit up to one hour after taking the medication, take your treatment again. Severe side-effects are rare. If you don't feel well, it is important you don't stop your treatment and come to the clinic.

SUMMARY OF ART REGIMENS FOR ADOLESCENT GIRLS (10 – 19 YEARS) AND ADULT WOMAN INITIATING ART

Any WOCP with normal renal function, with or without TB,	Weight ≥ 30 kg	TDF 300 mg, 3TC 300 mg, DTG 50 mg (TLD) as a single fixed dose combination tablet taken once daily
	Weight < 30 kg	Replace TDF with Abacavir 300mg bd (or 600mg once daily)
	DTG requires boosting with TB treatment to 50 mg twice daily. This will require one standard fixed dose combination tablet of TLD to be taken at the normal time, and an additional single tablet of DTG 50 mg to be taken 12 hours later.	
Abnormal renal function	Tenofovir (TDF) is contraindicated	Replace TDF with Abacavir 300mg bd (or 600mg once daily)
Known HIV positive women, who are not currently on ART, but are ART-exposed (e.g. previous VTP, or previous LTFU on ART)	Weight ≥ 30 kg	TDF 300 mg, 3TC 300 mg, DTG 50 mg (TLD) as a single fixed dose combination tablet taken once daily
	Weight < 30 kg	Replace TDF with Abacavir 300mg bd (or 600mg once daily)

For further information see the **2023 ART Clinical Guideline**

These monitoring bloods are in addition to the *"Viral Load Monitoring Schedule" on page 20*

MONITORING BLOODS ON ART

Time on ART	Creatinine (only if on TDF)	CD4
At ART Initiation	✓	✓
Month 3	✓	
At 1 year	✓	✓
Annually	✓ (aligned with annual VL)	If clinically indicated

NSA refers to the *"VL Non-Suppression Algorithm" on page 21*

Remember to put the correct VTP code in the EGK code field of the laboratory form for each VL done to ensure the electronic gatekeeping rules (EGK) do not lead to sample rejection.
Use the code **C#PMTCT** for all VLs done during ANC or the breastfeeding period.
Use the code **C#Delivery** for all VLs done at the time of delivery.

START HERE

Select a category for the woman starting ART from the pink blocks below:

Months on ART in ANC/Postpartum		Newly initiating ART or re-initiating ART on a DTG-based regimen (before 28 weeks gestation)	Already on ART at Pregnancy Diagnosis	Late presenter in ANC after 28 weeks, or at dellivery
Antenatal VL Monitoring	Baseline	ART initiated at 1st ANC visit	VL at ANC 1st visit	ART initiated after 28 weeks or at delivery
	1 months		VL<50 / VL≥50 → NSA	
	2 months			
	3 months	1st VL at 3 months on ART		
	(4 months)	VL<50 / VL≥50 → NSA		
	(5 months)			
Delivery		All women get a VL at delivery (results must be checked at postnatal visit before 6 days)		1st VL at delivery
Postnatal VL Monitoring	10-12 weeks PP		VL<50 / VL≥50 → NSA	VL at 10-12 weeks on ART
	4 months PP			VL<50 / VL≥50 → NSA
	5 months PP			
	6 months PP	VL at 6 months postpartum		
	6-monthly	VL 6-monthly during breastfeeding		

! Ensure that the results of any VL test are checked within 1 week. If VL ≥ 50c/mL:
- Recall the mother-infant pair to the facility.
- Extend infant prophylaxis if mother is still breastfeeding. Go to *"Management of a High Maternal Viral Load after Delivery" on page 24.*

If in doubt about when to take, or how to interpret, a VL result, call the HIV hotline **0800 212 506**

VL NON-SUPPRESSION ALGORITHM FOR PREGNANT AND BREASTFEEDING WOMEN

VL unsuppressed (VL ≥ 50 c/mL) in a pregnant or breastfeeding woman

Do a thorough assessment of the cause of an elevated VL
as per *"ABCDE Assessment of an Elevated Viral Load" on page 22*

Implement interventions to re-suppress the VL.
Switch to TLD if indicated (See *"Switching Existing Clients to DTG-containing Regimens" on page 16*)
Start, re-start, or extend **high-risk infant prophylaxis** if breastfeeding, and intensify breastfeeding support. Recommend **condom use and contraception** as appropriate, and partner testing

Repeat VL after 4-6 weeks [1]

VL < 50 c/mL
Repeat as per *"Viral Load Monitoring Schedule" on page 20*

If the repeat VL is **unsuppressed** [2] **(VL ≥ 50 c/mL)**

Re-assess and resolve adherence issues! [3]
(See also *"ABCDE Assessment of an Elevated Viral Load" on page 22*)

On TLD for **at least 2 years**,
and **two** or more consecutive **VLs ≥ 1000 c/mL**
(taken two or more years after starting TLD regimen)
and **adherence > 80%** [5]

Go to the algorithm for
"Management of confirmed virological failure on TLD" of the ART Clinical Guideline

On TLD **less than** 2 years [4]
or adherence still suboptimal [5],
or persistent low-level viraemia [6]

Repeat VL in 3 months' time
(or at delivery if > 28 weeks gestation)
Intensify efforts to
resolve adherence issues [7]

1. The shorter 4-week interval between doing the first VL above 50 and the repeat VL is preferred wherever possible. However, if the first elevated VL is the delivery-VL, the next visit may only occur at the 6-week post-natal visit.
2. Due to their high genetic barrier, resistance to a first-line DTG-containing (TLD1) regimen is extremely rare. If other reasons for an unsuppressed VL have been addressed or excluded, e.g., drug interactions, and the client remains unsuppressed at their repeat VL, suboptimal adherence remains the most probable cause for non-suppression. The highest probability of improving adherence would be to remain on a once-daily, well-tolerated, fixed-dose combination regimen (TLD) while identifying and addressing the underlying root causes of non-adherence. Most (99,9%) of these clients will re-suppress on TLD if adherent!
3. Repeat ABCDE assessment as outlined on page 23. Screen for and manage any vomiting in pregnancy. Check if the patient is crushing/breaking ARV tablets which can affect absorption. Remember to ask about treatment side-effects, the potential cost of transport or loss of income related to clinic visits, mental health conditions, and current or prior drug interactions. Current or previous drug interactions with rifampicin or the polyvalent cations may have resulted in the development of resistance.
4. Drug interactions may also warrant an expert discussion and authorisation of a resistance test earlier than 2 years on the regimen. If necessary, discuss with an expert
5. Objective measures of good adherence include **at least one of**:
   a. Pharmacy refills > 80% in the last 6-12 months (if this is known)
   b. Attendance of > 80% of scheduled clinic visits in the last 6-12 months (if this is known)
   c. Detection of current antiretroviral drug/s in the client's blood or urine, if available
   Note: Self-reported adherence is not considered a reliable measure of good adherence!
6. Two or more consecutive VLs between 50 and 999 c/mL
7. Women who fail to suppress on TLD1 despite intensive adherence support or who are failing TLD2 or 3rd line should be discussed with an expert/HIV hotline or referred. These women may be experiencing complex clinical and/or psychosocial challenges beyond the scope of this primary care guideline, and may require a tailored approach to maternal management, infant prophylaxis, and recommendations for breastfeeding.

BREASTFEEDING WITH AN ELEVATED VIRAL LOAD

It is recommended that women with an unsuppressed VL on TLD1 continue to breastfeed. Exclusive breastfeeding is strongly recommended if the baby is less than 6 months old. Infant prophylaxis should be extended/restarted while a concerted effort is made to re-suppress the mother's VL
(see *"Management of a High Maternal Viral Load after Delivery" on page 24*).

Although breastfeeding in women with an unsuppressed VL on TLD2 or 3rd line ART is not recommended (particularly if the VL > 1000 c/mL) due to the risk of resistant HIV transmission, exclusively formula feeding may also pose risks to vulnerable children. These mother-baby pairs should be referred or discussed with a team of experts*, and social circumstances considered. If formula feeding is deemed the lesser risk, intensive formula feeding support and close monitoring by the therapeutic nutrition programme are recommended. Infant formula should be supplied by the DoH. See also *"Stopping Breastfeeding" on page 33*.

* A team of experts may include an HIV expert, paediatrician, dietician, social worker. If necessary, consult one of the *"HIV Hotline" on page 22.*

Abbreviations: ART, Antiretroviral therapy; DTG, Dolutegravir; LLV, Low-level viraemia; SOP; TL, Third-line; TLD, fixed-dose combination of tenofovir, lamivudine, DTG; VL, Viral load.

ABCDE ASSESSMENT OF AN ELEVATED VIRAL LOAD

A thorough assessment is essential for any client with a viral load measuring ≥ 50 c/mL

! Remember, an elevated VL in a pregnant or breastfeeding mother is a **MEDICAL EMERGENCY!**
Every week she continues with an elevated VL increases her risk for vertical transmission!

A **Adherence**	Is adherence to medication poor? Ask about factors that may influence adherence e.g. • Medication side-effects, • Mental health disorders (see mental health screen below), • Alcohol or substance abuse, • Poor social support or • Non-disclosure. Pregnant women may experience nausea, heartburn, and constipation. Assess the need for symptomatic treatment with an anti-emetic, anti-diarrhea agent, or fiber supplement.	**Tips** Ask open ended questions e.g. "What makes it difficult for you to take your treatment?", and "How many doses have you missed this week?" Be non-judgemental. Statements like "we all miss a dose now and then" can encourage a client to be more open.
B **Bugs (Infections)**	Check for symptoms and signs of infection. Do a TB and STI screen.	Remember that immune compromised and pregnant clients may not exhibit overt symptoms of TB. If in doubt, do a TB GXP.
C **Correct Dose**	Is the client on the correct dose for her weight? This is especially applicable to young or malnourished girls who may have recently gained weight, or clients with previous renal impairment.	
D **Drug Interactions**	Are there any potential drug interactions? Consider: • Other prescribed treatment e.g. rifampicin, anti-epilepsy drugs • Over the counter treatment e.g. antacids • Supplements and herbal/traditional medications e.g. St John's wort	If in any doubt, call the **HIV Hotline** **0800 212 506**
E **RE-sistance**	Consider HIV drug resistance if other causes of virological failure have been excluded and the client is adherent to their medication.	Refer to the algorithm for "Management of confirmed virological failure" in the 2023 ART Clinical Guideline

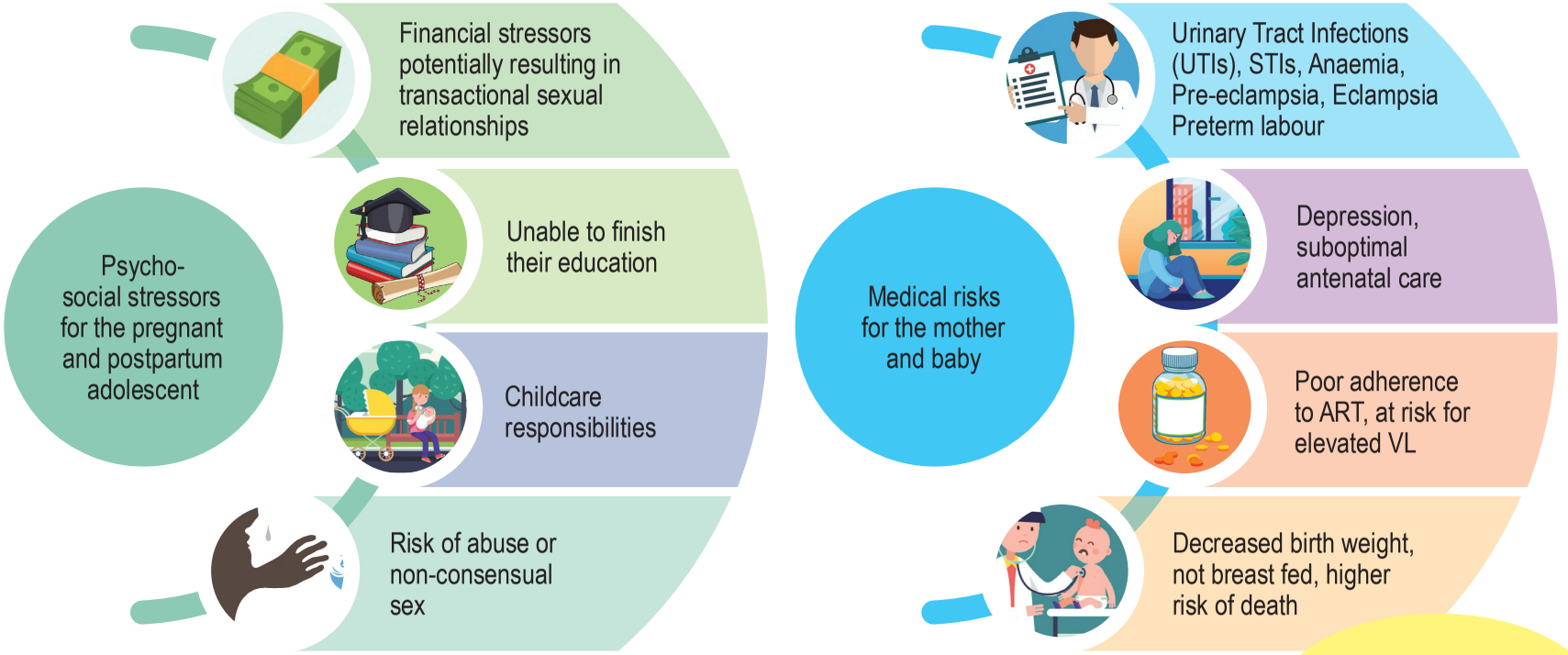
MENTAL HEALTH DISORDERS

Pregnancy, childbirth and the first year after birth are often stressful times for women. Mental health conditions affect a person's **feelings, thoughts**, **behaviours**, and **functioning**. Women with mental disorders may struggle to use health and social services that are available and may struggle to bond with and parent their children.

Mental Health Screen

When to screen	Screen at booking visit in antenatal care, once during each trimester, and once during the postnatal period (from 6 weeks to 3 months). Thereafter, screen at regular intervals for up to one year.
How to screen	**Ask the following 3 screening questions, using a gentle and kind attitude:**
	In the last 2 weeks, have you felt unable to stop worrying or thinking too much? (Yes = 1 point; No = 0)
	In the last 2 weeks, have you felt down, depressed, or hopeless? (Yes = 1 point; No = 0)
	In the last 2 weeks, have you had thoughts and plans to harm yourself or commit suicide? (Yes = 1 point; No = 0)
When to refer	If the Total score across the 3 questions = **2 or 3 points**, **refer** If a patient answers 'yes' to the **self-harm** question, **refer urgently** for a mental health assessment with a medical officer or mental health professional
Additional Resources: Maternity Care Guidelines; Primary Healthcare and Adult Hospital Standard Treatment Guidelines (STGs); Adult Primary Care (APC); FAMSA 0119757106/7; Lifeline 0861 322 322	

Pregnant adolescents are a vulnerable group that have psycho-social stressors and medical risks that may result poor health outcomes[14]



For ART Regimens applicable to adolescents go to ***"Summary of 1st Line Art Regimens" on page 19***

The pregnant adolescent requires non-judgmental, confidential, and quality youth friendly SRH services that are sensitive to the challenges and stressors experienced by adolescents. This care should include:

A determination of whether or not the pregnancy was intended/unintended? wanted/unwanted? Provide counselling about options in terms of proceeding/not proceeding with the pregnancy.	**High quality basic antenatal care**, considering the additional medical risks in an adolescent.	**Intensive ART adherence support** during ANC, breastfeeding and there-after. If available, she should attend a peer-led support group.	Education and intensive support for **breastfeeding and VTP**. Adolescent are more likely not to breastfeed.	Counselling on **contraceptives, STIs** as well as **re-entering the education system**. Long-acting reversible contraceptive methods are preferred.	An exploration of the **possibility of abuse or non-consensual sex** to ensure that she is in a safe environment. If not, the involvement of the police and social services should be facilitated.

MANAGEMENT OF A HIGH MATERNAL VIRAL LOAD AFTER DELIVERY

Follow **ART Initiation Algorithm** for mother on page 18, and the **VL Monitoring schedule** on page 20

A Mother may have a high VL after delivery due to:

A new HIV diagnosis after delivery

or

An elevated VL of ≥ 50 c/mL after previously being suppressed on ART.

Re-suppress the mother's VL as a matter of urgency! Follow the ***"VL Non-Suppression Algorithm" on page 21***

See ***"Dosing Charts for Prophylaxis for the HIV-Exposed Infant" on page 27***

Infant currently breastfeeding, or has breastfed in the last week

Immediate infant HIV-PCR

Provide Dual Infant Prophylaxis: AZT twice daily for 6 weeks, and NVP for a minimum of 12 weeks (until the maternal VL is suppressed), regardless of infant's age. Clearly document the prophylaxis start date.

Infant HIV-PCR negative

Complete 6 weeks of AZT and a minimum of 12 weeks of NVP. If needed, continue NVP for longer until mothers VL < 50 c/mL.

Do HIV-PCR 6 weeks after stopping NVP

Breastfeeding never started or stopped more than 1 week ago.

Immediate Infant HIV-PCR

No prophylaxis needed as baby is no longer being exposed to HIV

Infant HIV-PCR negative

Do all routine HIV tests according to the age and schedule for HIV exposed Infants:

- HIV-PCR at age 10 weeks
- HIV-PCR at age 6 months
- HIV-PCR 6 weeks post-cessation of breastfeeding
- HIV Rapid test at age 18 months
- Test anytime baby is unwell

Enquire as to why breastfeeding was stopped or never started. Ensure that the mother understands the risks of not breastfeeding, and that she has made an informed choice as to whether she will continue breastfeeding or not. See also the Infant and Young Child Feeding Policy.

Women who fail to suppress on TLD1 despite intensive adherence support or who are failing TLD2 or 3rd line should be discussed with an expert/HIV hotline or referred. These women may be experiencing complex clinical and/or psychosocial challenges beyond the scope of this primary care guideline, and may require a tailored approach to maternal management, infant prophylaxis, and recommendations for breastfeeding, including possibly stopping breastfeeding and the prescription of infant formula to be supplied by the DoH (see ***"Stopping Breastfeeding" on page 33***)

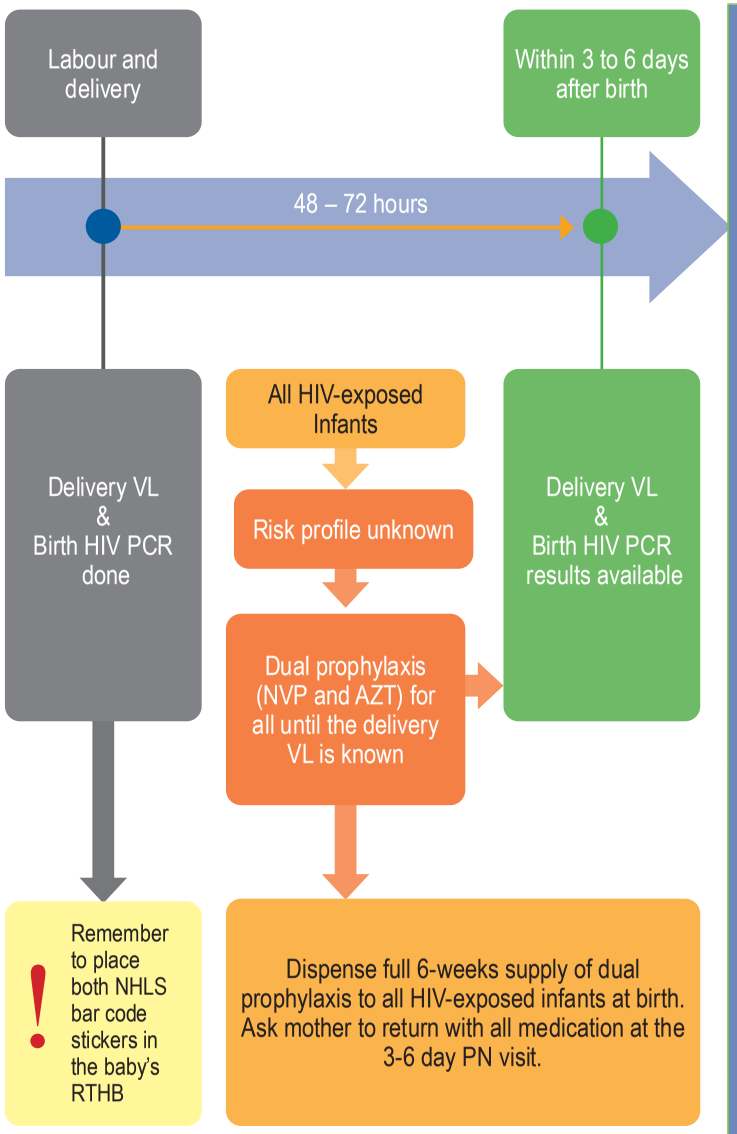
If Infant tests HIV-PCR positive at any stage.

Confirm positive result with a 2nd PCR on a new sample. Stop any HIV prophylaxis. Initiate ART. Start cotrimoxazole (CPT)

For any child who tests HIV-positive ensure that:

- A confirmatory HIV test was done
- The child is tracked and linked to care
- The mother and other significant caregivers are counselled appropriately
- CHWs are involved
- The child is registered on Tier.net & retained in care
- a nutritional assessment is done, and the breastfeeding mother is advised to continue breastfeeding her HIV positive baby for 2 years or longer

The VTP strategies include timely HIV diagnosis, ART initiation and VL suppression in the mother (either pre- or post-conception) and the provision of HIV post-exposure prophylaxis to the infant. The mother's response to ART by the time of delivery is measured by the delivery VL, which will also determine the risk profile of the infant at birth and, subsequently, the infant's ART prophylaxis regimen. While awaiting the delivery VL result, all infants should, in the meantime, receive dual prophylaxis (NVP & AZT) until the VL result can be reviewed. If the mother-baby pair have already been discharged, this may be at the 3-6 day postnatal visit at the clinic. Clinicians working in postnatal clinics should therefore check the results of delivery VL. If the baby is still admitted to hospital, ward staff should ensure that the results are checked. Once the result of the delivery VL is known, prophylaxis should be adjusted accordingly.



Reclassify risk profile

Maternal Delivery VL *	Classification	Prophylaxis	Comment
Delivery VL< 50 copies/mL regardless of feeding choice	Low risk	Change to low-risk prophylaxis • Stop AZT • NVP daily for six weeks.	• Affirm and encourage good adherence. • Repeat maternal VL 6 monthly during breastfeeding. • Do all routine HIV tests for HIV-exposed infants as indicated on ***"HIV Testing For The HIV-Exposed Infant" on page 26.***
Delivery VL ≥ 50 copies/mL in a breastfeeding mother**	Higher risk	Continue dual prophylaxis: • AZT twice daily for six weeks. • NVP daily for a minimum of 12 weeks.	• Do an ABCDE assessment and intervention as a matter of urgency to achieve a suppressed VL in the mother as soon as possible. Follow the ***"VL Non-Suppression Algorithm" on page 21.*** • Stop infant NVP only after confirmation of maternal VL being less than 50 c/mL, or until four weeks after cessation of all breastfeeding. • Do all routine HIV tests for HIV-exposed infants as indicated on ***"HIV Testing For The HIV-Exposed Infant" on page 26.***
Delivery VL ≥ 50 copies/mL in a mother who is exclusively formula-feeding her infant from birth	Higher risk	Continue dual prophylaxis: • AZT twice daily for six weeks. • NVP daily for six weeks.	• Do an ABCDE assessment and intervention as a matter of urgency to achieve a suppressed VL in the mother as soon as possible. Follow the ***"VL Non-Suppression Algorithm" on page 21.*** • Do all routine HIV tests for HIV-exposed infants as indicated on ***"HIV Testing For The HIV-Exposed Infant" on page 26.***
Birth PCR positive	HIV infected	Stop any NVP and AZT prophylaxis. Initiate ART. Confirm the positive result with a 2nd PCR on a new sample. Start cotrimoxazole prophylaxis therapy (CPT) at 6 weeks of age.	

* All women known to be living with HIV should have a VL at delivery. This includes women who are newly diagnosed during labour, newly initiating ART, or re-initiating ART

** Breastfeeding includes exclusive breastfeeding or mixed feeding

PROPHYLAXIS FOR THE HIV-EXPOSED INFANT DURING BREASTFEEDING

Maternal VL monitoring should happen 6-monthly during breastfeeding.
At every visit, check the results of the mother's most recent VL.
An elevated maternal VL during breastfeeding may require an infant HIV PCR to be done and higher-risk infant prophylaxis to be started, re-started, or extended

The following are situations in which a mother's VL may be elevated. These situations are therefore indications to provide higher-risk infant prophylaxis during breastfeeding:	**Infant prophylaxis to be provided:**	Remember to adjust NVP dosages according to weight (See ***"Dosing Charts for Prophylaxis for the HIV-Exposed Infant" on page 27***)
1. A new HIV diagnosis while breastfeeding 2. A mother on ART with her most recent VL ≥ 50 c/mL 3. A mother who is HIV positive but not on ART Go to ***"Management of a High Maternal Viral Load after Delivery" on page 24***.	• AZT twice daily for six weeks. • NVP daily for a minimum of 12 weeks.	

HIV TESTING FOR THE HIV-EXPOSED INFANT

HIV TESTING SCHEDULE

Birth HIV-PCR

HIV-PCR at age 10 weeks

HIV-PCR at **6 months** for all HIV-exposed infants
- Aligned with 6-month maternal HIV VL

Universal 18 month rapid/ELISA for all children
- Whether exposed or un-exposed
- Aligned with 18-month maternal HIV VL

Age-appropriate test at **6 weeks post-cessation of BF**

Age-appropriate test at any time if the baby is unwell

CONFIRMATORY TESTING

Any child under two years with a positive HIV-PCR or a positive HIV rapid test should have their HIV status confirmed with a HIV-PCR test on a new sample. At the clinician's discretion, the HIV-PCR may be replaced by a viral load test which has the advantage of both confirming the HIV diagnosis and providing a baseline VL for monitoring the child's response to ART. Any child who tests HIV positive should initiate ART according to the Paediatric ART guideline as a matter of urgency. Do not wait for the confirmatory result before initiating ART but ensure that this result is checked. See ***"Management of Indeterminate PCR results and the Abandoned Infant" on page 28***

AGE OF CHILD	HIV SCREENING TEST	HIV CONFIRMATORY TEST
Less than 18 months	PCR	PCR
18 months to 2 years	Rapid	PCR
More than 2 years	Rapid	Rapid

DOSING CHARTS FOR PROPHYLAXIS FOR THE HIV-EXPOSED INFANT

Summary of infant prophylaxis regimens

	Risk Profile	NVP	AZT
At birth (following maternal delivery VL review)	Low-risk, whether breastfed or formula-fed	6 weeks	Stop AZT
	Higher-risk and breastfed **	minimum of 12 weeks	6 weeks
	Higher-risk and exclusively formula fed	6 weeks	6 weeks
During breastfeeding	Higher-risk during breastfeeding	minimum of 12 weeks	6 weeks

Dosing charts for infant HIV prophylaxis in infants > 2000 g

NVP and AZT dosing table for prophylaxis at birth and during breastfeeding (see also *"VL Non-Suppression Algorithm" on page 21*)					
	Birth – 6 weeks		6 weeks – 6 months	6 – 9 months	9 – 24 months
	2.0 – 2.49 kg	≥ 2.5 kg			
NVP (Daily)	1 mL (10 mg) daily	1.5 mL (15 mg) daily	2 mL (20 mg) daily	3 mL (30 mg) daily	4 mL (40 mg) daily
AZT (Twice daily)	1 mL (10 mg) twice daily	1.5 mL (15 mg) twice daily	6 mL (60 mg) twice daily	Children > 6 months of age requiring AZT prophylaxis should use treatment doses.	

Dosing charts for infant HIV prophylaxis in preterm infants < 2000 g

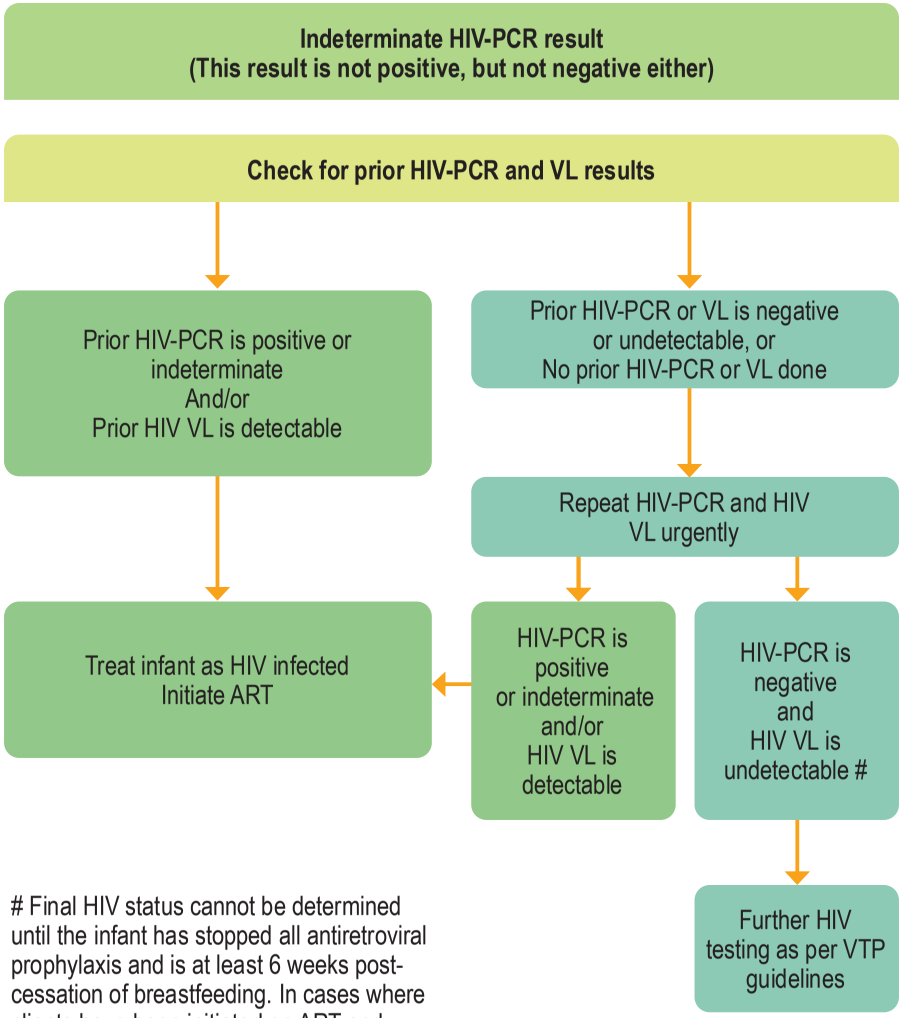
Nevirapine, oral, once daily		
Weight	**First 2 weeks after birth (mg of NVP)**	**After first 2 weeks after birth (mg of NVP)**
500 to < 625 g	0.1 mL (1 mg)	0.2 mL (2 mg)
625 to < 850 g	0.15 mL (1.5 mg)	0.3 mL (3 mg)
850 to < 1200 g	0.2 mL (2 mg)	0.4 mL (4 mg)
1.2 to < 1.5 kg	0.3mL (3 mg)	0.5 mL (5 mg)
1.5 to < 2.0 kg	0.35 mL (3.5 mg)	0.6 mL (6 mg)
If the infant at the time of discharge is severely underweight-for-age (3 SD or 3 z-scores below the mean), give NVP according to weight (i.e. 4 mg/kg/dose daily) until in the normal weight-for-age range.		

Zidovudine (AZT), oral, twice daily				
Gestational age at birth	**First 2 weeks after birth**	**2 – 4 weeks after birth**	**4 – 6 weeks after birth**	**> 6 weeks after birth**
30–35 weeks	0.2 mL/kg (2 mg/kg)	0.3 mL/kg (3 mg/kg)	0.4 mL/kg (4 mg/kg)	
<30 weeks	0.2 mL/kg (2 mg/kg)		0.3 mL/kg (3 mg/kg)	0.4 mL/kg (4 mg/kg)

Dosing chart for intravenous (IV) AZT prophylaxis

Gestational Age	Approximate birth weight	AZT IV dosing for the first 14 days (If unable to tolerate oral agents)
≥ 35 weeks	≥ 2.5 kg	3 mg/kg body weight IV every 12 hours
< 35 weeks	< 2.5 kg	1.5 mg/kg body weight IV every12 hours

MANAGEMENT OF INDETERMINATE PCR RESULTS IN INFANTS

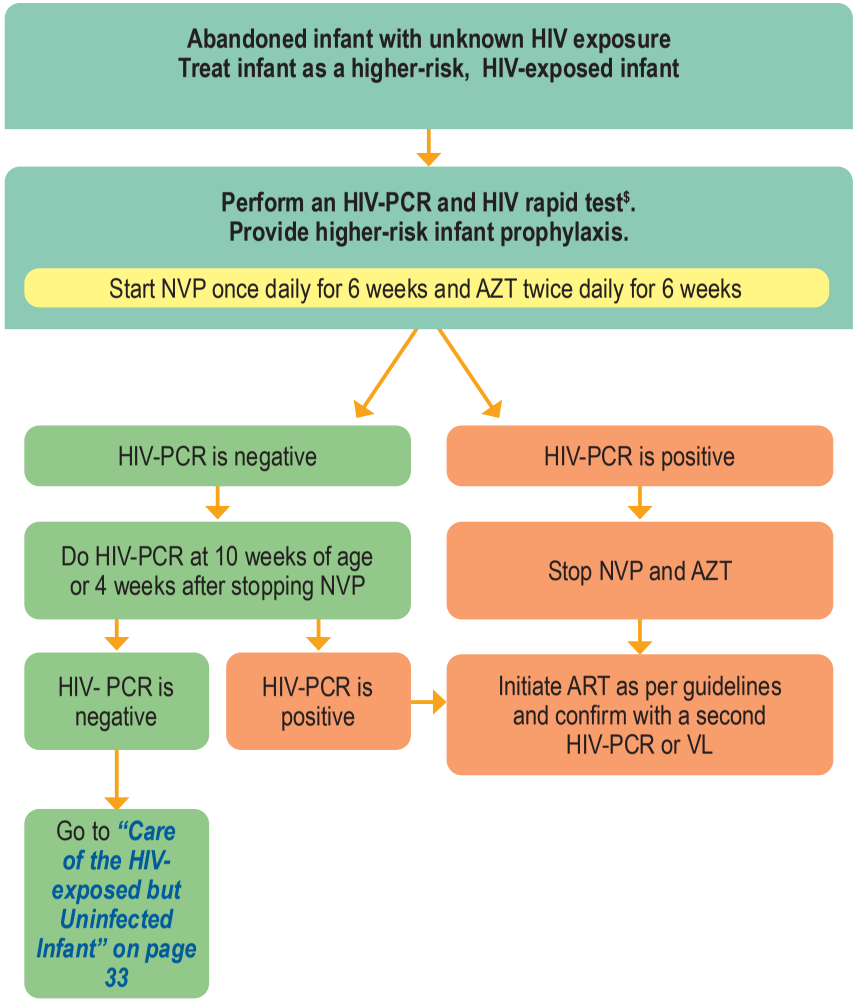


Final HIV status cannot be determined until the infant has stopped all antiretroviral prophylaxis and is at least 6 weeks post-cessation of breastfeeding. In cases where clients have been initiated on ART and diagnosis remains uncertain, clients should be referred for further management by a specialist clinical and laboratory team. ART should never be stopped without specialist supervision.

! If in doubt, discuss with a virologist, or contact the NICD at HIV@nicd.ac.za
Document all test barcodes in the RTHB and referral letters

PCR, polymerase chain reaction; VL, viral load; ART, antiretroviral therapy

THE ABANDONED INFANT



$ A positive HIV rapid test will confirm HIV exposure and assist clinical management. However, a negative HIV rapid test may be falsely negative. Due to the unavailability of the mother, the HIV-exposure status of an infant with a negative rapid test can therefore not be definitively established. For this reason, all abandoned infants should have an HIV-PCR test performed and be managed as a higher-risk HIV-exposed infant. An HIV rapid test therefore adds value if it is positive but does not change the management of the infant if it should be negative.

All women should be evaluated for TB at every visit

IPT is now known as **TPT** (TB Preventive Therapy)
TPT treats Latent TB Infection (LTBI)

At 1st / Booking visit in ANC

All pregnant women with a new HIV diagnosis, or
All known HIV positive woman with new pregnancy diagnosis
(whether on ART or not on ART)

Assess TB symptoms and clinical condition:
If TB symptoms without danger signs, or no TB symptoms present, **initiate ART**.
If the woman appears very ill with any of the following signs, **discuss with a doctor or refer for further assessment. Do not start ART until TB is excluded/diagnosed as these women may be at a higher risk of developing IRIS:**
weight loss > 5%, difficulty breathing, respiratory rate >30/min, temperature > 38°C, pulse > 100min, BP < 90/60, coughing up blood, confusion or agitation, or unable to walk unaided.

Do a TB GXP for all women at 1st visit in ANC, due to the lower sensitivity of the symptom screen in pregnant women.

- GXP neg, but TB symptoms still present → Additional investigations as per National TB Guidelines
  If CD4 ≤ 100, do a urine LAM
  - TB diagnosis confirmed → Initiate TB Rx
  - Initiate TB Rx
- GXP positive → Initiate TB Rx
- TB GXP negative (or unable to produce sputum) AND no TB symptoms → Initiate/continue ART

Review in 2 weeks: If stable and tolerating TB Rx, continue TB Rx and initiate/continue ART:
TDF, 3TC/FTC, DTG[$]
If TB meningitis, defer ART for 4 to 6 weeks

Initiate TPT after contra-indications have been excluded*

At Follow-up visits

HIV positive woman currently on TPT

Check:
1. Adherence to TPT, ART (and CPT)
2. Side-effects of TPT
3. TB symptoms

- 1 or more TB symptoms present → Investigate as per National TB Guideline
  - If TB diagnosed, stop TPT, initiate full TB Rx and send a sputum sample for culture and drug sensitivity test (DST)
- No TB symptoms present → Continue TPT for a total of 12 months

All HIV positive women who are not currently on TPT and have never had TPT in the past

TB symptom screen

- No TB symptoms present → Initiate TPT for 12 months (after excluding other contra-indications to TPT *) Record start date of TPT
- 1 or more TB symptoms present → Investigate as per **National TB Guideline (2014)**

***Contra-indications to TPT**
- Positive TB symptom screen
- Alcohol abuse
- Liver disease
- Known hypersensitivity to INH

TPT dosage: Isoniazid (INH) 300 mg daily PO, and Pyridoxine 25 mg daily PO x 12 months

[$]DTG requires boosting with TB treatment.
See *"Dolutegravir (DTG) in Pregnancy" on page 16*.

MANAGEMENT OF THE NEWBORN EXPOSED TO TB

Newborn exposed to TB
(born to a mother diagnosed with TB during antenatal or peripartum care, or a newborn with other significant TB exposure[1])

Does the baby have active TB disease?

Do a thorough clinical assessment
Assess for symptoms/signs of TB disease. Systems evaluated should include lungs, abdomen (including liver, spleen) and CNS. Consider baby's HIV status,birth weight, growth restriction and whether premature or not.
Do not give BCG [2]

Clinical assessment suggestive of active TB disease in the newborn [3]

No indications of active TB

Is the mother or close contact still potentially infectious?

Does the mother or close contact have any one of the following that indicates she could still be infectious?
- On TB treatment < 2 months, OR
- Symptoms that are not improving, OR
- Sputum smear or culture has not yet converted to negative, or is unknown at the time of birth

Refer/discuss any mother who is not responding to TB treatment as expected

NO

YES

Is the baby eligible for TPT?

If eligible, what TPT regimen should the baby receive?

Baby does not require TPT

Baby requires TPT

Determine if mother has DS or DR TB

Refer/discuss any mother diagnosed with drug resistant TB with an expert [4]

Mother has DS TB or drug susceptibility unknown

HIV-exposed/HIV-positive baby on NVP, DTG or LPV/r or on any other drug with rifampicin interaction?

YES

NO

6H*

3RH*

Support adherence, evaluate for side-effects, monitor weight and adjust doses, evaluate for TB symptoms **until TPT completed.**
Ensure that HIV testing and prophylaxis (or ART treatment) has been provided as appropriate

Give BCG [2]

Telephonic consultation with expert

OR

Undertake appropriate clinical and laboratory investigation in newborn

OR

Refer newborn to hospital

Refer/discuss any mother diagnosed with **drug resistant TB** with an expert or call the HIV Hotline 0800 212 506

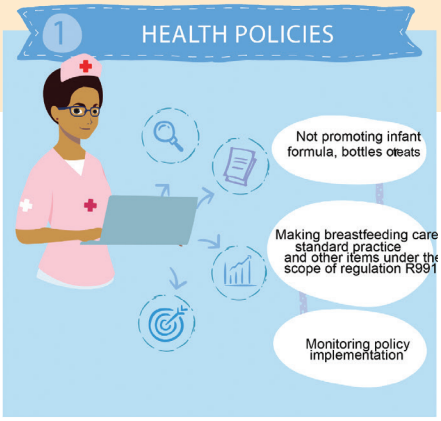
1. Significant exposure is known (documented) exposure to a person (adult or adolescent) with pulmonary TB who shared the same enclosed space for one or more nights (e.g. at home or similar) or for frequent or extended daytime periods (e.g. at a school, crèche or similar) during the three months before the index patient started TB treatment.
2. BCG is a live attenuated M.bovis vaccine and is killed by TB medications, including those used in TPT. For this reason, BCG should not be given at birth if the baby is going to start TPT. However, it is critical that BCG should be given immediately after the completion of TB preventive treatment or TB treatment. If the child is also living with HIV, discuss with HIV clinician to decide when BCG should be given.
3. These infants must be investigated for TB disease – if TB disease has been excluded, infants should return to algorithm for TPT
4. For management of DR-TB exposure, refer to the latest National DR-TB Guidelines

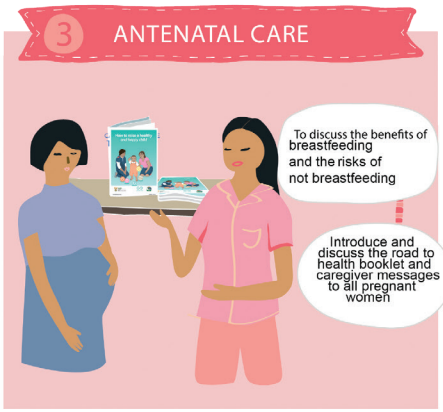
*** For TPT Dosing Table see *"Annexure 5 – TPT DOSING TABLES" on page 52***

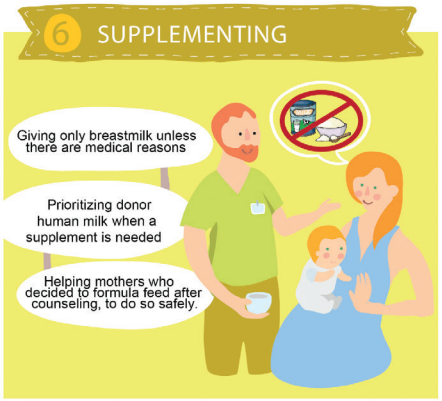
Abbreviations: BCG Bacillus Calmette-Guérin; CNS Central nervous system; DS Drug susceptible; DR Drug resistant; 6H 6 months of INH; 3RH 3 months of rifampicin and INH; TPT tuberculosis preventive treatment.

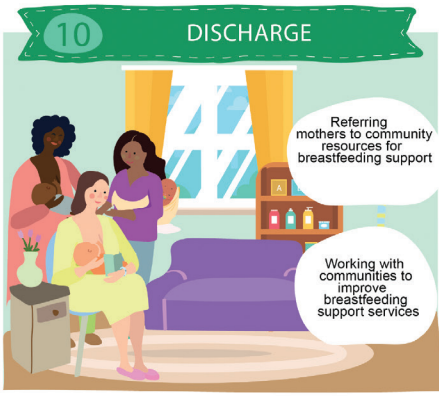
The **TEN STEPS** to Successful Breastfeeding

All Health Facilities must support mothers to breastfeed as a standard of care by implementing the following...









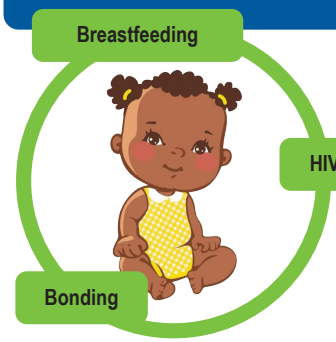
health
Department:
Health
REPUBLIC OF SOUTH AFRICA

World Health Organization

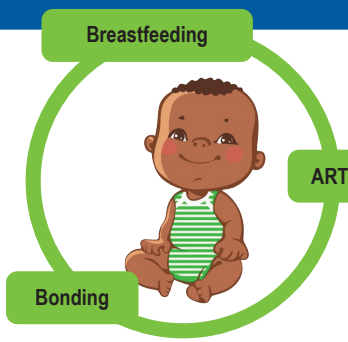
unicef

Poster Adapted for South Africa 2018

Breastfeeding Plus



BF+



Infant feeding in the context of HIV:
Integration of nutrition, nurture & medical intervention.

HIV Un-exposed Infant

HIV NEGATIVE WOMEN

1. HIV Risk Reduction
   - Number of sexual partners
   - Condom use
   - Partner testing
   - Partner ART and viral suppression
   - PrEP (as available and applicable)
2. Regular HIV Testing
3. Infant Feeding advice and support

HIV-exposed Infant

WOMEN LIVING WITH HIV

1. ART and VL suppression
2. Infant prophylaxis
3. Infant testing
4. HIV Risk reduction (re-infection and risk to partner)
   - Number of sexual partners
   - Condom use
   - Partner testing
   - Partner ART and viral suppression
5. Infant Feeding advice and support

Whether a woman is living with HIV or HIV-uninfected, recommendations for Infant feeding remain the same

! HIV VL suppression in mother is essential to prevent vertical transmission through breastfeeding!

Infant Feeding Advice

For all women, exclusive breastfeeding (EBF) is recommended for the 1st six months of life. Thereafter, breastfeeding should continue for two years or longer, with the introduction of nutritionally adequate, appropriate and safe complementary feeding. Women living with HIV should be fully supported for ART adherence during the breastfeeding period and thereafter

Antenatal	0 - 6 months	6 - 12 months	12 - 18 months	18 months - 2 years
Counselling on the benefits of breastfeeding should start during the antenatal period	Early initiation of BF within 1 hour after birth. EBF for 1st 6 months of life	**Continue breastfeeding until 2 years of age or longer**		
		Start introducing age appropriate solid foods from 6 months onwards as outlined in the RTHB		

! Introducing solids before 6 months is strongly discouraged! The younger the infant, the higher the risk to the infant's health.

WHO Practice Statements for Women Living with HIV

- Any mother that is mixed feeding in the first 6 months should be encouraged to return to exclusive breastfeeding.
- However, mothers living with HIV and health-care workers can be reassured that ART reduces the risk of postnatal HIV transmission in the context of mixed feeding. Although exclusive breastfeeding is recommended, practicing mixed feeding with formula milk is not a reason to stop breastfeeding in the presence of ARV drugs.
- Mothers living with HIV and health-care workers can be reassured that shorter durations of breastfeeding of less than 12 months are better than never initiating breastfeeding at all.

STOPPING BREASTFEEDING

Stopping Breastfeeding

- Mothers living with HIV who decide to stop breastfeeding should do so gradually over a period of a month.
  Abrupt cessation of breastfeeding is not recommended and may increase the VL in breastmilk. If subsequent intermittent breastfeeding should occur, the infant is at increased risk of becoming HIV infected.
- Infants who have been receiving ART prophylaxis should continue prophylaxis for four weeks after all breastfeeding has stopped.
- Children must receive an adequate diet following cessation of breastfeeding as outlined in the Infant and Young Child Feeding Policy.

Indications for Formula Feeding to be provided by the Dept of Health Supplementation Scheme

1. Infants of mothers who are failing TLD2 or third-line ARV treatment (VL ≥1000 c/mL)
   Note: Although breastfeeding in women with an unsuppressed VL on TLD2 or 3rd line ART is not recommended due to the risk of resistant HIV transmission, exclusively formula feeding may also pose risks to vulnerable children. These mother-baby pairs should be referred or discussed with a team of experts, and social circumstances considered. If formula feeding is deemed the lesser risk, intensive formula feeding support and close monitoring by the therapeutic nutrition programme are recommended. See also the ***"VL Non-Suppression Algorithm" on page 21***.
2. The mother has died, or the infant has been abandoned.
3. Other individual circumstances deemed necessary by a multidisciplinary team including certain metabolic conditions in the infant, medical conditions in the mother, or certain maternal medications as outlined in the PHC EML.

Where there are legitimate medical conditions, as diagnosed by a medical practitioner, or when a mother is incapable of caring for her infant or young child, health care personnel should recommend appropriate infant formula feeding as an alternative feeding option for up to 12 months of age. The mother/caregiver should receive appropriate counselling on the safe preparation of formula, the age-appropriate quantities and how to cup feed. Once the child reaches 12 months of age, pasteurised full cream milk (400-600ml/day) should be recommended, as ongoing formula for children older than 12 months is not necessary.

CARE OF THE HIV-EXPOSED BUT UNINFECTED INFANT

More than 25% of the total infant population in SA are HIV-exposed and more than 98% of these infants are HIV negative. Yet, having escaped HIV infection, they may still suffer the consequences of being born to a woman living with HIV. HIV-exposed but Uninfected (HEU) children still require:

Routine Child Health Management

- Manage and treat acute problems according to the IMCI guidelines
- Provide feeding counselling and support
- Monitor growth and development
- Provide routine immunizations, Vit A, and deworming
- Screen for TB symptoms and TB index cases and manage accordingly
- Ask about mother's health, ART adherence, and contraception needs
- Provide social support and counselling for age-appropriate parental disclosure

Routine Management for the HIV-Exposed Infant

- Ongoing interventions to prevent vertical transmission through breastfeeding
- All routine HIV tests as indicated in this guideline for HIV-exposed infants

Additional Management for the HEU Infant

HEU infants may experience poorer outcomes despite being HIV uninfected, and may require more regular follow-up.
Identify high-risk HEU infants who may require closer monitoring, including those with:

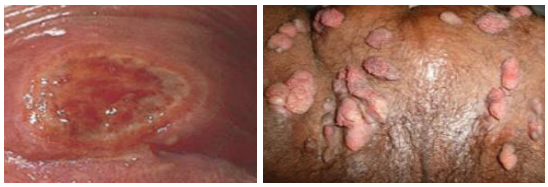
- Poor birth outcomes
- Symptoms of anaemia
- Impaired growth and/or neurodevelopment
- History of hospitalisation
- Maternal illness or death

Ongoing Care for the Mother and her Family

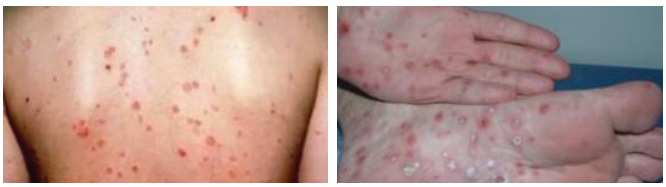
- Remember to provide appropriate ongoing care to the women living with HIV and her family.
- If a breastfeeding mother is sick or hospitalised, consider appropriate ways she can continue breastfeeding. If not, ensure that baby receives appropriate care whilst mother is hospitalised.
- Screen partner and other children for HIV and other infectious disease as indicated (e.g. TB)

SYPHILIS

Syphilis is a sexually transmitted infection that can have multiple different presentations but also be asymptomatic. The signs of secondary syphilis occur six to eight weeks after the primary ulcer (chancre) and may include a generalized rash (often including palms and soles), flu-like symptoms, flat wart-like genital lesions (condylomata lata), mouth ulcers and patchy hair loss. Tertiary syphilis occurs many years later and affects skin, bone, heart and nervous system.

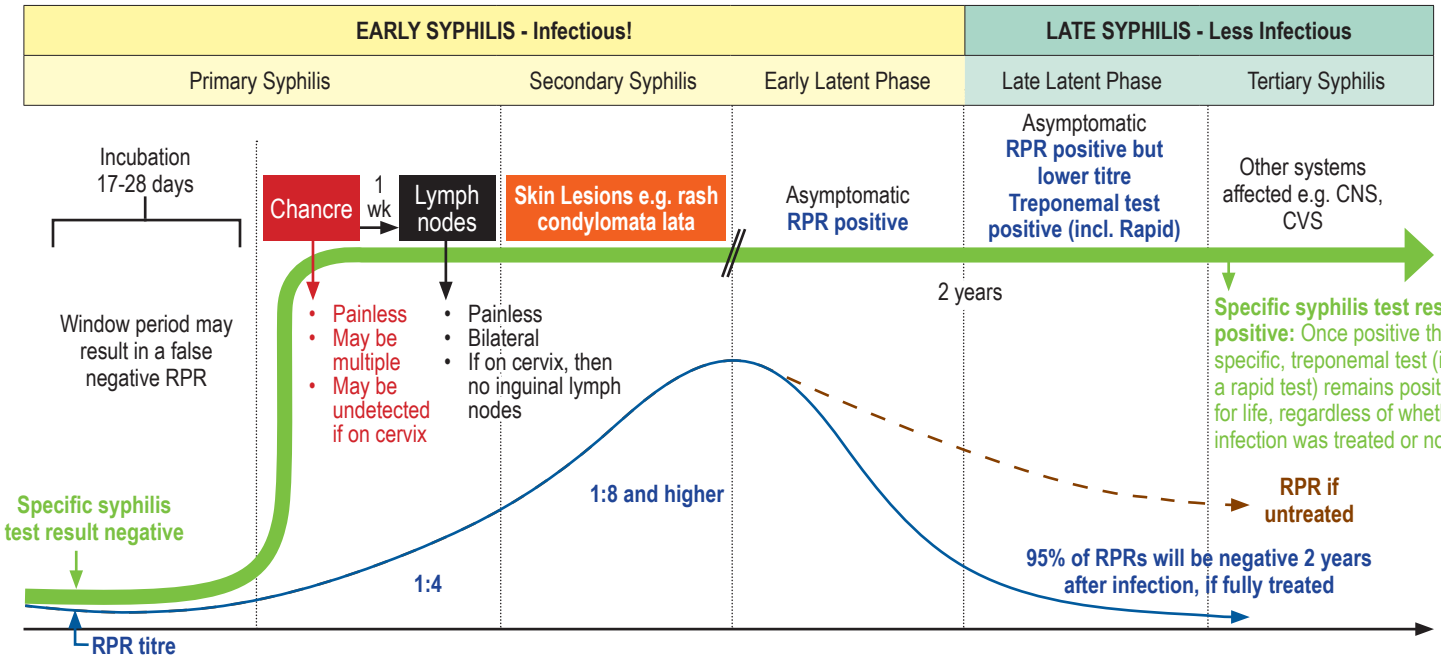


Painless ulcer/chancre and condylomata lata on genitals



Rash involving palms and soles

The stages of disease progression of syphilis are illustrated in the figure below, together with the typical clinical presentation in each stage, and the level of the RPR titre (blue graph) if treated. This timeline is an approximation, and may vary from client to client. Note that a genital ulcer caused by syphilis will resolve spontaneously within four to six weeks without treatment; however, the syphilis infection persists, and the ulcer (or other symptoms) resolving does not represent cure.



Frequency of syphilis testing

A pregnant woman should be screened and tested for syphilis

- at her 1st/booking visit in antenatal care.
- If she tests negative, syphilis testing should be repeated:
  - Scheduled antenatal visits, at approximately 4-weekly intervals, e.g., for BANC+ clients, this could be at 20, 26, 30, 34, and 38 weeks gestation
  - During her labour/delivery admission
  - At the time of diagnosis of an intrauterine death or miscarriage
  - At any time, if the mother has clinical symptoms or signs suggestive of syphilis

Syphilis testing should be aligned with the HIV testing schedule:

- If a woman tests positive for HIV, but tests negative for syphilis, repeat syphilis testing should continue at the intervals described above.
- If a woman tests positive for syphilis but tests negative for HIV, repeat HIV testing should continue at recommended intervals

NOTE: If a client is CURRENTLY being treated for syphilis during their current pregnancy, they should NOT be re-tested for syphilis apart from the recommended RPR titre test which is performed a minimum of 3 months after concluding syphilis treatment.

TYPES OF SYPHILIS TESTS AND THEIR USES

- **Rapid syphilis tests** use a type of test known as a specific (or treponemal) test for syphilis. Rapid syphilis tests remain positive for life, even if the infection has been treated.
- **RPR type syphilis tests** are known as non-specific (or non-treponemal) tests and are usually done in a laboratory. RPR titres change in response to treatment or disease progression.
- If a rapid test is used as the screening test (preferred), a positive result should be confirmed using an RPR test. The RPR will determine if the positive rapid result indicates a current active infection or an earlier infection, and the baseline titre allows the response to treatment to be monitored
- Once a woman has tested positive using a rapid test, a rapid test should no longer be used for routine screening to identify new infections at subsequent visits. A rapid test cannot differentiate between a new and a previous infection. A RPR should then be used as the screening test to identify new infections

When available and appropriate, **rapid testing is the preferred first-line test in pregnancy**, as it allows for immediate treatment.

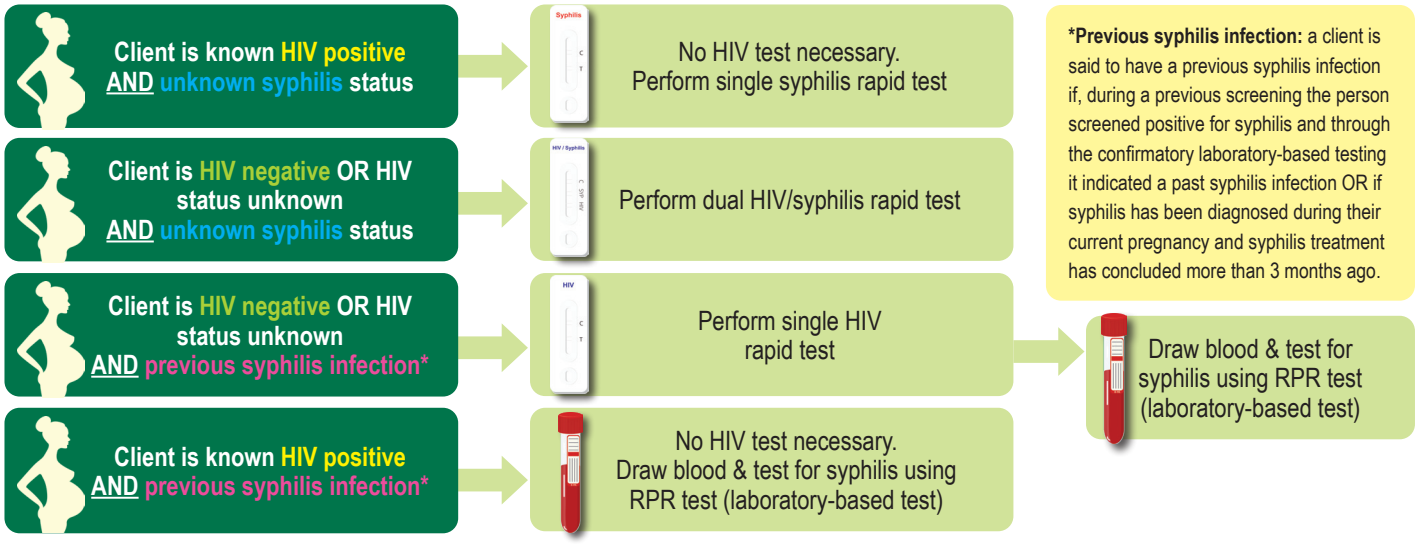
Rapid syphilis tests are available as a **single** rapid diagnostic test (RDT) that tests only for syphilis, and a **dual** RDT which tests for both syphilis and HIV using the same drop of blood.

Dual syphilis and HIV rapid tests should only be used in clients

- **Whose HIV status is negative or unknown AND**
- **Who have not had a previous syphilis infection**

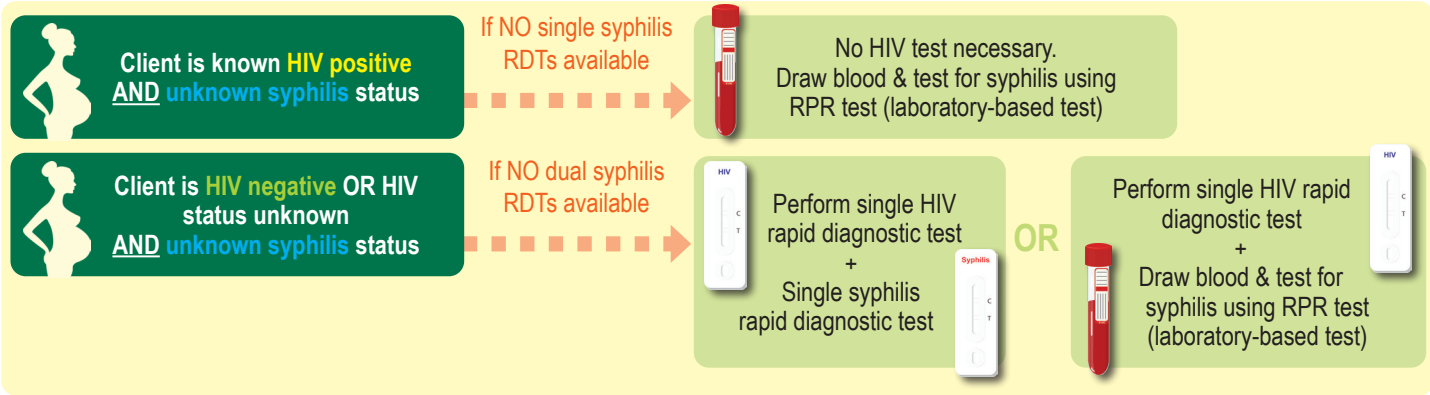
! Clients who are already known to be living with HIV should NOT be re-tested for HIV and should therefore not use a **dual** syphilis and HIV rapid test!

HIV & Syphilis Testing Guide for Pregnancy: Which test should be used when?



***Previous syphilis infection:** a client is said to have a previous syphilis infection if, during a previous screening the person screened positive for syphilis and through the confirmatory laboratory-based testing it indicated a past syphilis infection OR if syphilis has been diagnosed during their current pregnancy and syphilis treatment has concluded more than 3 months ago.

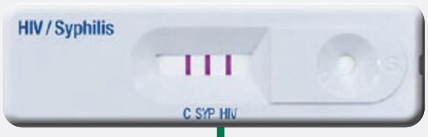
What to do when a facility does not have syphilis rapid tests in stock



SYPHILIS RAPID DIAGNOSTIC TESTING

Single syphilis rapid test

Dual HIV syphilis rapid test



Interpretation for syphilis component of the dual test

Perform **syphilis** rapid test
Assess for clinical signs of syphilis & counsel on condom use.

Screening test:
Syphilis REACTIVE

Treat: **Penicillin Dose 1***

Confirm the syphilis diagnosis:
Send a single blood sample* to the laboratory requesting an **RPR test**
A note should be added to the specimen request form as follows:
"If the RPR result is negative, the lab should proceed to do a specific syphilis test on the same blood specimen"
Ask the client to return in 1 week for results.

Screening test:
Syphilis NON-REACTIVE

Syphilis Negative

No current & no previous syphilis infection

* If other blood tests are also being requested, e.g. an HIV VL, send the syphilis sample with its own specimen request form to prevent delays in processing of the test.

RPR **NON-REACTIVE**
AND
Lab-based specific syphilis test
NON-REACTIVE

Syphilis Negative

No current & no previous syphilis infection

Continue routine screening for syphilis using: **rapid tests**

RPR **NON-REACTIVE**
AND
Lab-based specific syphilis test
REACTIVE

Syphilis Negative

No current active syphilis infection
Positive specific test indicates ***past infection***

Continue routine screening for syphilis using: **RPR tests.**
Do not use rapid tests as, once positive, it remains positive for life

RPR **REACTIVE**

Syphilis Positive

Counsel: that a diagnosis of syphilis is confirmed
Treat: Penicillin dose 2*
Document: RPR titre
Trace & test sexual partners
Schedule: Penicillin 3rd dose in 1 week

Treat: **Penicillin dose 3***

Repeat RPR titre 3 months after treatment completion to **confirm response to treatment**[$]

*** Treatment for syphilis**

- Check for a history of penicillin allergy (all over body rash, bronchospasm, hypotension/collapse, or neck/throat swelling after previously taking penicillin).
- If no history of penicillin allergy, give **2.4 MU of benzathine penicillin IM** x 3 doses, at weekly intervals.
- If the mother has a delay of > 14 days between weekly IM doses, the mother is considered untreated, and the entire course must be restarted

If the woman reports a penicillin allergy:

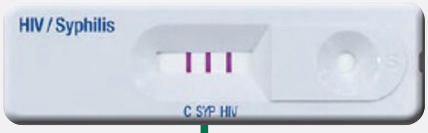
- Take a careful history to confirm the likelihood of true allergy.
- Penicillin is the only known drug that effectively treats syphilis in the fetus.
- Refer to hospital for penicillin desensitization (see EML for details) and syphilis treatment under close observation by a doctor trained to manage anaphylaxis.

[$] Confirm response to syphilis treatment:

- A 4-fold drop in RPR titre confirms effective treatment (e.g., 1 in 32 goes down to 1 in 8).
- Do not re-check RPR until at least 3 months after treatment is completed.
- If the titre was low to start with (1 in 4 or less), then a drop may not be seen after 3 months.
- A low titre may take years to disappear completely.
- Only be concerned if there is a rise in titre compared to the initial low titre.

HIV RAPID DIAGNOSTIC TESTING

Dual HIV syphilis rapid test



Single HIV RDT

Interpretation for HIV component of the dual test

Perform **HIV** rapid test
Assess for clinical signs of syphilis & counsel on condom use.

Screening test:
HIV REACTIVE

Perform HIV Confirmatory Test

Confirmatory test:
HIV REACTIVE

HIV Positive

Initiate on ART

Confirmatory test:
HIV NON-REACTIVE

Repeat the Testing Algorithm #

Repeat screening test:
HIV NON-REACTIVE

HIV Negative

Refer to HIV prevention services

Repeat screening test:
HIV REACTIVE
AND
Repeat HIV confirmatory test:
HIV NON-REACTIVE

HIV Discrepant

Refer to:
Reflex Laboratory Testing

Screening test:
HIV NON-REACTIVE

HIV Negative

Refer to HIV prevention services

Repeat screening test:
HIV REACTIVE
AND
Repeat HIV confirmatory test:
HIV REACTIVE

HIV Positive

Initiate on ART

 # Repeat the Testing Algorithm

- When repeating the testing algorithm, the same screening test that was initially used should be used again, i.e.:
  - If the dual HIV syphilis RDT was used as the initial screening test for HIV, the dual HIV syphilis RDT should be used again to repeat the HIV screening. Evaluate only the HIV component of the dual test. (In the unlikely event that the client tests positive for syphilis using the dual test, treat as per the syphilis diagnostic algorithm).
  - If the single HIV RDT was used as the initial screening test for HIV, the single HIV test should be used again to repeat the HIV screening.

LABORATORY-BASED TESTING WHEN RAPID TESTS ARE UNAVAILABLE OR INAPPROPRIATE

Send a single blood sample* to the laboratory requesting an RPR test
A note should be added to the specimen request form as follows:
If the RPR titre result is **1:4 or less**, the lab should proceed to do a **specific syphilis test** on the same blood specimen

Assess for clinical signs of syphilis & counsel on condom use.
Ask the client to return in 1 week for results.

* If other blood tests are also being requested, e.g. an HIV VL, send the syphilis sample with its own specimen request form to prevent delays in processing of the test

RPR REACTIVE titre 1:8 or greater	RPR **REACTIVE** titre 1:4 or less **AND** Specific syphilis test **REACTIVE**	RPR **REACTIVE** titre 1:4 or less **AND** Specific syphilis test **NON-REACTIVE**	RPR **NON-REACTIVE**

Syphilis Positive

Counsel: that a diagnosis of syphilis is confirmed
Treat: Penicillin dose 1*
Document: RPR titre
Trace & test sexual partners
Schedule: Penicillin 2nd dose in 1 week

Treat: **Penicillin dose 2*** / Schedule: Penicillin 3rd dose in 1 week

Treat: **Penicillin dose 3***

Repeat RPR titre 3 months after treatment completion to **confirm response to treatment**[$]

Syphilis Negative

No current syphilis infection
Continue routine follow-up screening for syphilis.

$ Confirm response to syphilis treatment:
- A 4-fold drop in RPR titre confirms effective treatment (e.g., 1 in 32 goes down to 1 in 8).
- Do not re-check RPR until at least 3 months after treatment is completed.
- If the titre was low to start with (1 in 4 or less), then a drop may not be seen after 3 months.
- A low titre may take years to disappear completely.
- Only be concerned if there is a rise in titre compared to the initial low titre.

*** Treatment for syphilis**
- Check for a history of penicillin allergy (all over body rash, bronchospasm, hypotension/collapse, or neck/throat swelling after previously taking penicillin).
- If no history of penicillin allergy, give **2.4 MU of benzathine penicillin IM** x 3 doses, at weekly intervals.
- If the mother has a delay of > 14 days between weekly IM doses, the mother is considered untreated, and the entire course must be restarted

If the woman reports a penicillin allergy:
- Take a careful history to confirm the likelihood of true allergy.
- Penicillin is the only known drug that effectively treats syphilis in the fetus.
- Refer to hospital for penicillin desensitization (see EML for details) and syphilis treatment under close observation by a doctor trained to manage anaphylaxis.

TREATING PARTNERS

- Trace and test partners of women with confirmed syphilis
- Test the partner using a rapid syphilis test if available and assess for symptoms and signs of a genital ulcer or secondary syphilis.
- If the rapid test is positive, and symptoms or signs of syphilis are present, treat the partner for early syphilis using one of the following options:
  - A single immediate dose of benzathine penicillin 2.4 MU IM, if stock levels are sufficient
  - If penicillin stock levels are insufficient, give Doxycycline 100mg 12-hourly orally for 14 days
- If the rapid test is positive and there are NO symptoms or signs of syphilis, send a confirmatory blood sample to the laboratory for an RPR. Do not wait for the results before treating the partner, but be sure to check the results 1 week later. Treat the partner for latent syphilis using one of the following options:
  - Benzathine penicillin 2.4 MU IM, once weekly for 3 weeks, if stock levels are sufficient
  - If penicillin stock levels are insufficient, give Doxycycline 100mg 12-hourly orally for 30 days

MANDATORY NOTIFICATION FOR CONGENITAL SYPHILIS

- **CS is a Category 2 Notifiable Medical Condition (NMC):** Health care workers must notify all cases of congenital syphilis through paper-based or electronic case notification forms (CNF) to the National Institute for Communicable Disease (NICD) within 7 days of diagnosis.
- Refer to link: https://www.nicd.ac.za/nmc-overview/notification-forms/
- Stillbirths due to syphilis should also be notified.

DIAGNOSIS

Clinical signs depend on gestation at time of transmission, fetal immunological response & maternal syphilis stage & adequacy of treatment.
30-40% of babies who acquire syphilis in-utero, die shortly before or after birth.
Early congenital syphilis presents in first two years of life.
Late congenital syphilis manifests from third year of life onwards.

- Seizures
- Jaundice, Hepatomegaly
- Splenomegaly
- Long bone changes
- Pallor, Petechiae
- Large, pale, greasy placenta
- Growth restriction

- Peeling Rash, Oedema Nonimmune fetal hydrops
- Loss of eyebrows, chorioretinitis, uveitis, cataract, glaucoma
- Nasal discharge ("snuffles")
- Pneumonia
- Myocarditis

Screening and Diagnosis of Syphilis in Babies
If congenital syphilis is suspected at delivery, perform confirmatory laboratory tests.
Send placenta for histology if possible.
Follow local hospital & laboratory testing protocols for syphilis.

Other investigations that may be considered based only on clinical signs:

- If clinical concerns of thrombocytopaenia (petechiae) & anaemia (pallor):
  - **Full blood count**
- If clinically jaundiced or other signs of liver impairment (bleeding, encephalopathy):
  - **Total serum bilirubin with conjugated fraction and other liver function tests as indicated**
- **Bedside cranial ultrasound scan**, if available, to look for intracranial pathology (bleeds, infarcts).
- In symptomatic babies, long bone x-rays & CSF are not mandatory investigations, as they do not affect treatment duration.
- Ophthalmology assessment for eye abnormalities associated with syphilis (non-urgent assessment).

MANAGEMENT OF SYPHILIS EXPOSED BABIES

ASYMPTOMATIC BABIES BORN TO MOTHERS WITH FULLY TREATED SYPHILIS

Mother treated with benzathine penicillin G
2.4 million IU IM weekly for 3 consecutive weeks with last dose > 30 days before delivery.

No treatment indicated.
Ensure partner traced and tested.

ASYMPTOMATIC BABIES BORN TO MOTHERS WITH INADEQUATELY TREATED* OR UNTREATED SYPHILIS**

Single dose Benzathine Penicillin G
50 000 units/kg IM.
Never give IV.
Ensure partner is traced, tested and treated (as indicated).

*** Inadequately treated mother:**

- mother did not complete three doses in full, or
- mother received three doses but there was a delay of > 14 days between weekly IM doses, or
- last dose was not more than 30 days before delivery, or
- the dose that the mother received was incorrect was incorrect

**** Untreated mother:**

- mother did not receive any treatment for syphilis, or
- mother was treated for syphilis with an antibiotic that was not penicillin

See *page 38* for **PUBLIC HEALTH INITIATIVES** on Partner tracing and more.

SYMPTOMATIC BABIES BORN TO MOTHERS WITH SYPHILIS REGARDLESS OF TREATMENT STATUS

Aqueous crystalline Penicillin G

- 50 000 units/kg 12 hourly IV or IM for the first 7 days of life, then 8 hourly from day 8 of life onwards to complete 10 days of treatment
- **Parenteral penicillin is drug of choice for treatment of congenital syphilis.** Data are insufficient regarding use of other antimicrobial agents (e.g., ampicillin).

Note: If mother was fully treated & baby symptomatic – re-test mother & follow-up on reason for treatment failure; ensure partner tracing done.

If baby misses more than one day of treatment, the entire ten-day course must be restarted.

If unable to admit at current level of care, refer all babies with suspected congenital syphilis infection to appropriate level of care, in accordance with local referral pathways, for inpatient admission & work-up.
Refer all symptomatic babies with complications, e.g., thrombocytopaenia, anaemia, respiratory distress, signs of liver dysfunction, & suspected meningitis to a centre with high care or intensive care unit facilities.

Neurodevelopmental follow-up at 20 weeks corrected gestational age.
Re-test all babies with positive syphilis serology with elevated titres, 3 months after-treatment until titre has decreased 4-fold.
Re-treat if drop in titre less than 4-fold and discuss with specialist.
Follow-up date for re-testing can coincide with 14 week immunisation visit depending on date of discharge from hospital.

Visit Schedule for Integrated Care for the Mother living with HIV and her HIV-exposed Infant (HEI)

The principles are as follows:

1. Wherever possible, try to align the mother's ART, VL monitoring, and contraception visits with that of the child's visit schedule so the mother-baby pair need only attend the facility once for both consultations on the same day
2. Wherever possible, allow the mother and baby to receive care at the same facility

Age group	Age of child	Routine visits as per RTHB	ART Dispensing cycle (DC)	Follow-up for the HIV-exposed baby	ART Follow-up for mother	Immunisations	Feeding advice	Growth monitoring	Development	Head circumference	Vit A	Deworming	Oral Health	TB Screen	Mother's contraception
Neonate	1st week of life	3-6 days postnatal (PN) visit for mother and baby	1	• Follow-up results of birth PCR# and mother's delivery VL If birth PCR negative, re-classify the risk profile of the HEI: • Delivery VL < 50 c/mL (low-risk) • Stop AZT and continue NVP daily for six weeks • Delivery VL ≥ 50 c/mL (higher-risk) • Continue AZT twice daily for six weeks • Continue NVP daily for minimum of 12 weeks • Check adherence to NVP and AZT dispensed at delivery	• Follow-up results of mother's delivery VL • Delivery VL ≥ 50 c/mL: manage as per *"Viral Load Monitoring Schedule" on page 20.* • Check ART supply: The mother should have been provided with 2 months ART at discharge from labour ward which will last her until 6 week PN visit • Adherence check-in for mother • Provide breastfeeding support and routine PN care		x	x						x	x**
2-6 months (monthly follow-up)	6 weeks	6 weeks	2*	• Ensure that birth PCR and mother's VL results were checked, recorded and acted upon correctly • If low-risk, stop NVP • If higher-risk, stop AZT and dispense NVP for additional 6 weeks	• Postnatal clinical review and adherence check-in. If delivery VL ≥ 50 c/mL, repeat VL at this visit • Provide breastfeeding support. • Provide ART for 2 DCs (2MMD) for mother*	x	x	x						x	
	10 weeks	10 weeks	3	• **Do 10 week HIV-PCR #** • If higher-risk, check result of repeat maternal VL done at 6 weeks visit. • If VL < 50 c/mL, advise to stop NVP after 12 weeks • If VL still ≥ 50 c/mL, dispense and continue NVP until the breastfeeding mother's VL is confirmed to be < 50 c/mL	• If VL repeated at 6 weeks, review results. Manage as per *"VL Non-Suppression Algorithm" on page 21* • If mother received either DMPA (Depo Provera®) or NET-EN (Nur Isterate®) after delivery, give repeat injection at this visit***	x	x	x						x	x
	14 weeks	14 weeks	4	• Check that 10 week HIV-PCR results were checked, recorded and acted upon correctly	• Adherence check-in for mother • Provide breastfeeding support. • Provide ART for 3 DCs (3MMD) for mother	x	x	x	x	x				x	
	18 weeks	4 months	5				x	x						x	
	22 weeks	5 months	6				x	x						x	
	26 weeks	6 months	7	• **Do 6-month HIV-PCR test #** • Review results of PCR and VL in 1 week using NHLS RfA reports. If mother's VL ≥ 50c/mL, restart/extend infant prophylaxis if still breastfeeding. Go to *"Management of a High Maternal Viral Load after Delivery" on page 24*.	• **Clinical review and '6-month' VL.** • Provide breastfeeding support and discuss the introduction of complementary feeding at age 6 months • Script for and provide ART for 3DCs at a time (3MMD) • Review results of VL and PCR in 1 week using NHLS RfA reports. If VL ≥ 50c/mL, manage mother as per the *"VL Non-Suppression Algorithm" on page 21*	x	x	x	x		x			x	x

* Review and repeat script at 6 weeks (rather than 8 weeks) to align with the RTHB visit schedule. The additional 2 weeks Rx that the mother will have in reserve will allow for alignment with the 6-month RTHB appointment which usually happens around week 26 (compared to 6 DCs of ART which will only provide enough ART for 24 weeks)

** Confirm the mother's FP method choice. Inform her that the DMPA injection or the combined oral contraceptive pill (COCP) can be repeated 3-monthly, and will align well with her ART and well-baby visit schedules. Using the NET-EN 2-monthly injection will require additional visits by the mother, as a 2-monthly repeat injection will not always align with the visit schedule outlined above.

*** As per WHO recommendations[18], the repeat injection of DMPA and NET-EN can be given up to 2 weeks early. The repeat DMPA injection can be given up to 4 weeks late without requiring additional contraceptive protection. The repeat NET-EN injection can be given up to 2 weeks late without requiring additional contraceptive protection.

\# HIV testing should only be done in those who previously tested HIV negative. If a child tests HIV positive at any stage, stop NVP prophylaxis, initiate ART, do a confirmatory HIV PCR, and initiate cotrimoxazole prophylaxis.

Age group	Age of child	Routine visits as per RTHB	ART Dispensing cycle (DC)	Follow-up for the HIV-exposed baby	ART Follow-up for mother	Immunisations	Feeding advice	Growth monitoring	Development	Head circumference	Vit A	Deworming	Oral Health	TB Screen	Mother's contraception
6-12 months	**30 weeks**	**7 months**	8	• Check that baby's 6-month HIV-PCR results were reviewed • Check that mother's 6-month VL results were reviewed and acted on correctly	• Check that baby's 6-month HIV-PCR results were reviewed • Check that mother's 6-month VL results were reviewed and acted on correctly. • If VL < 50 c/mL, offer RPCs options		x	x						x	
	34 weeks	**8 months**	9				x	x						x	
	38 weeks	**9 months**	10		• Adherence check-in and breastfeeding support Provide ART for 3DCs at a time (3MMD) unless in RPCs.	x	x	x	x					x	x
	42 weeks	**10 months**	11				x	x						x	
	46 weeks	**11 months**	12*				x	x						x	
	52 weeks*	**12 months (of 30 days)**	13	• Ensure mother's 6-monthly VL was done. • Review results of VL in 1 week using NHLS RfA reports. • If VL ≥ 50c/mL, re-call MIP to the facility. Do an HIV-PCR on baby and restart/extend infant prophylaxis if still breastfeeding. Go to *"VL Non-Suppression Algorithm" on page 21*.	• Clinical review and 6-monthly VL • Provide breastfeeding support. • Script for and provide ART for 3DCs at a time (3MMD), or offer RPCs options/rescript for RPCs • Review results of VL 1 week using NHLS RfA reports • If VL ≥ 50c/mL, manage mother as per *"VL Non-Suppression Algorithm" on page 21*.	x	x	x	x	x	x	x	x	x	x
13-24 months 3 monthly follow-up	**56 weeks**		14	• Check that mother's 12-month VL results were reviewed and acted on correctly											
	60 weeks		15												
	64 weeks	**15 months**	16		• Provide ART for 3DCs at a time (3MMD), unless in RPCs Provide breastfeeding support.		x	x	x		x	x		x	x
	68 weeks		17												
	72 weeks		18												
	76 weeks	**18 months**	19	• Universal HIV rapid testing at 18 months# (HIV rapid test for **all** infants regardless of HIV exposure, except in those who previously tested HIV positive and are on ART) • Review results mother's VL in 1 week using NHLS RfA reports • If VL ≥ 50c/mL, restart/extend infant prophylaxis if still breastfeeding. Go to *"VL Non-Suppression Algorithm" on page 21*.	• 6-monthly VL if breastfeeding. Renew script and provide ART for 3DCs at a time (3MMD) or offer RPCs options/ rescript for RPCs. Try to align ART for mother and baby with the well-baby visit schedule • Review results of VL 1 week using NHLS RfA reports • If VL ≥ 50c/mL, manage mother as per *"VL Non-Suppression Algorithm" on page 21*.	x	x	x	x		x	x		x	x
	80 weeks		20												
	84 weeks		21												
	88 weeks	**21 months**	22		• Provide treatment for 3DCs at a time (3MMD), unless in RPCs • Provide breastfeeding support.		x	x						x	x
	92 weeks		23												
	96 weeks		24												
2 until < 5 years	**24 - 59 months**	**At 24 months and 6-monthly thereafter**			• **Renew script and provide ART for 3DCs at a time (3MMD) or offer RPCs options/rescript for RPCs Try to align with child's yearly well-baby visit schedule**		Up to 2 years	6-monthly	At 3 years		6-monthly	6-monthly	yearly	3-monthly	3-monthly

Abbreviations: AZT zidovudine; ART antireviral ART; DC dispensing cycle (ART supply 28-days); 3DC three dispensing cycles of ART DMPA, depo medroxyprogesterone acetate (Depo Provera®); HEI HIV-exposed infant; MIP mother-infant-pair; MMD multi-month dispensing; 3MMD multi-month dispensing for 3 months; NVP nevirapine; NET-EN norethisterone enantate (Nur Isterate®); PCR polymerase chain reaction (HIV test); RPCs repeat prescription collection strategies (see DMOC SOPs); RTHB road-to-health booklet; VL viral loadDS

INFORMATION FOR THE HEALTH CARE PROVIDER

"A FATHER IS NOT A VISITOR…"
Fatherhood campaign, Brazil

Background: Why Should Fathers be Actively Engaged?

- Research shows benefits to the mother, baby, and father if male partners are involved during pregnancy and breastfeeding.
- ANC and PNC services should be family orientated and should welcome fathers to actively participate in clinical consultations and health education.
- During every consultation, screen mothers for intimate partner violence (IPV) and, if safe, invite the male partner to attend the next visit, explaining the benefits of his involvement.
- Men have traditionally been excluded from ante- and postnatal spaces. For this reason, it may take time to build men's trust and for them to feel comfortable in the new male-friendly service environment.
- ANC and PNC services should display male-friendly posters and health information materials.

Involving Fathers: A proposed four visit approach

- Male partners are unlikely to be able to attend every ANC and PNC visit
- **A structured, four-visit approach** with an outline of helpful content (see below) will help fathers to feel involved, valued, supported, and prepared during the pregnancy and after their baby's birth
- When the father attends, ask his name and call him by his preferred name, not just 'Dad'
- Men may be fearful of HIV testing and may avoid attending visits if they think they may be 'forced' into testing for HIV. For this reason, a **status-neutral approach to HIV services**, where HIV prevention and HIV treatment are explained, promoted and offered in equal balance may assist with male uptake of HIV testing and services. This means that HIV testing should be offered as one component of a comprehensive package of general healthcare services, and linking to HIV prevention services, e.g. PrEP is an equal priority to linking to HIV treatment.

Visit 1: Early/Mid Pregnancy
(e.g. second antenatal visit)

- Inform about pregnancy, good nutrition and general health
- Introduce benefits of involved fatherhood
- Offer HIV testing and HIV prevention or treatment based on couple's needs
- Educate serodifferent couples about Treatment as Prevention, and benefits of PrEP

Visit 2: Late Pregnancy
(e.g. 34-38 weeks)

- Provide information on delivery, labour, danger signs
- Advise on what to pack in the mom's bag
- Educate about first days after baby's birth
- Encourage male HIV testing if previously declined
- Use of the HIV self-testing kit can be offered as an alternative

Visit 3: Labour/ Delivery

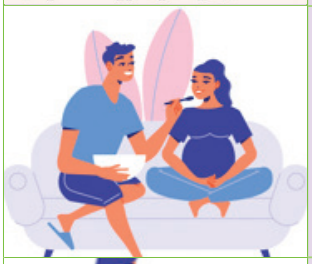
- Allow the father to support the woman during labour
- Encourage skin-to-skin contact with Dad
- Help dad to support early feeding choice
- Engage the father in supporting linkage to post-natal care

Visit 4: With Newborn
(e.g. day 3-6, 6 week or 10 week visit)

- Inform about infant feeding and the importance of immunisations
- Encourage bonding to support early development including skin-to-skin contact
- Educate on mom's postnatal health
- Offer male HIV testing or prevention/ ART services if not yet aware of status or accessing care

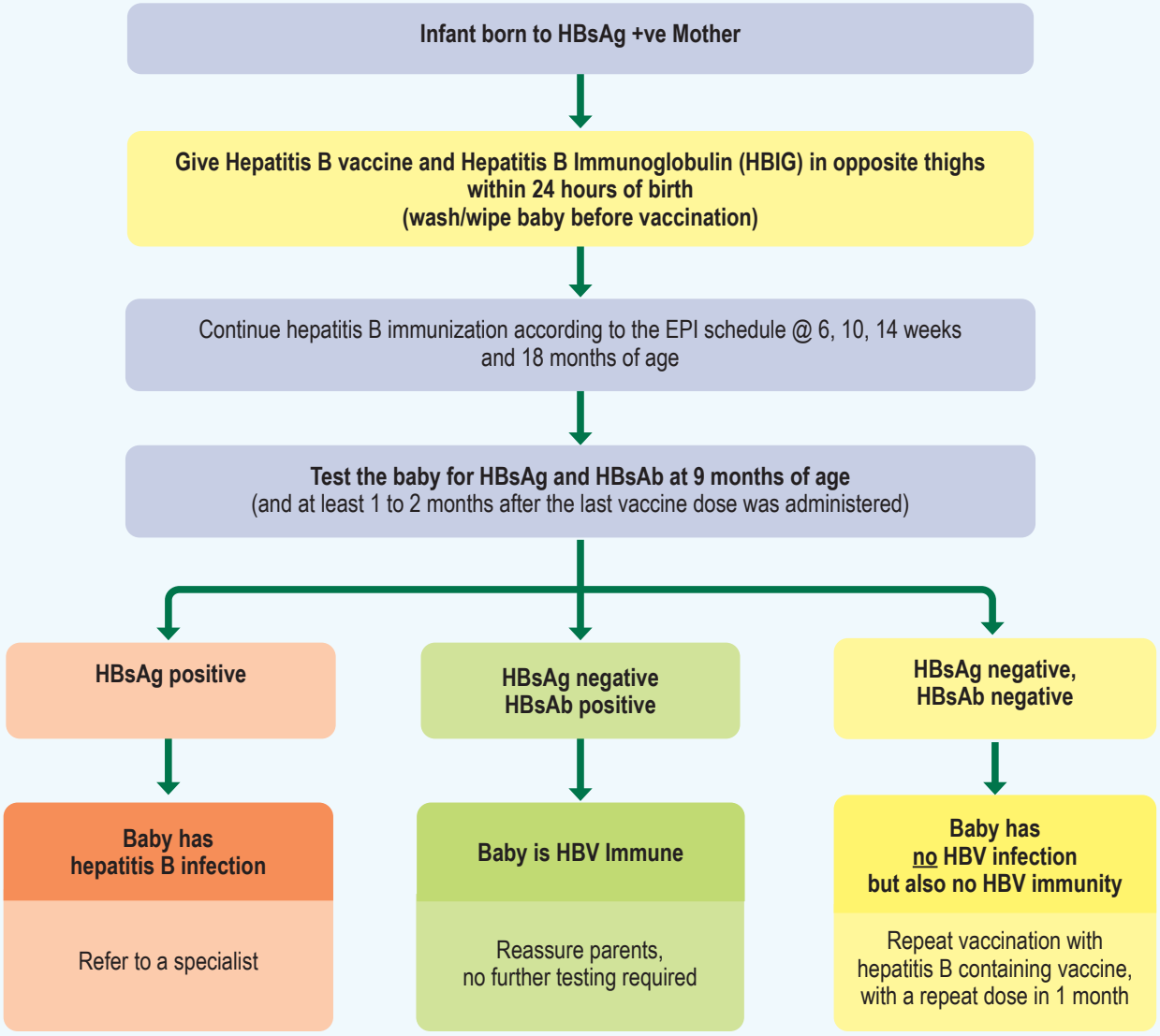
* Father can refer to the biological father or any other supportive male who wishes to be involved including a new partner, grandfather, maternal uncle, cousin, brother, friend

INFORMATION FOR THE FATHER

INFORMATION FOR THE FATHER DURING ANTENATAL CARE	
	At each antenatal visit, we will: • Check Mom's blood pressure, weight and urine to make sure she is healthy • Check for baby's movements and growth • An ultrasound may be done during the pregnancy to check baby's growth and development • Answer any questions you may have about the pregnancy or mom or baby's health • Offer you general health services, including HIV testing and prevention or treatment services because it is important for both Mom and Dad to know their HIV status so that they can be healthy and in control of their health
	What you can do to support your partner during pregnancy: • Help her to eat well and keep active • Help her to avoid drinking alcohol, smoking or using recreational drugs during pregnancy as these may harm her health and affect the baby's growth and development • Help her rest enough by helping with cooking, cleaning and looking after older children • Help her to take any daily medications that have been given without forgetting
	What you can do to bond with baby during the pregnancy: • Did you know your relationship with your baby can start even before your baby is born? • Place your hand on mom's tummy, baby may play by kicking or punching back • Baby can hear your voice, and tell it apart from mom's, from four months into the pregnancy. You can sing, read to the baby, tell baby stories or play your favourite tunes through headphones placed against mom's tummy. Baby will recognise these things after he/she is born and will quiet to familiar sounds heard during the pregnancy.

INFORMATION FOR THE FATHER DURING POST-NATAL CARE	
	At each post-natal visit, we will: • Check mom's health and review any chronic medication, including monitoring blood results • Check on your baby's feeding, growth, and development and provide immunisations • Answer any questions/concerns you may have about your own, your partner's or baby's health • Offer you any health services you may need including HIV testing, prevention or treatment so that you can be a healthy member of your family
	What you can do to support your partner during the time after your baby is born: • Help your partner to eat well and get enough rest by helping with chores and older children • If your baby is breastfeeding, you can help by burping/winding baby after a feed or feed baby if mom expresses milk into a cup or bottle • Having a new baby can be exhausting and busy. Help your partner remember to take daily medications. If she forgets, encourage her to take it as soon as you or she remembers • If you think you or your partner are getting depressed (low mood) seek help at your local clinic
	What you can do to bond with baby during the first few weeks/months: • The first few weeks can be hard work, take time to hold your baby, and learn how to bathe and change your baby's nappies. Skin-to-skin contact is important for you as a dad too. • By six weeks your baby will start to smile at you – this is a really special time! • By three months old baby can play peekaboo and will laugh with you • Reading, telling stories or listening to music together can help to build a bond • Take baby out for walks, being outside gives baby plenty to look at to keep them calm

MANAGEMENT OF THE INFANT EXPOSED TO HEPATITIS B



Note: Providers should wait until the infant is 9 months of age, and at least one to two months after the last dose of HBV vaccine to perform the Post Vaccination Serologic Tests (PVST). Tests performed before 9 months of age can provide inaccurate anti-HBs results by detecting passive antibodies from HBIG/HBV vaccine administered at birth rather than actual response to the hepatitis B vaccine.

Refer if hepatitis B serology is not available.

EPI	Expanded Programme on Immunisation;	HBsAg	hepatitis B surface antigen;
HBIG	hepatis B immunoglobulin;	HBV	hepatitis B virus;
HBsAb	hepatitis B surface antibody;	PVST	post vaccination serologic tests

DATA MANAGEMENT

DOCUMENTATION IN THE CLIENT RECORD

Document all clinical findings, results and decisions clearly, and insert the barcode stickers of any blood tests taken in the following client records as applicable:

1. The Maternity Case Record
2. The Adult Clinical Record (ART Stationery) for HIV positive women, if available in that facility
3. The Road to Health Booklet for the HIV-exposed infant

Registering on the self-service portal and requesting reports
STEP 1: Go to **www.nicd.ac.za**
→ Click on the "M&E Dashboards" and "HIV"
→ Select "Guest User"
→ Click on "Self Service Registration"
→ Self-Service Portal Landing Page
STEP 2: Select "New User Registration" → Complete the registration form, and follow further instructions

Please direct any queries to **HIV@nicd.ac.za**

USING NHLS REPORTS FOR QUALITY IMPROVEMENT AND CLIENT TRACKING

These reports are compiled from NHLS HIV laboratory data and are e-mailed in different formats depending on the user's requirements. The purpose of these reports is to assist with monitoring of the HIV VTP program, identify HIV-infected pregnant women with high viral loads and link HIV-infected infants to care.

VL MONITORING TO FACILITATE VL SUPPRESSION

LEVEL	REPORT NAME	REPORT NO.	DESCRIPTION	PURPOSE
Facility / district level	HIV VL RfA Report (all ages)	RPT00001 W/D	• All VL ≥ 50 c/mL (with client identifiers) since the previous weekly (W)/ daily (D) report • **VLs ≥ 50 c/mL done in ANC, at delivery, or during postnatal can be identified in the report if an EGK code was used** • Previous consecutive VL ≥ 1000 c/mL per client are also reported (within limitations of demographic linking)	Facilitates action to regain viral suppression for individual clients at facility level
Facility, district levels	Monthly Maternal EGK (Facility level)		• Facility level use of C#PMTCT and C#DELIVERY codes	**Monitors EGK code coverage rates** This can be used to monitor the uptake (coverage) of EGK codes used by comparing the number of codes used to the number of women living with HIV who received care: • EGK code uptake during antenatal care= C#PMTCT (Antenatal)/ 'Antenatal on ART at 1st visit' + 'Antenatal start on ART' • EGK code uptake at delivery = C#DELIVERY/ 'Live births to HIV positive women'
District, province, national levels	Operation Phuthuma report: Monthly EGK code section		Per district, per month, within categories of ANC, delivery, and postnatal: • Total HIV VL tests • Number of tests (< 1000 c/mL and < 50 c/mL) • VL suppression rate (<1000 c/mL and < 50 c/mL)	**Monitors VL outcomes** Provides an indication of viral suppression rates during ANC, at delivery, and in the postnatal period per district and province

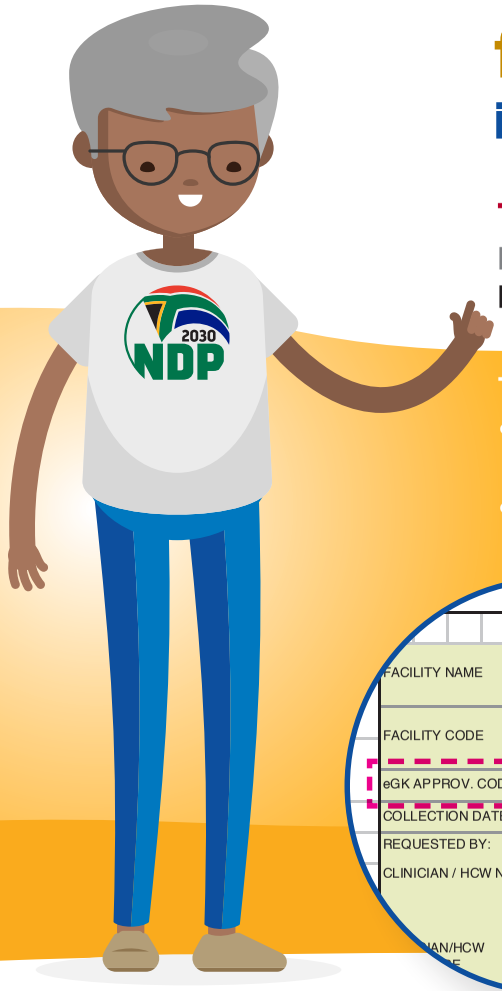
RfA Results for Action;
MDOs Missed Diagnostic Opportunities = registered HIV PCR tests that are neither positive or negative (includes rejections, invalid and indeterminate results);
DHIS District Health Information System

PCR MONITORING TO IDENTIFY AND LINK HIV-INFECTED INFANTS TO CARE				
LEVEL	REPORT NAME	REPORT NO.	DESCRIPTION	PURPOSE
Facility / district level	HIV PCR RfA Report weekly (W)/daily (D) report "	RPT01002	• All verified HIV PCR results and rejected samples since the previous weekly (W)/ daily (D) report. Includes client identifiers for intervention at the individual level • All previous HIV PCR results per client are also reported (within limitations of demographic linking)	• To assist with tracing individual HIV-positive infants and linkage to care
District, province, and national levels	Operation Phuthuma report: Monthly EID section		• Reports total number of PCR tests performed and number of positives, disaggregated by age (0 - < 6 weeks, 6 weeks - < 4months, 4 - < 8months, 8 - < 24 months) including EID coverage at around 10 weeks and 6-months of age in comparison to the same month of the previous year. • Number of children with a first PCR positive test are reported (within limitations of demographic linking)	• To monitor EID coverage and number of newly diagnosed children < 24 month of age • Can be used to check accuracy of DHIS data in terms of numbers of PCR tests done per age group, and PCR positivity rates. • Can also be used to monitor trends in transmission rates
Facility, district, provincial and national levels	HIV PCR MDO Report (monthly)	RPT01004/5/6/7	• Facilities with the highest number of MDOs are listed at either National, Provincial, District or Facility level • The 10 facilities with the most MDOs in a region receive a detailed report of their MDOs (e.g. rejection type, rejection reason and test result text) • A laboratory report is also available for laboratorians	• To identify facilities with highest number of MDOs and improve the quality of specimen collection and processing

Facility Guide

EGK authorisation codes for HIV Viral Load testing

in pregnant and breastfeeding women



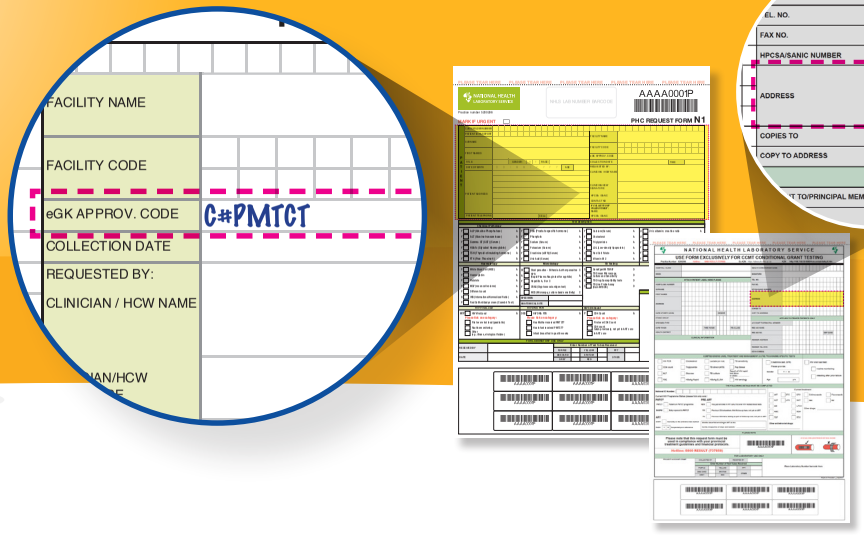
Two special EGK approval codes must be provided with **EVERY** HIV VL requested during **pregnancy** and **breastfeeding.**

The electronic gatekeeping (eGK) codes will:

- prevent HIV VL tests from being cancelled by gatekeeping
- facilitate HIV VL monitoring of the pregnant and breastfeeding women

Pregnancy-related EGK approval codes	
C#PMTCT	To be used during pregnancy and breastfeeding
C#DELIVERY	To be used during labour

Please spell the eGK codes correctly



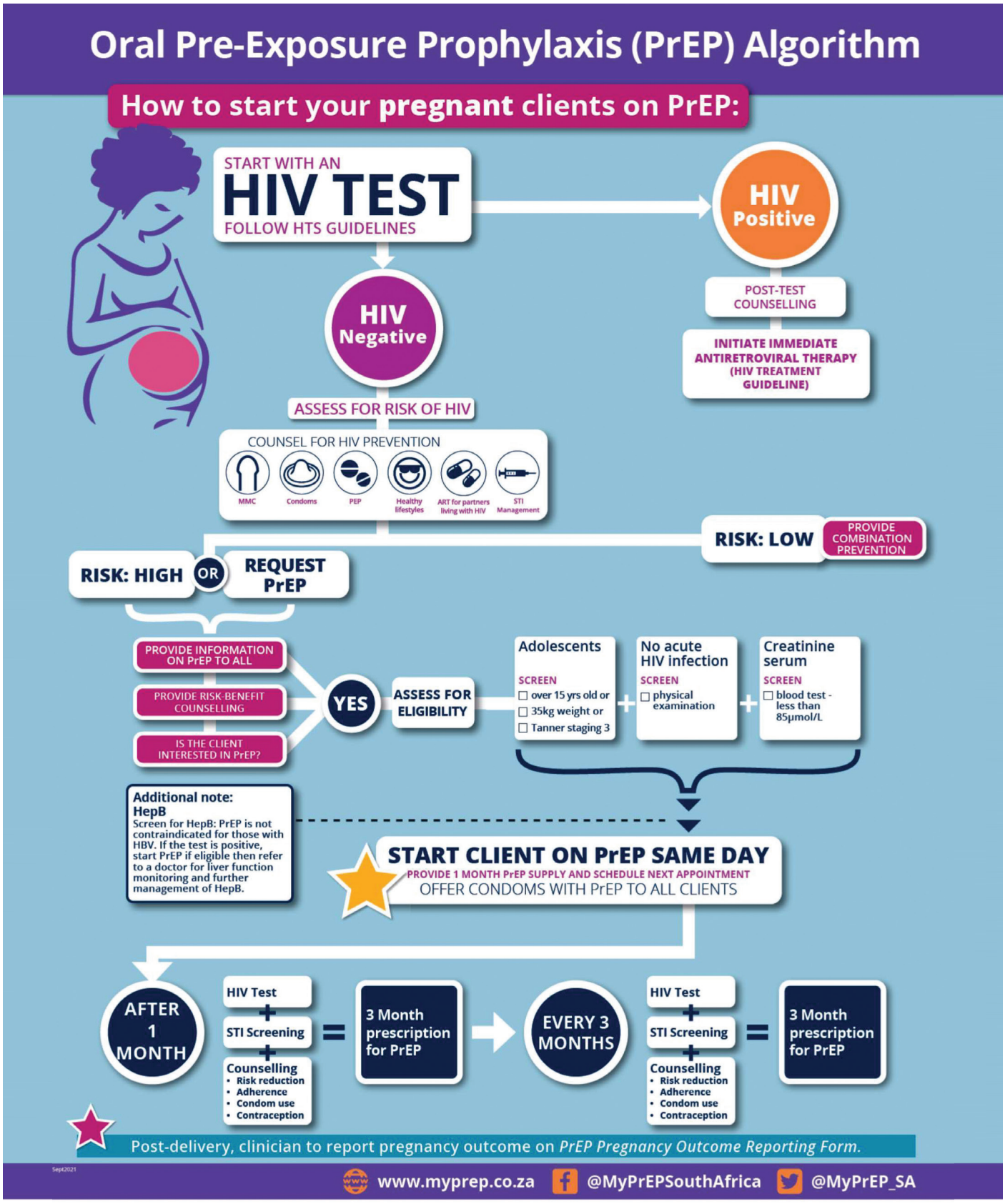
NHLS Requisition Form

Fill in the eGK code in 'eGK approval code' if present on the form **or,** on forms where this is not provided, clearly state in an available space such as below the 'HPCSA/SANC number' as indicated

health
Department:
Health
REPUBLIC OF SOUTH AFRICA

2030 NDP

ANNEXURE 2 – PrEP JOB AID FOR CLINICIANS



ANNEXURE 3 – COUNSELLING FOR PrEP

Counselling Job Aid for Healthcare Providers

PrEP for pregnant and breastfeeding women

STEP 1:

Offer HIV counselling and testing to determine HIV status.

STEP 2:

For women that test HIV negative, conduct risk assessment to determine the level of risk of HIV the women is potentially exposed to by asking the following:

be sensitive and non-judgmental

- Do you ever have unprotected sex (not using a condom)?
- Do you have unprotected sex with a partner/s who are HIV-positive?
- Do you ever have unprotected sex with a person whose HIV status you don't know?
- Do you ever have sex under the influence of alcohol and/or drugs?

If response is YES to any of the above or if the women requests PrEP, proceed with providing information about PrEP:

- PrEP is an ARV pill used to PREVENT HIV infection.
- PrEP is for HIV-negative people.
- PrEP is taken daily.
- PrEP is safe to take!
- PrEP does not protect you from getting other STIs.
- PrEP does not prevent you from getting pregnant if you are breastfeeding.
- PrEP can be stopped at any time that you do not need it.

always try to use a condom as well as PrEP

PrEP does not protect you from STIs or getting pregnant

STEP 3:

Conduct Risk benefit counselling

Counselling Key Message

PrEP is one of several options which should be offered to help protect the HIV-negative pregnant or breastfeeding woman at substantial risk of infection.
The woman should be informed about the comprehensive HIV prevention package which includes:

- STI screening and treatment
- Condom promotion
- Risk reduction counselling
- PrEP with emphasis on adherence
- Emphasizing the importance of follow up ANC visits
- Partner testing and treatment

Visit Schedule for Integrated Care: Mother taking PrEP

The principles are as follows:

1. Wherever possible, try to align the mother's PrEP, HIV and STI screening and contraception visits with that of the child's EPI visit schedule so the mother-baby pair need only attend the facility once for all consultations on the same day
2. Wherever possible, allow the mother and baby to receive care at the same service point (ideally PNC/MCH) at the same facility

Age group	Age of child	Routine visits as per RTHB	PrEP Dispensing cycle (DC)	PrEP Follow-up for mother	Immunisations	Feeding advice	Growth monitoring	Development	Head circumference	Vit A	Deworming	Oral Health	TB Screen	Mother's contraception
Delivery			1	• **Provide 3 months* of PrEP (3MMD) which will last until 10 week PN visit**		x								
Neonate	1st week of life	3-6 days postnatal (PN) visit for mother and baby		• Provide **HIV test** to mother (if not tested in labour) • **Check PrEP supply:** The mother should have been provided with 3 months* of PrEP at delivery which will last her until 10 week PN visit • **PrEP adherence** check-in for mother • Provide breastfeeding support and routine post natal care		x	x						x	x***
2 - 6 months	6 weeks	6 weeks	2*	• Postnatal clinical review • Provide breastfeeding support • **PrEP adherence** check-in	x	x	x						x	
	10 weeks	10 weeks	3	• **Postnatal and PrEP clinical review and PrEP adherence check-in** • **Provide breastfeeding support.** • **Provide HIV test and STI screen to mother** • **Provide PrEP for 3 PrEP DCs (3MMD) for mother**** • **If mother received either DMPA (Depo Provera®) or NET-EN (Nur Isterate®) after delivery, give repeat injection at this visit********	x	x	x						x	x
	14 weeks	14 weeks	4	• Postnatal clinical review • Provide breastfeeding support • **PrEP adherence check-in**	x	x	x	x	x				x	
	18 weeks	4 months	5			x	x						x	
	22 weeks	5 months	6			x	x						x	
	26 weeks	6 months	7	• **PrEP clinical review** • **Provide breastfeeding support.** • **HIV test and STI screen for mother** • **Script for and provide PrEP for 3DCs at a time (3MMD)**	x	x	x	x		x			x	x

* Mother may have PrEP supply remaining from her last supply during ante-natal care. Provide sufficient PrEP supply to ensure mother has 3 months supply when she leaves the facility after delivery.

** Review and repeat script at 10 weeks (rather than 12 weeks) to align with the RTHB visit schedule. The additional 2 weeks Rx that the mother will have in reserve from delivery will allow for alignment with the 6-month RTHB appointment which usually happens around week 26 (compared to 6 DCs of PrEP which will only provide enough PrEP for 24 weeks).

*** Confirm the mother's FP method choice. Inform her that the DMPA injection or the combined oral contraceptive pill (COCP) can be repeated 3-monthly, and will align well with her PrEP and well-baby visit schedules. Using the NET-EN 2-monthly injection will require additional visits by the mother, as a 2-monthly repeat injection will not always align with the visit schedule outlined above.

**** As per WHO recommendations[18], the repeat injection of DMPA and NET-EN can be given up to 2 weeks early[1] The repeat DMPA injection can be given up to 4 weeks late without requiring additional contraceptive protection. The repeat NET-EN injection can be given up to 2 weeks late without requiring additional contraceptive protection.

Abbreviations:

DC	dispensing cycle (PrEP supply 28-days);	MIP	mother-infant-pair;	3MMD	MMD, multi-month dispensing for 3 months;
3DC	three dispensing cycles of PrEP;	MMD	multi-month dispensing;	NET-EN	norethisterone enantate (Nur Isterate®);
DMPA	depo medroxyprogesterone acetate (Depo Provera®);			RTHB	road-to-health booklet

Age group	Age of child	Routine visits as per RTHB	PrEP Dispensing cycle (DC)	PrEP Follow-up for mother	Immunisations	Feeding advice	Growth monitoring	Development	Head circumference	Vit A	Deworming	Oral Health	TB Screen	Mother's contraception
7 - 12 months	30 weeks	7 months	8			x	x						x	
	34 weeks	8 months	9			x	x						x	
	38 Weeks	9 months	10	• **PrEP clinical review** • Provide breastfeeding support. • **HIV test and STI screen for mother** • Script for and provide **PrEP for 3DCs at a time (3MMD)**	x	x	x	x					x	x
	42 weeks	10 months	11			x	x						x	
	46 weeks	11 months	12*			x	x						x	
	52 weeks*	12 months (of 30 days)	13	• **PrEP clinical review** • Provide breastfeeding support. • **HIV test and STI screen for mother** • Script for and provide **PrEP for 3DCs at a time (3MMD)**	x	x	x	x	x	x	x	x	x	x
13 - 24 months	56 weeks		14											
	60 weeks		15											
	64 weeks	15 months	16	• **PrEP clinical review** • Provide breastfeeding support. • **HIV test and STI screen for mother** • Script for and provide **PrEP for 3DCs at a time (3MMD)**		x	x	x		x	x		x	x
	68 weeks		17											
	72 weeks		18											
	76 weeks	18 months	19	• **PrEP clinical review** • Provide breastfeeding support. • **HIV test and STI screen for mother** • Script for and provide **PrEP for 3DCs at a time (3MMD)**	x	x	x	x		x	x		x	x
	80 weeks		20											
	84 weeks		21											
	88 weeks	21 months	22	• **PrEP clinical review** • Provide breastfeeding support. • **HIV test and STI screen for mother** • Script for and provide **PrEP for 3DCs at a time (3MMD)**		x	x						x	x
	92 weeks		23											
	96 weeks		24											
2 until < 5 years	24 - 59 months	At 24 months & 6-monthly thereafter		• **PrEP clinical review** • Provide breastfeeding support. • **HIV test and STI screen for mother** • **PrEP continuation/discontinuation education and counselling** • Script for and provide **PrEP for 3DCs at a time (3MMD)** • **Try to align with child's yearly well-baby visit schedule**		Up to 2 years	6-monthly	At 3 years		6-monthly	6-monthly	yearly	3-monthly	3-monthly

Abbreviations:

DC dispensing cycle (PrEP supply 28-days);
3DC three dispensing cycles of PrEP;
DMPA depo medroxyprogesterone acetate (Depo Provera®);
MIP mother-infant-pair;
MMD multi-month dispensing;
3MMD MMD, multi-month dispensing for 3 months;
NET-EN norethisterone enantate (Nur Isterate®);
RTHB road-to-health booklet

ANNEXURE 5 – TPT DOSING TABLES

TPT REGIMENS FOR CHILDREN WEIGHING LESS THAN 25 KILOGRAMS

There are two potential regimens for children: 3RH (rifampicin and isoniazid for 3 months), and 6H (isoniazid for 6 months). The choice depends on the child's weight, HIV status or HIV exposure (maternal HIV) status:

- in HIV-negative children < 25kg, the priority regimen is 3RH
- in children living with HIV and on DTG (dolutegravir) containing ART, the preferred regimen is 6H to avoid drug-drug interactions with ART
- in infants born to HIV-positive women (HIV-exposed but HIV-negative infants) on nevirapine, 6H is the priority regimen as rifampicin lowers nevirapine levels below efficacy

All children and breastfeeding infants require pyridoxine (vitamin B6) for the duration of their TPT as follows: Children younger than five years 12.5 mg and children five years or older 25 mg, once daily. Lack of pyridoxine access should not be a barrier to receiving TPT.

For HIV-positive infants who have just had the Bacillus Calmette-Guérin (BCG) vaccine and are not TB-exposed, TPT should be deferred for 14 weeks as Isoniazid (INH) impairs the effect of live BCG (M.bovis BCG) vaccine.

1. RECOMMENDED DAILY DOSAGES FOR 3RH IN HIV-NEGATIVE CHILDREN <25KG

Child's Weight (kg)	RH (Daily) fixed dose combinations		Duration
	75 / 50	If dispersed in water	
2 - 2.9	½ tablet	5ml	3 months
3 - 3.9	¾ tablet	7.5ml	
4 - 5.9	1 tablet	10ml	
6 - 7.9	1 ½ tablet	15ml	
8 - 11.9	2 tablets	20ml	
12 - 15.9	3 tablets	30ml	
16 - 24.9	4 tablets	40ml	
≥ 25	**Use adult formulations and doses**		

2. RECOMMENDED DAILY DOSAGES FOR 6H AMONGST CHILDREN LIVING WITH HIV < 25KG

Weight band (kg)	Daily INH 100mg tablet	Duration
2 - 3.4	¼ tablet	6 months
3.5 - 4.9	½ tablet	
5 - 7.4	¾ tablet	
7.5 - 9.9	1 tablet	
10 - 14.9	1½ tablet	
15 - 19.9	2 tablets	
20 - 24.9	3 tablets (or one 300mg tablet)	
≥ 25	**Use adult formulations (maximum dose 300 mg per day)**	

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