The SA National PMTCT Guidelines (2019)

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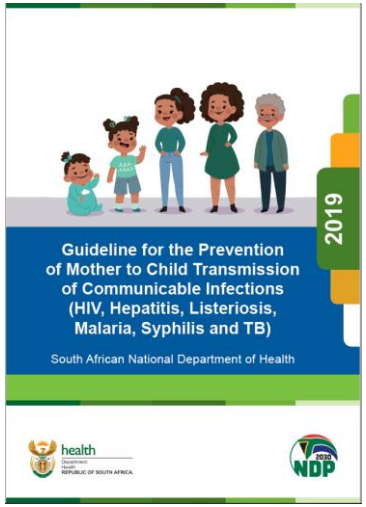
SOMSA 2019



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Outline

- The ideal PMTCT pathway
- Detail of new interventions to move us towards the ideal PMTCT pathway for mother and her infant

The Ideal PMTCT Pathway for the Mother

The ideal pathway for the mother involves :

- A planned pregnancy
- Early booking into antenatal care
- Early diagnosis of HIV
- Same day ART initiation with triple therapy ART (cART)
- Good adherence and retention in care during antenatal care
- Appropriate VL monitoring and response

In order to achieve

VL suppression at delivery

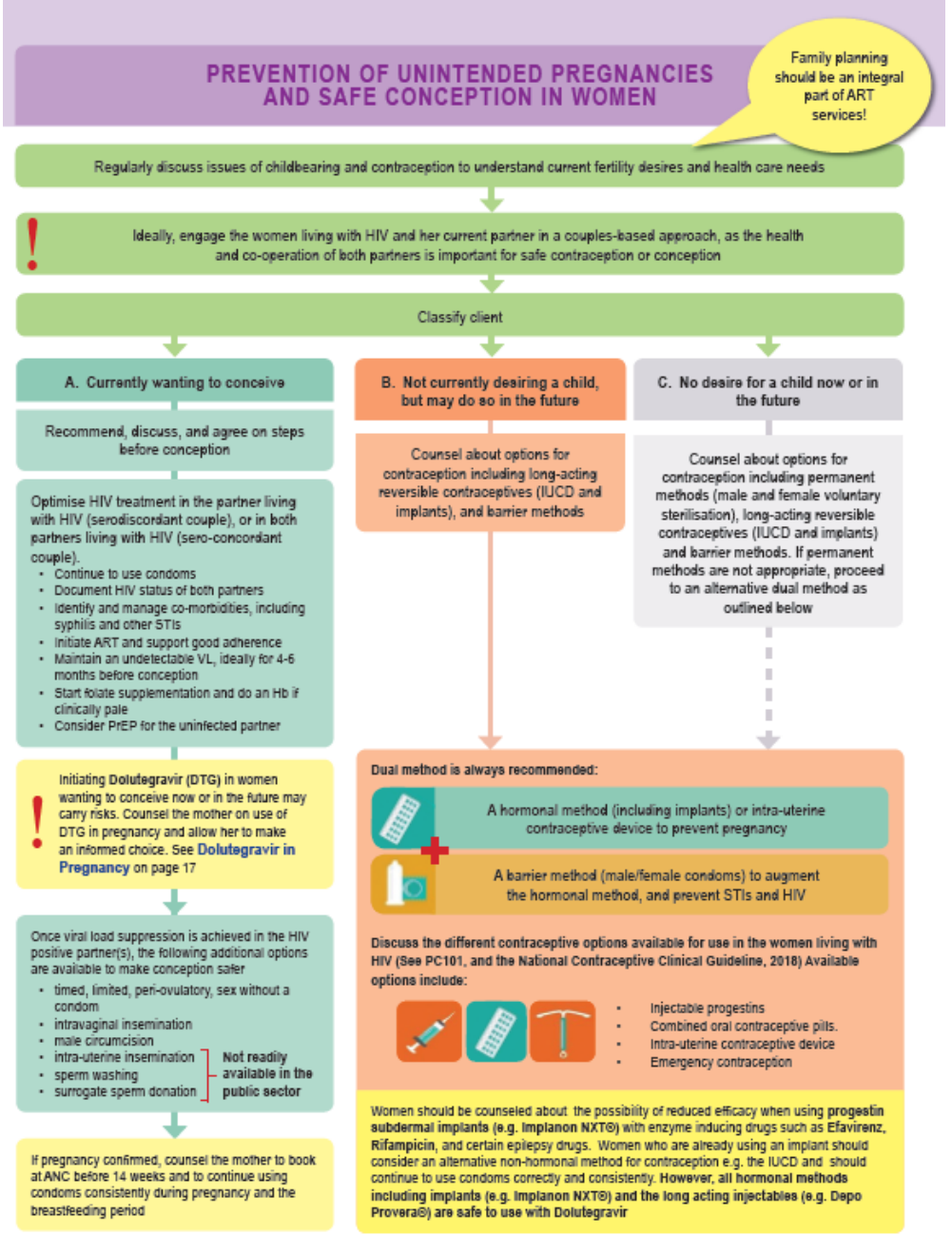
- Care to reduce MTCT during delivery
- Successful linkage back into care post-delivery
- Good adherence and retention in care postnatally
- Appropriate VL monitoring and response
- Integrated care for the mother and baby

In order to achieve

VL suppression during breastfeeding and thereafter

A Planned Pregnancy

- **Integration of ART and family planning services** are essential in the era DTG.
- Guidance is provided on both contraception and **safe conception**
- **At every visit**, issues of childbearing and contraception should be discussed to understand current fertility desires and health care needs



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(Early) Diagnosis of HIV

- HIV 1st test
  - At **1st /booking visit** in ANC clinic
- If she tests negative for HIV, repeat
  - **monthly at every full BANC visit** NEW
  - at labour and delivery
  - **at 10w well child visit**, and
  - 3-monthly during breastfeeding

Same day ART Initiation

Three factors related to ART initiation are of critical importance in pregnant / lactating mothers

1. Timing of ART initiation ✓
2. Potency of the regimen
3. The safety of the regimen

Enter…
The new kid on the block….

Dolutegravir

- TDF, 3TC, DTG (TLD) is a potent ART regimen
  - Superior efficacy and faster rate of viral suppression
  - Well tolerated
  - High genetic barrier to resistance
  - No drug interactions with contraception

BUT….

Safety of the ART regimen

- Safety signal for the risk of **neural tube defects (NTDs)**
- Therefore, be cautious in:

» women wanting to **conceive**,

» women not on reliable **contraception**, and

» pregnant women in the **1st trimester.**

- **Contraception is recommended** for any non-pregnant women taking or starting DTG.
- However, women's autonomy in decision-making about their health should be respected, and she should be enabled to make an **informed choice**

Integration of ART and Family Planning services essential!

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Risks and Benefits of DTG vs EFV

Benefits of using DTG	Risks of using DTG
Provides rapid viral suppression	DTG may increase the risk of **neural tube defects (NTDs)** if used in the first four weeks after conception
High genetic barrier to resistance	
No interaction with hormonal contraceptives	Drug interactions with **rifampicin**, metformin, anticonvulsants, and polyvalent cations (Ca, Fe, Mg)
Side effects are mild and uncommon	

Benefits of using EFV	Risks of using EFV
Safe in pregnancy	Low genetic barrier to resistance
No significant interaction with TB treatment	Drug interactions with contraceptives
	Neuropsychiatric side effects

Should she choose DTG despite recommendations, document her choice in writing in clinical notes

Switching between EFV and DTG

Overarching principle:
Never change only one drug in a failing regimen!

A single drug switch to DTG requires a VL of < 50 c/mL in last 6 months

Also remember to:

- Counsel her on **risks and benefits of DTG vs EFV**, and the risk for NTDs in subsequent pregnancies
- Provide counselling on **contraception** post-partum
- Check for potential **drug interactions**
- Warn the client about **new side effects** that may be experienced when switching to a new drug

Any pregnant or breastfeeding woman with a VL ≥ 50 c/ml should be managed as per the VL Non-suppression algorithm

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Drug Interactions with DTG

Interacting Drug	Effect of Co-Administration	Recommendation
Rifampicin	↓ Dolutegravir	Double DTG dose to 50 mg 12-hourly. If on TLD FDC, add DTG 50 mg 12 hours after TLD dose
Anticonvulsants: • Carbamazepine • Phenobarbital • Phenytoin • Valproate	↓ Dolutegravir	Avoid co-administration if possible (lamotrigine, levetiracetam, and topiramate do not interact with DTG, and can be used). Double DTG dose to 50 mg 12 hourly for carbamazepine if alternative anticonvulsant cannot be used
Metformin / DTG	↑ Metformin	DTG increases metformin dose. Maximum metformin dose 500 mg 12-hourly
Polyvalent cations – significant interactions → see next slide (Mg, Fe, Ca, Al, Zn) e.g. antacids, sucralfate, multivitamin and nutritional supplements		

Pregnant women with co-morbidities, e.g. diabetes or epilepsy are a high risk group who should be discussed with an expert/referred

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Drug interactions between DTG and the polyvalent cations (calcium/ iron supplements and antacids)

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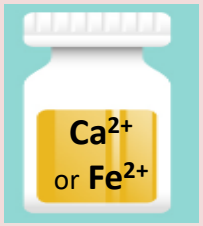

without food

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Decreased DTG levels

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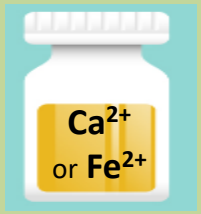

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No effect on DTG levels

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

+

Regardless of food intake

=

Decreased DTG levels
take a minimum of 2 hours before or 6 hours after DTG

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TB Screening Before ART Initiation

- The sensitivity of the TB symptom screen is reduced during pregnancy. Therefore, do a **TB GeneXpert, regardless of symptoms** on
  - all pregnant women with a **new HIV diagnosis**, and on
  - all known HIV positive women who have a **new pregnancy** diagnosis,
- In a women with TB symptoms
  - Previous guidelines recommended AZT monotherapy for women with TB symptoms until the results of her GeneXpert were available
- New guidelines recommend that women with TB symptoms **initiate triple therapy ART** (not AZT monotherapy)
  - Only if she is ill with **danger signs** should ART be deferred: these women may be at a higher risk of developing IRIS

VL Monitoring and Response (1)

- Viral Load monitoring :

Confirms good adherence and viral suppression

Timeously detects factors negatively affecting VL

- The following code should be on the lab form of every VL in a pregnant or breastfeeding women, so electronic gatekeeping rules (EGK) do not lead to sample rejection.

NEW

C#PMTCT

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VL Monitoring and Response (2)

VL Monitoring Schedule during Antenatal Care

- New HIV diagnosis HIV & initiated on ART for the first time:
  - **Do 1st VL at 3m on ART**
  - If suppressed, repeat **VL at delivery** NEW
- Known HIV-positive women already on ART:
  - **VL at first/booking visit in ANC**
  - If suppressed: Repeat **VL at delivery.** NEW
- Known HIV-positive women, currently not on ART, but are ART exposed (e.g. previous PMTCT, or ART discontinued)
  - **Do VL before re-starting ART (**but don't await results before starting ART)
  - **Repeat VL in one month**
  - If more than one log drop in VL - continue & repeat VL in 2m
  - If suppressed, repeat VL at delivery

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VL Monitoring and Response (3)

VL Monitoring Schedule During and After Birth

- VL **at delivery**, to determine NEW
  - response to ART in ANC
  - prophylaxis for the HIV exposed infant (HEI)
  - re-calibrating time points for maternal VLs during BF
- VL at **6m after delivery**, regardless of BF status NEW
- VL **6-monthly during BF**, aligned to the 6m, 12m and 18m well child visits

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

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 MTCT!

A Adherence	Is adherence to medication poor? Ask about factors that may influence adherence e.g. • Medication side-effects, • Depression, • 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. The need for 2nd-line ART is determined by her current regimen and how long she has been on ART.	Refer to the 2019 Consolidated ART Guideline for further management

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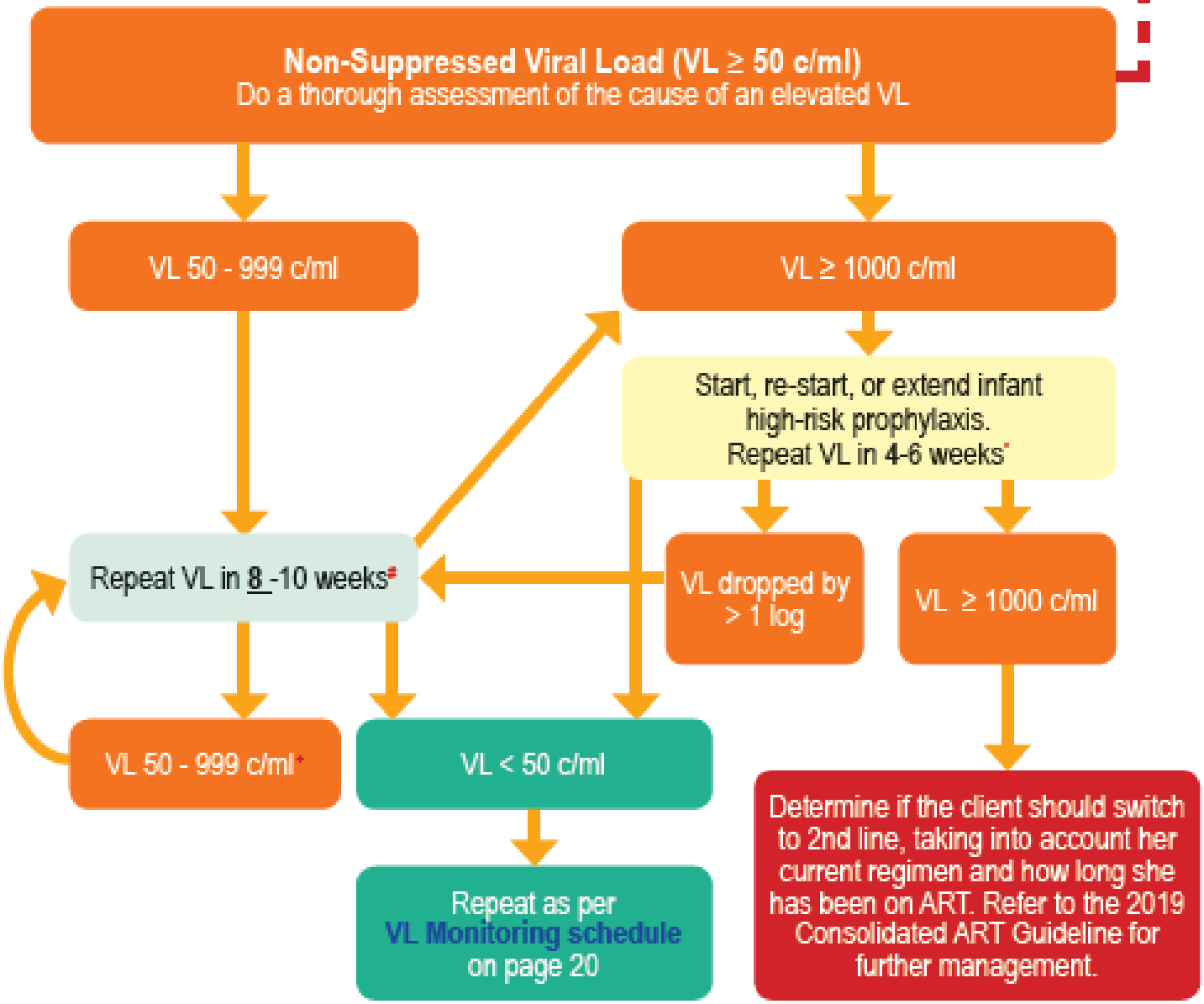
VIRAL LOAD NON-SUPPRESSION ALGORITHM (NSA)



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2nd line Regimens in Adults and Adolescents

Progression will be:

PI as alternative if DTG not suitable i.e. women wanting to conceive

Switching for virological failure will now depend on:

- Current regimen (NNRTI vs InSTI/PI)
- Duration on ART

  Due to their high genetic barrier, resistance to DTG and PIs develops very slowly. An elevated VL on DTG or LPV/r is therefore more likely to be related **to suboptimal adherence**. For this reason, a client should be on DTG for at least 2 years before considering a switch to second-line.

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Care to Reduce MTCT during Labour and Delivery (1)

ART during Labour and Delivery

- HIV positive on ART
  - Continue ART with usual timing
  - Give 2 months ART supply at discharge

NEW

- Known HIV positive mother **not on ART,** provide
  - A **stat dose of NVP**, together with
  - A **stat dose of TLD** (TDF 300mg, 3TC 300mg & **DTG** 50mg)

NEW

ART to be continued the following day after understanding fertility intentions and appropriate counselling on the risk of DTG-associated NTDs for subsequent pregnancies is done

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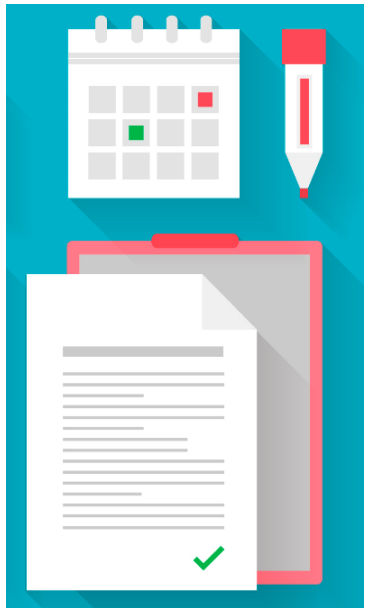
Linkages Back to Care in the Immediate Postpartum Period

- This is a high-risk period for poor adherence.
- Ask her where she plans to receive her follow-up ART care.
- **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.



Provide Integrated Care for the Mother-Infant Pair

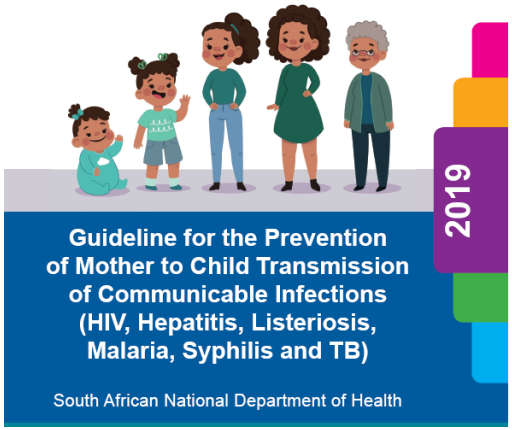
Benefits:

- Promotes **adherence and retention in care**
- *Both* mother & baby receive appropriate care to in terms of **linked health needs** and risks, to:
  - Reduce MTCT
  - Timeously respond to laboratory results
  - Promote health and prevent illness
- Opportunity to **promote and protect BF**

New South African National PMTCT Guideline (2019)

We will now move along each step of the ideal PMTCT pathway and describe the recommended interventions for the

HIV-exposed infant



Overview of Recommended Interventions to Prevent MTCT to the Infant

Strategy 1

Minimize infant exposure to the virus by

Maternal VL suppression

Strategy 2

Infant post-exposure prophylaxis

If these steps fail/ are suboptimal, we need to **identify infected children** as soon as possible by providing:

Early Infant Diagnosis and initiating ART

Cotrimoxazole Preventative Therapy (CPT)

At the same time we need to **promote and protect breastfeeding**

HIV-free **Survival**

Normal growth and development

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Infant Prophylaxis at Birth: Definitions and Principles

Principle 1

The delivery-VL will determine risk profile of infant

If result of delivery VL not yet available, use result of the most recent VL in the last 12 weeks of antenatal

Principle 2

High risk until proven low-risk

Treat the infant as high risk unless there is evidence to prove they are low risk

Principle 3

Continue prophylaxis until mom's VL is suppressed

NVP should be stopped after 12 weeks only if the mother's VL is less than 1000c/ml.

Definition 1

Low Risk = **VL < 1000**

Delivery VL, or VL in last 12 weeks of ANC (if delivery VL not yet available)

Definition 2

High Risk = **VL ≥ 1000, or No VL available**

Delivery VL, or VL in last 12 weeks of ANC (if delivery VL not yet available), or no VL available in last 12 weeks

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Breastfeeding in the context of HIV

- Benefits of breastfeeding for child survival balance the risks of possible MTCT
- Need to reduce MTCT via BF as far as possible by
  - Keeping HIV-uninfected mothers HIV-negative by

encouraging breastfeeding **PLUS** HIV risk reduction

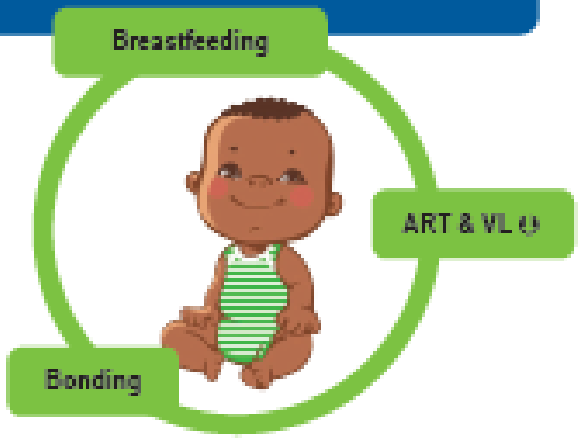
  - Keeping HIV-positive mothers virally suppressed by

encouraging breastfeeding **PLUS** Adherence to ART, retention in care, and correct VL management and response

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

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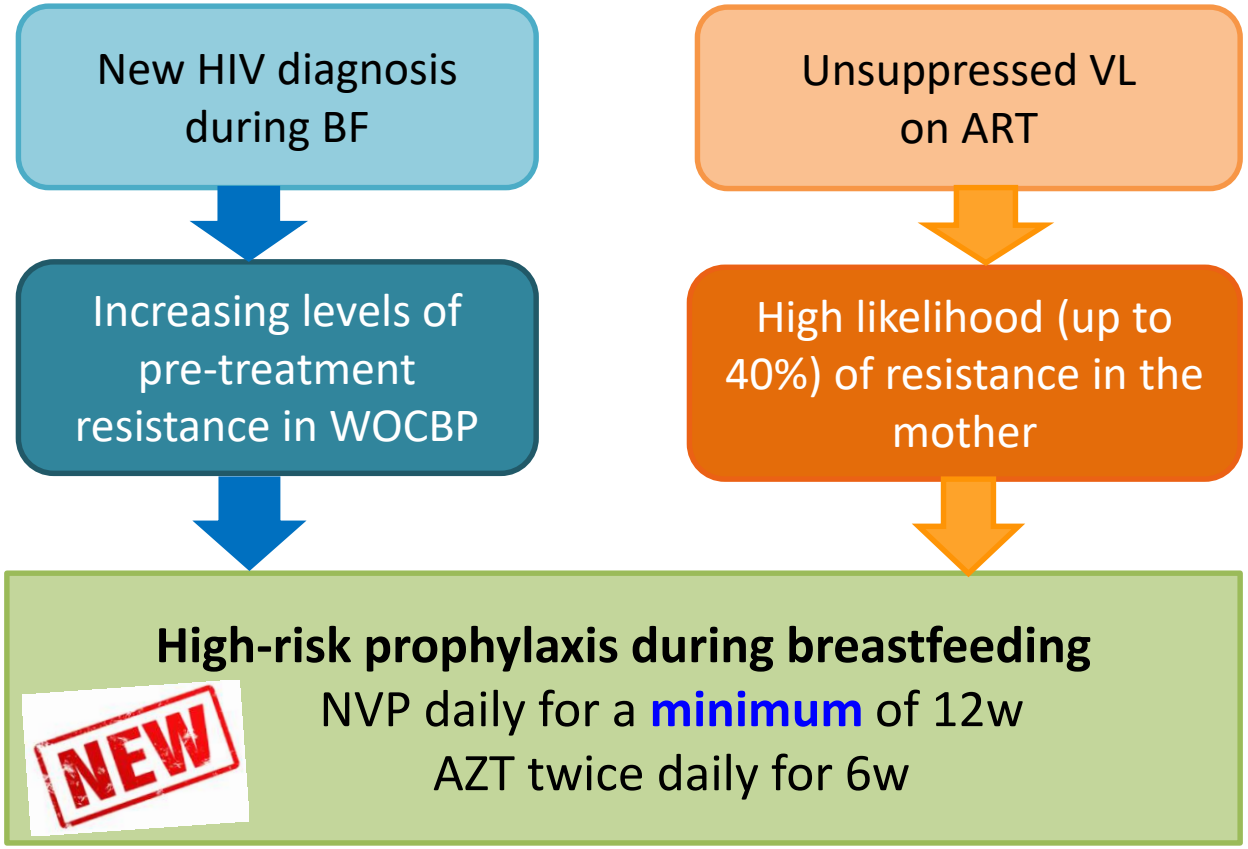
Prophylaxis for infants of mothers with an elevated VL during breastfeeding period

A mother may have an elevated VL during BF due to:



Early Infant Diagnosis: When to test?

If our strategies to prevent MTCT fail we need to **identify infected children** as soon as possible by testing infants for HIV:

- ☑ Birth PCR remains
- ☑ 10 week PCR remains

- ~~18 week removed~~, moved to
- NEW **6 month PCR** for all HIV-exposed infants
  - Aligned with 6-month maternal VL
- NEW **Universal 18 month** rapid/ELISA for <u>all</u> children
  - Whether exposed or un-exposed
  - Aligned with 18-month maternal VL

- ☑ Age-appropriate test at **6 weeks post-cessation of BF**
- ☑ Age-appropriate test at any time if **symptomatic**
- NEW Confirmatory viral antigen test up to age of 2 yrs

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Early Infant Diagnosis: Confirmatory Testing

Age of Child	HIV Screening Test	HIV Confirmatory Test
< 18 m	PCR	PCR
18 m to 2 y	Rapid	PCR
> 2 y	Rapid	Rapid

Retained Abs = False positive

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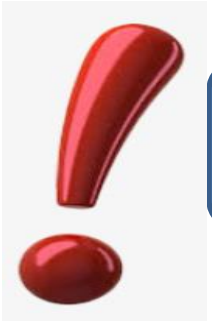
Care of The HIV-exposed but Uninfected (HEU) infant



HEU children are a vulnerable population that are at higher risk for growth deficits, neurodevelopmental delays, infections and death

Additional Management for the HEU Infant

- Identify high-risk HEU infants and ensure more regular monitoring for:
  - Poor birth outcomes
  - Symptoms of anaemia
  - Impaired growth and/or neurodevelopment
  - History of hospitalisation
  - Maternal illness or death
- They may experience poorer outcomes despite being HIV uninfected

Paradigm shift required:

A successful PMTCT program does not end only with an HIV negative child, but a child who **is HIV negative, and thriving, with normal growth and development**

Summary of Changes to the new PMTCT Guideline

Central Theme: Maternal Viral Load Suppression

Other cross cutting themes

Linking with HIV Prevention and Family Planning services
Integrating services for the mother-infant-pair
Promoting and protecting breastfeeding

Specific Changes

Antenatal care

HIV testing monthly at **every full BANC Plus visit**

Dolutegravir
- Potent VL suppressor
- Risk for NTDs
- Drug interactions

Labour and delivery

Delivery-VL for all HIV+ women

Stat NVP and TLD for women presenting in labour not on ART

Provide mother with **2 months ART supply** at discharge

Postpartum Care and Breastfeeding

HIV PCR at birth and 10 weeks remain
HIV-PCR at 6 months for all exposed
Maternal VL at 6 months and 6-monthly
18 month rapid/ELISA for all children
HIV confirmation with PCR until 24m

High risk infant prophylaxis (also BF):
- AZT for 6w
- NVP for a **minimum** of 12w, **until maternal VL suppressed**

Breastfeeding for **24 months** or longer **in the context of viral suppression** and **enhanced infant prophylaxis**

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Questions?

Abbreviations

- ART – Antiretroviral Therapy
- BANC – Basic Antenatal Care
- DTG - Dolutegravir
- CHW – Community Health Worker
- MTCT – Mother-to-child transmission
- NTD – Neural tube defect
- NVP – Nevirapine
- TEE – Tenofovir, emtricitabine & efavirenz
- TLD – Tenofovir, lamivudine & dolutegravir
- VL – viral load

Acknowledgement
"https://www.freepik.com”

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