Adult ART guidelines

Sipho Dlamini
Infectious Diseases & HIV Medicine
Groote Schuur Hospital

Topics

- ART in Pregnancy
- Abacavir Hypersensitivity reaction
- Adverse effects from Atazanavir

Ms XB

- 24 Year old Nursing student
  - HIV positive $CD4^{+}$ Count of 450 cells/µL
  - On ART for the past 3 years
    - Regimen of FDC (TDF/FTC/EFV)
    - Last viral load –LDL 6 months ago
  - 14 weeks pregnant
  - No other medical conditions & clinically well
  - **What do you do next?**
  - **When does she return to the clinic?**

Box 1: Changes specific to pregnant/breastfeeding women

- Immediate initiation of lifelong ART for all HIV-positive women who are pregnant, breastfeeding or within 1 year post-partum, regardless of CD4 cell count
- Use of EFV as part of the first-line regimen, regardless of the gestation of the pregnancy
- Use of maternal lifelong ART throughout pregnancy and breastfeeding to reduce MTCT
- Viral load testing for women on ART≥3 months at confirmation of pregnancy to direct management
- Repeat HIV testing for HIV-negative women 3-monthly during pregnancy, at labour/delivery, at the 6 week Expanded Programme on Immunisation (EPI) visit and 3-monthly throughout breastfeeding. This should be done during routine antenatal care, postnatal care and EPI/child health follow-up visits
- Women with contraindications to FDC should be considered high-risk pregnancies. They should be initiated on AZT immediately and referred urgently for initiation on to three single ART drugs
- Provision of birth HIV PCR for all HIV exposed neonates
- Use of extended 12 weeks NVP or dual post-exposure prophylaxis with NVP and AZT for infants where maternal viral load suppression may be inadequate

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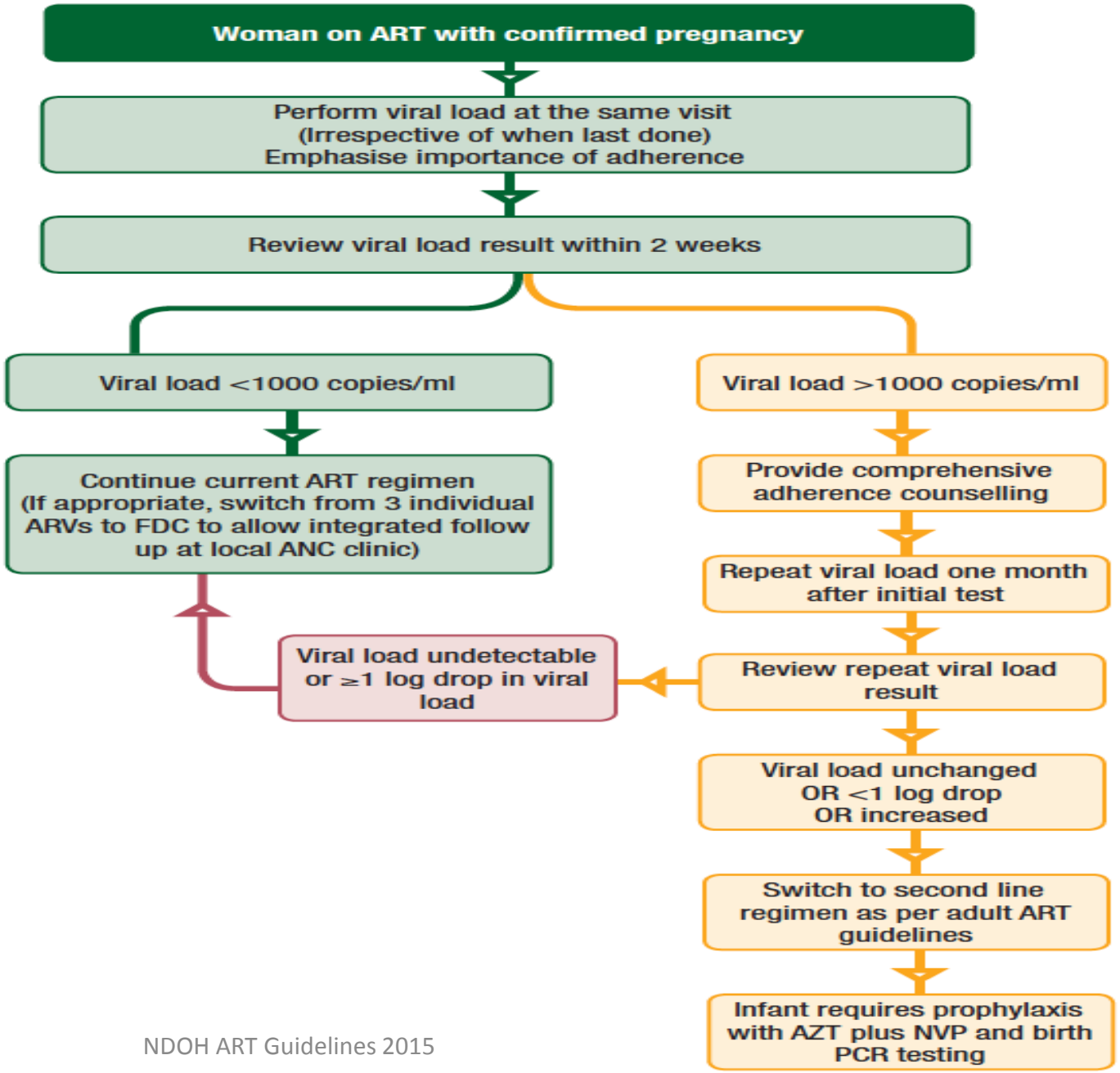
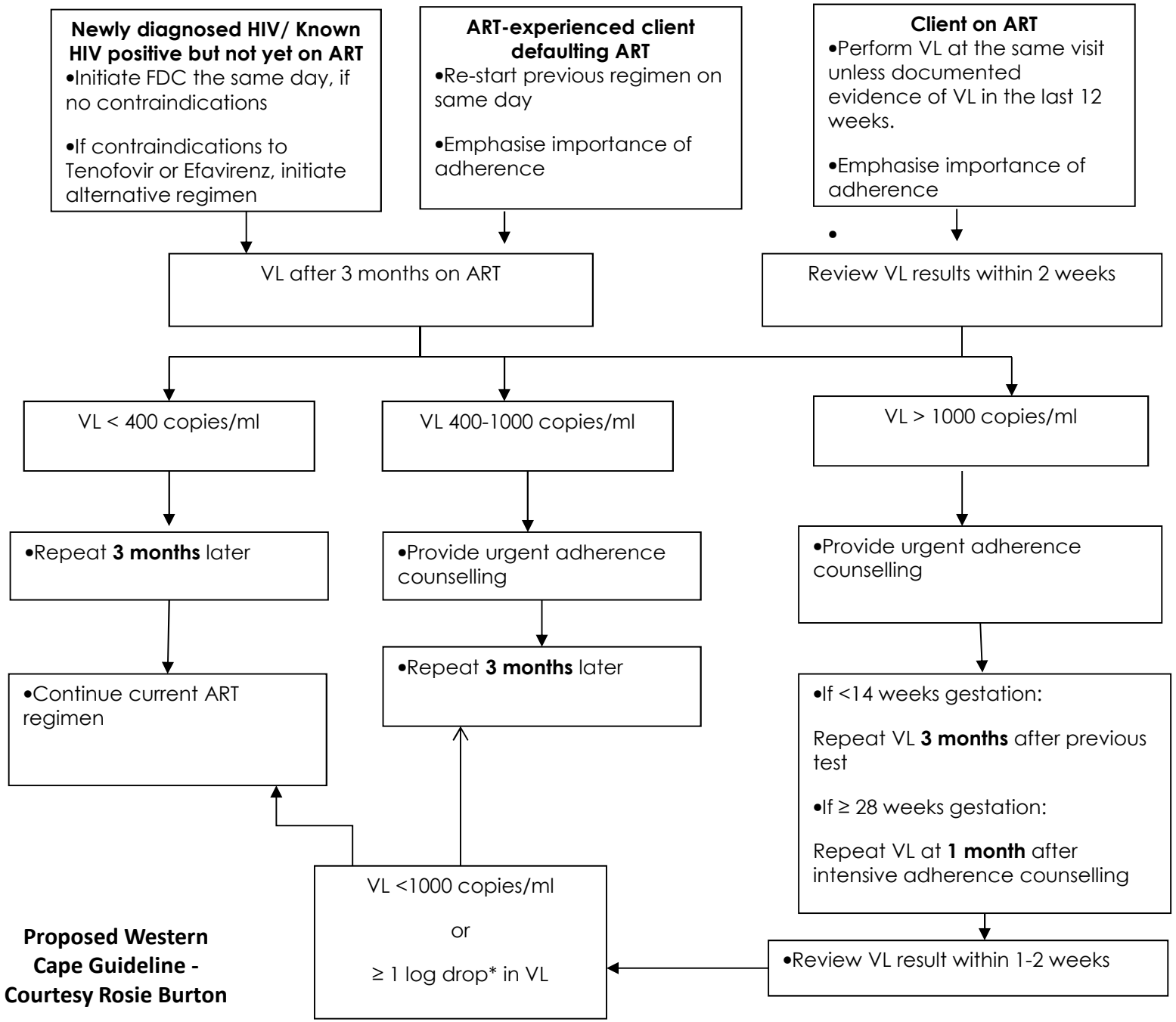
Viral Load	15 000 copies/ml

Algorithm for management of pregnant women already on ART for > 3 months

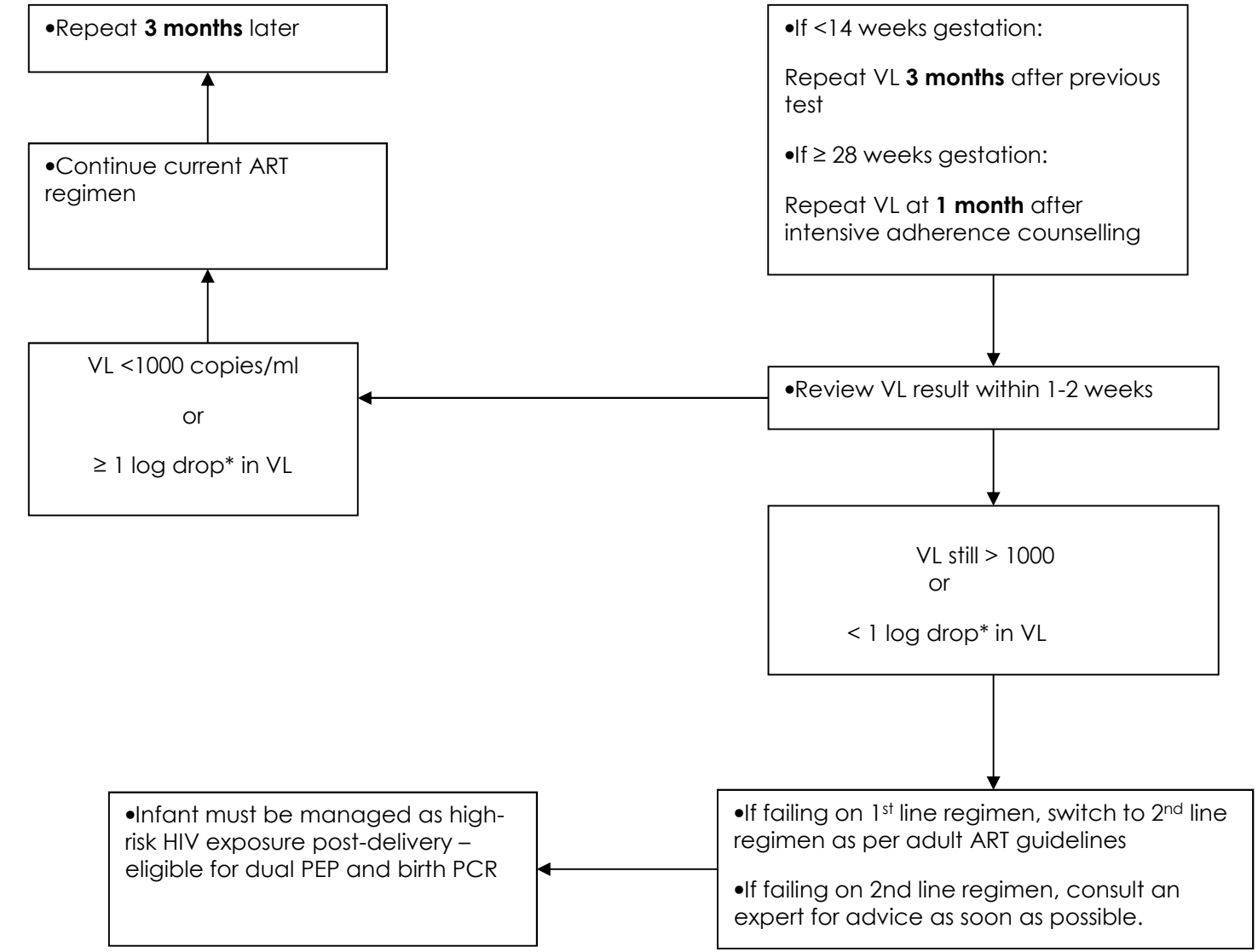


NDOH ART Guidelines 2015

VIRAL LOAD MONITORING IN PREGNANCY



Proposed Western Cape Guideline - Courtesy Rosie Burton



* log drop means a 10 fold drop i.e. divide the VL count by 10

Proposed Western Cape Guideline - Courtesy Rosie Burton

Mr ABC

- 41 year old
  - Diagnosed HIV positive 10 years ago $CD4^{+}$ nadir of 100
  - Initiated on FDC (TDF/FTC/EFV) in 2005
  - Defaulted ART in 2014
  - Admitted on 2nd April with diarrhoea & renal dysfunction
  - Restarted ART in May
    - Regimen Abacavir/ lamivudine/ Efavirenz

3 weeks later

Symptoms

- Fever
- Headache
- Vomiting
- Abdominal pain
- Easy fatigability
- Rash on the back

Examination

- T 38°C, BP 120/80 mmHg
- P 110
- Maculopapular exfoliative rash on back
- No hepatomegaly
- All other systems normal

Laboratory Results	
WCC	2.0 X 10^9/L
Hb	10.0 g/dl
PLT	90 X 10^9/L
Total Bilirubin	10 umol
ALP	49
GGT	31
ALT	80
Creatinine	90

Abacavir Drug Hypersensitivity (1)

- Features
  - Fever (usually 39-40 degrees)
  - Rash in 70% (maculopapular or urticarial)
  - Fatigue, malaise
  - GI symptoms (N&V, diarrhoea, abdominal pain)
  - Arthralgias
  - Cough, dyspnoea, pharyngitis
  - Usually > 1 system
  - Temporally related to taking dose

- Timing
  - Median onset 9 days
  - 90% in first 6 weeks

Abacavir Drug Hypersensitivity (2)

- Incidence
  - 4-8% in people of European descent
  - Much less common in people of African descent
  - Strongly associated with HLA-B5701
    - White Americans 8%
    - African-Americans 2.5%
    - Africa < 1%

- Can be fatal
  - 3/10,000 people on abacavir-based ART (trial data)
  - Rechallenge is an important risk

Ms AT

- 33 year old mother of 2 children
  - Diagnosed HIV positive 2013
  - Started ART July 2013- FDC (TDF/FTC/EFV)
  - Nov 2013 $CD4^+$ 635 VL-LDL
  - Sept 2014 develops DILI- EFV
  - Oct 2014 Switched to
    - Truvada + Atazanavir/ Ritonavir
    - $CD4^+$ 743 VL-LDL

Date	Oct 2014	Nov 2014	Dec 2014	Feb 2015	March 2015
TB	10	51	78	89	105
CB	5	13	11	7	7
ALP	82	78	49	72	49
GGT	38	31		23	32
ALT	55	44	30	24	30

Adverse effects of Atazanavir (1)

- Most common and recognized
  - Hyperbilirubinemia
    - Results in visible jaundice or scleral icterus
    - Due to inhibition of UGT1A1 enzyme
    - Occurs in 30-49% of patients in clinical trials
    - ~40% will experience >2.5 times ULN elevation (grade 3)
    - ~5% will experience >5 times ULN (grade 4)
  - Nausea
  - Diarrhoea

Adverse effects of Atazanavir (2)

- **Lipid profile and body fat composition**
  - ATV increases lipid levels less than other PIs
  - No associated with AEs related to glucose & insulin
  - Changes in body fat composition similar to other ARTs
- **Nephrolithiasis**
  - Obstructive uropathy
  - Acute renal failure
  - Incidence 23.7 cases per 1000 person-years

Gervasoni et al. PLOS ONE 10(4):e123670.

Hamada et al. CID 2012: 55(9):1262-9.

Adverse effects of Atazanavir (3)

- **Cholelithiasis**
  - Association between exposure & increased risk
  - Mechanism not fully understood
  - Hamada et al reported a low incidence of 2.23 per 1000 person-years
  - Nishijima et al report that risk increased with > 2 years

Hamada Y et al. PLOS ONE 8(7): e69845

Nishijima et al. JAC 2013