Introduction

• HIV prevalence in the adult population aged 15 years and older was estimated at 0.54% in 2014

• 212,000 people living with HIV (PLHIV) in Myanmar

• 106,000 PLHIV receiving ART in Dec 2015
• several meetings carried out in Naypyitaw and Yangon, with participation from all stakeholders to produce local guidelines

• the consensus reached was used to develop the Myanmar national guidelines 2014
Based on

- WHO CONSOLIDATED GUIDELINES in June, 2013
  and
- March 2014 SUPPLEMENT TO THE 2013 CONSOLIDATED GUIDELINES
1. Diagnosis of HIV infection

- Pre-test counseling

- Three testing strategy is used for clinical diagnosis

- Post-test counseling
WHO Strategy III (Diagnosis)

A1 (Determine-D)

D(+) Consider reactive

D(-) Report Non Reactive

A2 (Uni gold - UG) and A3 (Stat Pak-SP)

D(+), UG(+), SP(+)
Report positive

D(+), UG(+), SP(-)
D(+), UG(-), SP(+)

Report Indeterminate
Follow up after 4 to 6 weeks

D(+), UG(-), SP(-)

No risk factors
Consider Negative

Risk factors
Report Indeterminate
Follow up after 4 to 6 weeks

A1 = Determine (D) ICT,  A2 = Uni-gold (UG) ICT,  A3 = Stat Pak (SP) ICT
Cotrimoxazole prophylaxis

• It is recommended for all symptomatic individuals (WHO clinical stages 2, 3 or 4) including pregnant women

• Where CD4 count is available, cotrimoxazole prophylaxis is recommended for individuals with CD4 count of < 350/mm³
Laboratory assessment

- Hb g/dl Baseline
- CD4 count Baseline
- Fasting blood sugar Baseline
- ALT, AST Baseline Desirable
- Creatinine Baseline Desirable
- HBs Ag, HCV Ab Baseline Desirable
- Urinalysis Baseline
- Chest X-rays Baseline if indicated
Drug Adherence Counseling

• Patients should understand
  – that ART is suppressive therapy
  – that ART is life-long
  – that near perfect adherence is necessary to prevent ART resistance
  – that there are possibilities of side effects

• ART should never be prescribed casually at the first visit
When to start anti retroviral therapy

• Initiate ART if CD4 count < 500 cells/mm³
  – As a priority, initiate ART in everyone with severe/advanced HIV disease (clinical stage 3 or 4) or CD4 count < 350 cells/mm³

• WHO clinical stage 3 or 4 irrespective of CD4 cell count
Regardless of CD4 count and clinical stage

- Active TB disease
  - Start TB treatment first followed by ART as early as 2 weeks and not later than 8 weeks

- HBV co-infection with severe chronic liver disease
• HIV-positive individual in a serodiscordant couples

• Pregnant and breastfeeding women with HIV
  – Decide on when to stop (Option B) or Continue (Option B plus)
What ART combination to start

<table>
<thead>
<tr>
<th>First-line ART</th>
<th>Preferred first-line regimens</th>
<th>Alternative first-line regimens</th>
</tr>
</thead>
</table>
| Adults and adolescents (including pregnant and breastfeeding women and adults with TB coinfection and HBV coinfection) | TDF+3TC (or FTC) +EFV | AZT + 3TC + EFV  
AZT + 3TC + NVP  
ABC + 3TC + EFV<sup>a</sup> |

<sup>a</sup> ABC based combinations may be considered for pregnant women under special circumstances which may include situations where preferred or alternative regimens may not be available or suitable.
Monitoring ARV toxicities and response to treatment

• 2wks after initiation of ART
  – Drug allergy, Adherence, side effects such as dizziness due to EFV

• 4wks after ART
  – Anaemia, renal function, liver function
  – In addition to above parameters
• 1 to 3 months after ART
  – IRIS
  – In addition to above parameters

• Timing of follow up may depends upon patient’s condition after 3 months of ART

• Usually every 6 months in stable patients
<table>
<thead>
<tr>
<th>Laboratory monitoring of ART</th>
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</thead>
<tbody>
<tr>
<td><strong>Hb (For AZT)</strong></td>
<td>Baseline and at 4, 8, 12 weeks: every 6 months desirable</td>
</tr>
<tr>
<td><strong>CD4 count</strong></td>
<td>Baseline and every 6 months</td>
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<tr>
<td><strong>Plasma viral load: targeted</strong></td>
<td>At 12 months after the ART initiation and as needed only to confirm virological failure</td>
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<tr>
<td><strong>Chest X-rays</strong></td>
<td>When indicated</td>
</tr>
<tr>
<td><strong>Urinalysis (proteinuria, glucosuria)</strong></td>
<td>Baseline and Every 6 months if TDF used</td>
</tr>
<tr>
<td><strong>Creatinine (for Cr clearance calculation)</strong></td>
<td>Every 6 months if TDF used especially in high risk patients</td>
</tr>
<tr>
<td><strong>ALT, AST</strong></td>
<td>Every 6 months (if NVP used at 4, 8, 12 weeks) desirable but not compulsory</td>
</tr>
<tr>
<td><strong>Fasting blood sugar</strong></td>
<td>Every 6 months desirable</td>
</tr>
<tr>
<td><strong>Lipid profile (at least cholesterol and triglyceride)</strong></td>
<td>Every 12 months (desirable)</td>
</tr>
</tbody>
</table>
Management of Toxicities

• Find out the manageable causes of comorbidities such as;
  – OTC use of drugs
  – HBV, HCV, syphilis
  – Acute kidney injury
  – Piles, worms infestations
• Intolerance to EFV → NVP or PI/r

• Intolerance to NVP → EFV or PI/r

• Intolerance to TDF → AZT or ABC

• Intolerance to AZT → TDF or ABC
When to switch to second line ART

• WHO definitions of **clinical, immunological and virological failure** for the decision to switch ART regimens

• New or recurrent clinical event indicating severe immunodeficiency (**WHO clinical stage 4 condition**) after 6 months of effective treatment
• **CD4 count** falls to the baseline (or below) or Persistent CD4 levels **below 100 cells/mm³**

• **Plasma viral load** above **1000 copies/ml** based on two consecutive viral load measurements after 3 months with adherence support
Second-line ART regimens

- If d4T or AZT has been used in first line therapy, use TDF + 3TC (or FTC) plus a boosted PI (LPV/r)

- If TDF has been used in first line therapy, use AZT + 3TC plus a boosted PI (LPV/r) should be used as second line therapy
  - Keep TDF in second line if patient has HBV coinfection
• 3TC may remain useful in second line regimens even if there is resistance

• as such a strain may protect potential NRTI options and avoid PI monotherapy

• ABC and ddi are not recommended as preferred options
• If a patient on second line ART containing LPV/r have active TB use RIFABUTIN 150 mg 3times/wks instead of RIFAMPICIN
Third-line ART regimens

• Plans should be made for third-line therapy that consider costs, sustainability and equitable access to ART???
THANK YOU