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Acknowledgments

The Ministry of Health and Child Care acknowledges all stakeholders who participated in the development of the Operational and Service Delivery Manual for the Prevention, Care and Treatment of HIV in Zimbabwe. The Manual would not have been complete without the technical assistance and support provided by various stakeholders from the public and private sector. Special gratitude goes to the health workers in the four districts who committed to testing and reviewing the manual.

Special recognition goes to Dr Helen Bygrave (Consultant), Dr Tsitsi Mutasa-Apollo (MOHCC), Dr Joseph Murungu (MOHCC) and Dr Christine Chakanyuka (WHO) for providing oversight, strategic direction and significant technical input.

Technical and financial support for the development of the Operational Service Delivery Manual was provided by the World Health Organization (WHO) and Global Fund. Support for printing and distribution was contributed by UNICEF and OPHID.
### Abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC</td>
<td>Antenatal Care</td>
</tr>
<tr>
<td>ART</td>
<td>Antiretroviral Therapy</td>
</tr>
<tr>
<td>CARGs</td>
<td>Community ART Refill Groups</td>
</tr>
<tr>
<td>CBO</td>
<td>Community based organisation</td>
</tr>
<tr>
<td>CICT</td>
<td>Client initiated counselling and testing</td>
</tr>
<tr>
<td>CRAG</td>
<td>Cryptococcal antigen</td>
</tr>
<tr>
<td>CSF</td>
<td>Cerebral spinal fluid</td>
</tr>
<tr>
<td>CT</td>
<td>Computerised tomography</td>
</tr>
<tr>
<td>D4T</td>
<td>Stavudine</td>
</tr>
<tr>
<td>DBS</td>
<td>Dried blood spot</td>
</tr>
<tr>
<td>DHE</td>
<td>District health executive</td>
</tr>
<tr>
<td>DRTB</td>
<td>Drug resistant Tuberculosis</td>
</tr>
<tr>
<td>EAC</td>
<td>Enhanced Adherence Counselling</td>
</tr>
<tr>
<td>EDLIZ</td>
<td>Essential Drug List of Zimbabwe</td>
</tr>
<tr>
<td>EHT</td>
<td>Environmental health technician</td>
</tr>
<tr>
<td>EPI</td>
<td>Expanded programme of immunisation</td>
</tr>
<tr>
<td>FBC</td>
<td>Full blood count</td>
</tr>
<tr>
<td>Hb</td>
<td>Haemoglobin</td>
</tr>
<tr>
<td>HTC</td>
<td>HIV testing and counselling</td>
</tr>
<tr>
<td>IEC</td>
<td>Information, Education and Communication</td>
</tr>
<tr>
<td>IPD</td>
<td>In-patient department</td>
</tr>
<tr>
<td>MNCH</td>
<td>Maternal, Neonatal and Child health</td>
</tr>
<tr>
<td>MOHCC</td>
<td>Ministry of Health and Child Care</td>
</tr>
<tr>
<td>MRI</td>
<td>Magnetic resonance imaging</td>
</tr>
<tr>
<td>NCD</td>
<td>Non-communicable disease</td>
</tr>
<tr>
<td>NVP</td>
<td>Nevirapine</td>
</tr>
<tr>
<td>OI</td>
<td>Opportunistic infections</td>
</tr>
<tr>
<td>OPD</td>
<td>Out-patient department</td>
</tr>
<tr>
<td>PC</td>
<td>Primary counsellor</td>
</tr>
<tr>
<td>PCN</td>
<td>Primary Care Nurse</td>
</tr>
<tr>
<td>PEP</td>
<td>Post exposure prophylaxis</td>
</tr>
<tr>
<td>PITC</td>
<td>Provider initiated testing and counselling</td>
</tr>
<tr>
<td>PLHIV</td>
<td>People living with HIV</td>
</tr>
<tr>
<td>PMTCT</td>
<td>Prevention of mother to child transmission</td>
</tr>
<tr>
<td>PNC</td>
<td>Post natal care</td>
</tr>
<tr>
<td>POC</td>
<td>Point of care</td>
</tr>
<tr>
<td>RGN</td>
<td>Registered General Nurse</td>
</tr>
<tr>
<td>SCN</td>
<td>State Certified Nurse</td>
</tr>
<tr>
<td>SRH</td>
<td>Sexual and reproductive health</td>
</tr>
<tr>
<td>STI</td>
<td>Sexually transmitted infection</td>
</tr>
<tr>
<td>TaSP</td>
<td>Treatment as Prevention</td>
</tr>
<tr>
<td>TDF</td>
<td>Tenofovir</td>
</tr>
<tr>
<td>VHW</td>
<td>Village health worker</td>
</tr>
<tr>
<td>VIAC</td>
<td>Visual inspection with acetic acid and cerviography</td>
</tr>
<tr>
<td>VMMC</td>
<td>Voluntary medical male circumcision</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
Background & Rationale for the Manual

By the end of 2012, 9.7 million people were receiving antiretroviral therapy (ART) in low and middle income countries. This increase in the number of clients on ART over the last decade has been achieved through political commitment, community mobilisation and significant domestic and international financial support.

Zimbabwe has been one of the worst affected countries by the HIV epidemic in sub-Saharan Africa. Latest estimates reveal a national HIV prevalence (15-49 years) of 14.9%, ranging from 12.6% to 20.4% across provinces. HIV prevalence in the 15-24 year old population is estimated at 5.3%. 1.4 million people are estimated to be living with HIV with 620,867 adults (73% coverage) and 47,100 children (45% coverage) accessing ART by the end of 2013. PMTCT coverage is estimated at 82.5% of those in need (1).

Just achieving coverage of HIV counselling and testing or initiation of ART alone is no longer enough. Ensuring adequate linkages and quality monitoring are now required, with the aim that all those infected with HIV are identified, access appropriate treatment and achieve virological suppression.

In November 2013 the MOHCC launched new Guidelines for Antiretroviral Therapy for the Prevention and Treatment of HIV in Zimbabwe. In addition to the continued phasing out of D4T and ongoing decentralisation and integration of services new interventions recommended in the national guidelines include strengthening PITT supported by community-level HTC approaches; adoption of a CD4 threshold of $\leq 500 \text{cells/mm}^3$, prioritizing those with a low CD4 $\leq 350$ or clinical stage III or IV; adoption of universal treatment of children $< 5$ years regardless of CD4 count status; moving to lifelong ART for all pregnant and breastfeeding women (Option B+) and piloting of the Treatment as Prevention (TaSP) initiative among sero-discordant couples and sex workers. Viral load testing will be scaled up using the targeted approach initially with the aim of phasing in routine VL testing in the near future.

With the adoption of these new guidelines the number of people in need of ART has significantly increased to 1,207,175 adults and 101,146 children. In order to achieve these goals without overwhelming the health system and maintaining a quality service for people living with HIV, innovative programmatic strategies are needed. New approaches to HTC are needed to identify clients who are well with higher CD4 cell counts and review of the organisation of ART delivery systems will be required to relieve the burden both on the facility and the client. At all steps of the cascade active engagement of the community will continue to be essential in order to maximise uptake and retention.

To accompany the 2013 clinical guidelines which outline the “what to do” this operational and service delivery manual aims to give guidance on the “how to do it” with the aim of increasing retention at all steps of the cascade.
Manual Development Process

The Operational and Service delivery manual development process was spearheaded by a steering committee composed of representatives of the MOHCC and key stakeholders under the leadership of the Deputy Director for HIV and AIDS of the MOHCC.

The following key steps were followed:

- Desk review of relevant documents including background literature and systematic reviews, international guidance, national guidelines, policies and programme reviews
- Discussion and interviews with key stakeholders within the MOHCC, partners, service providers and service users
- Site visits (3 central; 2 provincial; 1 district hospitals and 3 primary care clinics)
- Two-day stakeholders consultative workshop
- Field Pre-testing of the manual in four districts (Harare, Zaka, Bubi and UMP)
How to use this Manual

This manual is for doctors, clinical officers, nurses, counsellors, pharmacists, health information officers, health promotion officers, community health workers and community based organisations providing HIV prevention, care and treatment services to children, adolescents and adults (including pregnant and breastfeeding women).

Each section describes a brief background to the topic, identifies potential barriers and solutions, and highlights key messages and reference materials that should be referred to in combination with the text. This reference material can be found on the CD at the back of the document.

The main body of the text is relevant for all groups but for pregnant/breastfeeding women, children, adolescents and key populations there may be some important special considerations to take into account. Throughout the text the ICONS shown in table 1 point the reader towards considerations for those special groups or a particularly important issue. So look out for the ICONS.

Tables 2-6 highlight the pages where special mention of issues for special groups pregnant/breastfeeding women, children and adolescents and key populations are referenced.

### Table 1: Key for ICONS

<table>
<thead>
<tr>
<th>Key Messages</th>
<th>Special Considerations for Pregnant Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference Materials</td>
<td>Special Considerations for Children</td>
</tr>
<tr>
<td>Activity performed by a clinician</td>
<td>Special Considerations for Adolescents</td>
</tr>
<tr>
<td>Counselling activity (PC or Nurse)</td>
<td>Special Considerations for Key Populations</td>
</tr>
<tr>
<td>Very important: Must Implement</td>
<td>Opportunity for Community and Facility Linkage</td>
</tr>
</tbody>
</table>
### Table 2: Special Considerations for Pregnant and Breastfeeding Women

<table>
<thead>
<tr>
<th>PAGE</th>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>HIV testing and counselling</td>
</tr>
<tr>
<td>59</td>
<td>Follow up Strategies</td>
</tr>
<tr>
<td>72</td>
<td>ART Initiation</td>
</tr>
<tr>
<td>78 and 82</td>
<td>ART Follow Up</td>
</tr>
</tbody>
</table>

### Table 3: Special Considerations for Children

<table>
<thead>
<tr>
<th>PAGE</th>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>HIV testing and counselling</td>
</tr>
<tr>
<td>60</td>
<td>Follow up Strategies</td>
</tr>
<tr>
<td>71</td>
<td>Pre ART Follow Up</td>
</tr>
<tr>
<td>73</td>
<td>ART Initiation</td>
</tr>
<tr>
<td>79 and 82</td>
<td>ART Follow Up</td>
</tr>
<tr>
<td>89</td>
<td>Treatment Failure</td>
</tr>
</tbody>
</table>

### Table 4: Special Considerations for Adolescents

<table>
<thead>
<tr>
<th>PAGE</th>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>HIV testing and counselling</td>
</tr>
<tr>
<td>60</td>
<td>Follow up Strategies</td>
</tr>
<tr>
<td>73</td>
<td>ART Initiation</td>
</tr>
<tr>
<td>79 and 82</td>
<td>ART Follow Up</td>
</tr>
<tr>
<td>89</td>
<td>Treatment Failure</td>
</tr>
</tbody>
</table>
1. Service Delivery

1.1 Provision of HIV prevention, care and treatment services: Defining the Minimum Package

1.1.1 Background

By the end of 2015 all health facilities in Zimbabwe will be expected to provide a minimum package of services for prevention, care and treatment of HIV. This will include at all levels the initiation and follow up of ART for children, adolescents and adults (including pregnant and breastfeeding women).

The Zimbabwean health system is a tiered structure as shown in Figure 1 below. In addition to the minimum package of services each successive tier of the health system will have additional responsibilities in terms of clinical management, mentorship, supportive supervision, pharmacy and laboratory support services and monitoring and evaluation.

*Figure 1: The Zimbabwean Health Care System*
1.1.2 The minimum package for HIV prevention, care and treatment at all facilities

The minimum package of HIV prevention, care and treatment services should be provided at all health facilities Monday to Friday 8 a.m – 4 p.m.

Additional opening hours (early morning, evening or weekend) should be considered according to the size of the clinic cohort and the particular needs of clients e.g children and adolescents at school will benefit from appointments outside school hours and during school holidays; working adults and at risk populations may benefit from an early morning clinic 6-7 a.m or a later clinic 4-6pm. This could be provided once a week or month depending on the cohort size.

**Table 5: The minimum package of services that should be provided at all tiers of the health care system**

<table>
<thead>
<tr>
<th>PREVENTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Provision of basic health education on how to prevent HIV transmission</strong></td>
</tr>
<tr>
<td>Basic education on HIV should be regularly included in the facility daily health talks.</td>
</tr>
<tr>
<td>Community based organisations must promote prevention of HIV infection through basic HIV education in the community (e.g at schools, workplaces, public gatherings, church functions and door to door health education).</td>
</tr>
<tr>
<td><strong>Provision of male and female condoms</strong></td>
</tr>
<tr>
<td>Condoms should be easily accessible at the facility. e.g available in toilets and waiting areas.</td>
</tr>
<tr>
<td>Condoms should be proactively offered to anyone attending with an STI or for HIV testing and counselling. There is a need for clinics to have models to be able to demonstrate female condoms.</td>
</tr>
<tr>
<td>Condoms should be distributed by village health workers, PLHIV, church leaders and CBO members.</td>
</tr>
<tr>
<td>Condoms should be available in hot spots such as beer halls and growth points</td>
</tr>
<tr>
<td><strong>Treatment of STIs</strong></td>
</tr>
<tr>
<td>All facilities should provide syndromic STI treatment</td>
</tr>
<tr>
<td><strong>Linkage with VMMC</strong></td>
</tr>
<tr>
<td>All facilities should offer or refer clients for VMMC (promote in health talks; have posters of locally available services). A referral slip should be used to refer potential clients for VMMC.</td>
</tr>
<tr>
<td>VHW and community leaders should mobilise their communities to take up VMMC</td>
</tr>
<tr>
<td><strong>Post exposure prophylaxis (PEP)</strong></td>
</tr>
<tr>
<td>PEP should be available for all facility staff after an accidental exposure to blood and for anyone presenting after an episode of sexual violence</td>
</tr>
<tr>
<td><strong>HIV TESTING AND COUNSELLING</strong></td>
</tr>
<tr>
<td>Facilities should provide CICT and <strong>Opt out</strong> PITC for all clients attending the facility (including</td>
</tr>
<tr>
<td>All facilities should ensure that there are adequate staff available to provide CICT/ PITC (rapid testing and collection of DBS for DNA PCR testing) at all entry points of their facility.</td>
</tr>
<tr>
<td>Topic</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Couples, children and adolescents) at all entry points (OPD, ANC, TB, MNCH / SRH, EPI, IPD) regardless of the purpose of the visit</td>
</tr>
<tr>
<td>Provider initiated testing is incorporated into any existing outreach activity e.g EPI</td>
</tr>
<tr>
<td>Mobile outreach testing should be organised on a regular basis (at least quarterly)</td>
</tr>
<tr>
<td>Index case testing should be provided</td>
</tr>
</tbody>
</table>
| Community cadres to perform HTC | Family members of a client who tests HIV positive should be offered HTC.  
1. Encourage client to bring family members to the clinic or other testing centres.  
2. Ask permission from the client to link with a community health worker or CBO member who can support and encourage the family member to test. Alternatively the health worker may go to test family members as an outreach activity.  
3. In the future self testing or community testing by community cadres (VHW and CBO members) may be considered by the MOHCC.  
Selected cadres will be trained to conduct HTC. This will be under the supervision of the facility and with the necessary systems in place to ensure quality HIV testing and delivery of correct, accurate results. Linkage between the facility and these community cadres will be essential to maximise the impact of these activities. |
## LINKING HIV POSITIVE CLIENTS TO CARE AND TREATMENT

| Clients testing positive at community level should be proactively linked to the facility for continuing care | POC CD4 should be used during outreach testing activities.

Once tested positive at a outreach or community testing activity the client should be linked directly with the health facility including a written referral slip and/or (with their consent) to a CHW or other community based representative working with HIV. This person should assist the client to link to appropriate care and treatment.

As part of the outreach team a clinician and where possible a counsellor trained to initiate ART should be included so that those who are immediately eligible can be started on ART. |

## PROVISION OF PRE ART SERVICES

| Facilities should provide the basic package of Pre ART care as outlined in section 2.4 | Facilities should provide access to:

- Clinical assessment and staging
- TB screening, diagnosis and treatment
- CD4 testing (and other baseline investigations if available)
- Cotrimoxazole and isoniazid preventive therapy (IPT)
- Treatment / or referral for opportunistic infections and cancers
- Basic HIV counselling
- Integrated SRH and MNCH services including treatment of STIs and screening for cervical cancer using VIA
- Family Planning

All clients who do not attend for follow up should be traced. Facilities should link with the community to strengthen basic HIV education, treatment literacy and retention of pre ART clients by performing defaulter tracing. |

## PROVISION OF ART SERVICES

| Facilities should provide the package of ART care as outlined in section 2.5-2.7 | Facilities should provide ART adherence preparation counselling, ART initiation and follow up for children, adolescents and adults (including pregnant and breastfeeding women) on 1st and 2nd line regimens.

Fast track refill systems (Section 2.3.4 and 2.3.5) should be offered to stable clients on ART.

Ongoing adherence support (including adapted paediatric counselling) should be provided (ANNEX 3 and 8).

Enhanced adherence support for “red flag” clients (patients who present with possible signs or symptoms of treatment failure) should be provided (ANNEX 5). |
Facilities should provide integrated ANC/delivery/PNC and PMTCT care as outlined in section 1.4.3

PMTCT should be provided as part of MNCH services (antenatally, at delivery and postnatally) so that the woman, child and husband are seen as a family with a one stop service approach (same nurse, same consultation room, same day). This is known as the family centred approach.

Family planning should be available for all HIV positive clients as a one stop service.

Screening for cervical cancer using VIA should be available.

Village health workers and other community based workers should identify clients who need SRH/ MNCH/ PMTCT and refer them to the facility. Facilities should link with the community to strengthen treatment literacy education and to perform defaulter tracing of pregnant and breastfeeding women.

All clients with HIV should be screened for TB at every visit and have access to diagnostic services. (smear, Xpert MTB/Rif, Culture, CXR)

All TB clients should be screened for HIV.

If diagnosed with TB and HIV they should be able to be initiated and followed for both diseases within the same facility, collecting drugs for both TB and ART on the same day.

Village health workers and other community based workers should educate, screen and refer suspected TB cases from the community.
### INFRASTRUCTURE AND EQUIPMENT REQUIRED

| Facilities should ensure there is adequate equipment available to offer the minimum package of services | • Running water  
• Well ventilated room; room with confidentiality for counselling  
• BP machines  
• Stethoscopes  
• Torch and otoscope/ auroscope  
• Thermometers  
• Height measuring boards/charts, child health cards for 0-5 years old and weight for age and height for age charts for older children, MUAC tapes, weight / salter scales  
• Examination couches |

### PHARMACY

| Facilities are responsible for ensuring a continuous supply of OI and ART medicines | Access to  
• Cotrimoxazole  
• Aciclovir  
• Fluconazole  
• Other Essential antibiotics including for treatment of STIs  
• Family planning commodities  
• Adult and paediatric first and second line regimens  
• Nevirapine syrup for exposed baby management  
• Anti TB medicines |

### LABORATORY

| Facilities should make all efforts to have access to the test kits listed. Lack of access to these investigations does not however mean ART therapy should be delayed  
Facilities should ensure regular sample transport e.g weekly (See section 3.2.2) | At primary facility:  
HIV testing kits  
DBS kits for DNA PCR  
Pregnancy tests  
Syphilis rapid tests  
Hb meters and test strips  
Urine dipstick  
Specimen tubes for CD4, FBC and biochemistry  
DBS kits for viral load testing where available  
Point of care technologies (e.g cartridges for CD4) where appropriate  

At District Level all of above plus:  
TB diagnosis (smear or Xpert MTB/Rif)  
CRAG testing for blood and CSF (at minimum access to Indian ink)  
Creatinine (TDF use);  
ALT (NVP use)  
CD4 (at least for baseline)  
Hepatitis B and C screening  

At provincial level all of above plus:  
Viral load (this will be gradually phased in)  

At national level all of the above plus:  
Genotyping  
TB Culture and drug sensitivity testing |
### MANAGEMENT OF HIV PREVENTION, CARE AND TREATMENT SERVICES

<table>
<thead>
<tr>
<th>Each facility should allocate a focal person for HIV prevention care and treatment services</th>
<th>This person is responsible for ensuring quality provision of HIV prevention, care and treatment services.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation of clinic and community meetings</td>
<td>Facilities should organise regular (weekly – monthly depending on case load) case discussion meetings to review difficult / failing cases. Where there is only one nurse regular case discussions must be organised with the district mentoring team.</td>
</tr>
</tbody>
</table>
| Data collection, analysis and reporting- see section 3.3 | All HIV related activities, (testing and counselling, pre ART and ART, PMTCT, TB/HIV, STI management) must be reported according to the National M and E standard reporting system. Each level of the health system will have it’s individual responsibility for reporting and analysis. Data from community based activities should be reported under their respective facility. 

Analysis of facility data should be utilised for continuous quality improvement (see Section 3.4). |

### 1.1.3 Additional Responsibilities for District Hospitals

In addition to the minimum package of services the district must also support the primary care clinics that are in it’s catchment area. The district must ensure there is:

- A referral system with a follow up mechanism in place for sick/ complicated clients to be linked to the hospital for further investigation and management.
- Treatment for cryptococcal meningitis as stated in the Guidelines for Antiretroviral Therapy for the Prevention and Treatment of HIV in Zimbabwe.
- Continuation of any treatments initiated at tertiary level; for example chemotherapy treatment for Kaposi’s Sarcoma.
- Screening and treatment for cervical cancer.
• A pharmacist or pharmacy technician who can support the clinics to strengthen supply chain management and respond in a timely manner to any emergency medicines shortages at the clinics.
• A laboratory that provides the basic package of investigations as outlined in the minimum package. Maintenance contracts for all machines (CD4, haematology and biochemistry) along with quality assurance mechanisms must be in place. For those tests that are being performed as point of care tests at the clinic the district laboratory must ensure that an adequate quality assurance (internal and external) is in place (Section 3.2).
• A radiology department that provides access to X-ray and ideally ultrasound.
• A district multidisciplinary mentorship team that visits each clinic. See section 1.2.3. In addition telephone and other electronic support should be available to the clinic nurses from the district HIV Prevention, Care and Treatment mentors to assist in the management of complicated clients and cases of treatment failure.
• Provision of a clinical attachment system for those nurses identified to be in need of clinical skills enhancement in HIV Prevention, Care and Treatment as part of the district clinical mentorship planning.
• A district human resources management plan to ensure adequate trained health care worker availability across all clinics.
• Regular assessment of staff training needs at district and clinic level in order to provide the minimum HIV Prevention, Care and Treatment package of services.
• Supportive supervision. These visits should be performed by the DHE team but should also include co-opted members as per need such as the laboratory scientist, nutritionist, and district AIDS coordinator. Each clinic within a district should be visited quarterly.
• An action plan developed for each site following supervision visits.
• District wide coordination of partners and HIV service delivery organisations.
• District wide coordination of community engagement with activities in line with local health needs.
• Consolidation of the monthly reports from all facilities and transmission to provincial level.

1.1.4 Additional Responsibilities for Provincial Hospitals

In addition to the minimum package of services provincial hospitals should:
• Accept referrals from the district facilities to diagnose and treat more complicated clinical cases including the management of DRTB.
• Provide laboratory tests that are not available at the district e.g. viral load.
• Provide additional radiological testing that is not available at the district.
• Consolidate provincial data for reporting to national level.

1.1.5 Additional responsibilities for Tertiary Hospitals

These hospitals should function as centres of excellence. In addition to the minimum package of services for their catchment area they should:
• Accept referrals from district and provincial medical staff to manage complicated cases including cases of second line failure.
• Act as the referral centre for suspected Kaposi’s Sarcoma and initiate chemotherapy treatment.
• Provide laboratory tests that are not available at the district and provincial sites such as Viral load, DNA PCR, resistance testing, TB culture and drug sensitivity testing.
• Provide additional radiological testing that is not available at the district or provincial sites such as CT and MRI scanning.

1.1.6 The Role of the Community

Engagement of the community in policy development, programming, resource mobilisation, implementation and evaluation of services is essential. Across the HIV care and treatment cascade community engagement provides the possibility to increase uptake of HIV testing and treatment and enhance retention and successful adherence to ART (2).

To achieve this there needs to be improved coordination and monitoring of community based activities and greater linkage with services provided at the facility. Facility managers, community nurses and district coordinators must ensure that they guide their communities in the activities they choose in order to maximise the health benefits at each step of the cascade.

Developing the capacity of existing community based workers using harmonized training materials in line with the new Guidelines for Antiretroviral Therapy for the Prevention and Treatment of HIV in Zimbabwe is the first step. Parallel to this there is urgent need to scale up the capacity of community members and volunteers to support community mobilisation and treatment literacy activities.

In addition to supporting access, retention and adherence the community should organise themselves to advocate towards increased political commitment and financial support for HIV programming. The community should also act as a watchdog using community monitoring systems to report on the quality of services provided and critical issues such as drugs supply shortages or stock outs.

1.2 Human Resources

1.2.1 Background

Decentralisation and integration of HIV Prevention care and treatment activities across all levels of the health system has required a critical review of roles and responsibilities of health care workers. With the further scale up of ART demanded by the 2013 Guidelines for Antiretroviral Therapy for the prevention and treatment of HIV in Zimbabwe further review of the tasks and working practices of health workers is required. By reviewing the scope of practice of health workers, not only will access and retention be improved, but it should allow clinicians (doctors and nurses) to spend more time with clients with more complex needs.
Evidence from the literature has demonstrated that there is no difference in clinical outcomes including mortality or losses to follow up when nurses initiate or manage people on ART relative to physician led care (3,4). Nurses should therefore be empowered to initiate and follow up children, adolescents and adults (including pregnant and breastfeeding women). Quality of care however should be ensured through adequate training, ongoing mentorship, clear indications for referral to higher levels of care and monitoring and evaluation systems that are utilised for improving client management.

### 1.2.2 Roles and Responsibilities of health care workers

The precise distribution of tasks will depend on the level of the health system, the number of staff available at a facility and the size of the cohort being served. It is the responsibility of the nurse in charge of the clinic or HIV Prevention care and treatment centre to ensure all tasks have a member of staff clearly identified and responsible for fulfilling it.

Table 6 outlines the scope of practice for different health care workers involved in the provision of HIV prevention, care and treatment services. Each site should use this table to review the scope of practice within their facility and establish responsibilities for each step.

**Table 6: Health worker Scope of practice for the provision of HIV prevention, care and treatment services**

<table>
<thead>
<tr>
<th>Task</th>
<th>Doctor and clinical officer</th>
<th>RGN</th>
<th>PCN</th>
<th>Nurse Aid</th>
<th>General Hand</th>
<th>PC</th>
<th>Data Clerk</th>
<th>Clinic based Microscopist</th>
<th>EHT</th>
<th>VHW</th>
<th>CBO and selected community members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention activities</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Registration and filling of appointment diaries</td>
<td>Yes but should delegate</td>
<td></td>
<td></td>
<td>Yes but should delegate</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Performing vital signs</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV testing and counselling</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X*</td>
<td>X*</td>
<td>X</td>
<td>X</td>
<td>X*</td>
<td>X</td>
<td>X*</td>
<td>X</td>
</tr>
<tr>
<td>DBS for DNA PCR testing</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management of complicated case (e.g. CCM; second line failure treatment failure etc)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre ART follow up</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>ART initiation and follow up for adults and children</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TB initiation for smear or Xpert positive cases for adults and children</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TB initiation for adults requiring CXR interpretation and children where no sputum is available</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution of refills</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X*</td>
<td>X*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management of first line treatment failure</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ART preparation and adherence counselling for adults, children and pregnant women including treatment failure</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defaulter tracing</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Data entry (for area of service)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Phlebotomy</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* with adequate training ** with discussion with nurse mentor or doctor
**District Medical Officer and District Nursing officer**

The District Medical Officer (DMO) along with the District Nursing Officer (DNO) is responsible to ensure successful implementation of the minimum package of care for HIV prevention, care and treatment services within their district hospital and decentralisation of the minimum package to the primary care clinics within their catchment area (Section 1.3). In addition they must ensure the district hospital and DHE fulfils the additional requirements as outlined in section 1.1.3.

**TB Focal Nurse and District TB Coordinator**

The TB Focal Nurse should oversee the clinical aspect of TB and TB/HIV activities at facility level. The district TB Coordinator in liaison with the TB Focal Nurse should oversee all TB and TB/HIV activities within the district. This must include oversight of community based activities to support TB case finding, retention in care of TB patients and coordination of all TB and TB/HIV data collection.

**Doctors and Clinical Officers**

A doctor or clinical officer based at district level should

- Assist in the general running of HIV prevention, care and treatment services in collaboration with the focal person / nurse in charge
- Ensure a thorough history and examination is performed and appropriate investigations are ordered for clients seen
- Assess complicated cases referred to them by the nurses within the district HIV prevention care and treatment centre and from referring clinics
- Support the HIV Prevention care and treatment nurse mentor in decisions to switch to second line ART
- Review cases of second line failure and refer as appropriate
- Support the management of DRTB cases
- Determine whether referral to a more specialised level of care is appropriate.

A doctor at district level should also be identified to be part of the district mentoring team. As well as participating in clinic visits a doctor should be available by phone for nurses to contact with clinical queries. This role can be rotated amongst the doctors within the district.

At provincial and tertiary level the doctors should be available to discuss complicated cases and accept referral as appropriate. If specialist consultants visit provincial sites, referring facilities should be aware of the scheduled dates.

**Sister in Charge of a facility or HIV prevention, care and treatment unit**

In addition to the clinical tasks involved in the provision of HIV prevention, care and treatment the nurse in charge of the facility should ensure:

- The minimum package of HIV Prevention care and treatment services (Table 5) is available within their facility and staff are allocated their daily duties to provide these services
- They have the necessary skills to manage and refer complicated cases
• Staff within her/his facility are adequately trained
• Pharmacy and laboratory commodities are ordered, stored and utilised correctly
• Accurate and timely monthly data is submitted to the district
• Clinic team meetings are organised to discuss challenging cases including treatment failure and to feed back analysis of data to support quality improvement activities
• Liaise with the community nurse who will organise meetings with community leaders and CBOs to facilitate linkage between clinic and community based activities
• Samples are taken, stored correctly and prepared for sample transport.

Clinic Nurse

A clinic nurse should:
• Provide all clinical services required to implement the minimum package of care for children, adolescents and adults (including pregnant and breastfeeding women)
• Initiate and follow up children, adolescents and adults (including pregnant and breastfeeding women) on ART including provision of counselling if required
• Initiate and follow up children, adolescents and adults (including pregnant and breastfeeding women) with a positive smear or Xpert MTB/Rif result on TB medication
• Follow up children, adolescents and adults (including pregnant and breastfeeding women) initiated on TB medication by the doctors (those diagnosed on CXR or clinically)
• Ensure clear documentation of the consultation is made in the client held notebook and the clinic held patient care and treatment book
• Ensure all baseline and follow up laboratory tests are performed according to the clinical guidelines
• Ensure that medicines are prescribed and dispensed accurately
• Support the provision of refill services (Section 2.3.4 and 2.3.5)
• Ensure accurate and timely documentation of all activities in the designated registers according to the activity carried out (HTC, pre ART, ART care)
• Assist the nurse in charge with the compilation of accurate and timely monthly reports.

Primary Counsellor

The primary counsellor is responsible for providing:
• HTC for children, adolescents, adults (including pregnant and breastfeeding women) including preparation of DBS specimens for DNA PCR testing
• Basic HIV education, ART education and ART initiation counselling for children, adolescents, adults (including pregnant and breastfeeding women) (ANNEX 1 and 2)
• Follow up adherence counselling for children, adolescents, adults (including pregnant and breastfeeding women) (ANNEX 3)
• Targeted enhanced adherence counselling for children, adolescents and adults (including pregnant and breastfeeding women) who are failing their treatment (ANNEX 5)
• TB and DRTB adherence counselling.

For all the above tasks the counsellor must document their findings in the client notebook and the notes section of the patient care and treatment booklet
For HTC activities the PC must also complete the HTC register and if instructed by the nurse in charge compile the monthly HTC report.

According to the setting the primary counsellor could also be assigned tasks such as registration of clients, updating of the appointment diary, initiation of the defaulter tracing process and acting as focal person for the formation and support of clubs and CARGs (Section 2.3.5). It remains the responsibility of the nurse in charge to clearly allocate duties and ensure that they are carried out.

**Nurse Aid**

The nurse aid should assist the clinic nurses in the provision of the minimum package of HIV prevention, care and treatment services. Depending on the setting, tasks such as checking of vital signs, registration of clients, ensuring the diary is accurately updated and defaulter tracing implemented could be assigned to the nurse aid. Nurse aids could also be considered as an additional cadre to perform HTC. It remains the responsibility of the nurse in charge to clearly allocate duties and ensure that they are carried out.

**Data Clerk**

The data clerk is responsible for ensuring data is accurately entered from the patient care and treatment booklet into the paper based or electronic patient monitoring system on a daily basis.

Depending on the setting the data clerk could be assigned tasks such as registration of clients, updating of the appointment diary and initiation of the defaulter tracing process. It remains the responsibility of the nurse in charge to clearly allocate duties and ensure that they are carried out.

**Environmental Health Technician (EHT)**

EHTs perform a wide range of activities. Regarding HIV Prevention care and treatment activities EHTs should:

- Support defaulter tracing under the guidance of the clinic nurse in charge
- Where appropriate support weekly sample transport under the guidance of a district sample transport strategy.

**Health Promotion Officer**

The health promotion officer should be responsible for activities to support community mobilisation, advocacy and health promotion messages related to the activities described within the minimum package of HIV prevention, care and treatment. Health promotion officers have a role in enhancing treatment literacy and adherence support in the community.

**Pharmacist and Pharmacy Technician**

The district and provincial level pharmacist or pharmacy technician must ensure their facility and the clinics that they are supporting have an uninterrupted supply of quality medicines according to the Zimbabwean pharmacy standard operating procedures and ensure emergency orders are supplied
When dispensing OI and ARV medications they should also advise on treatment literacy. Any serious adverse events should be reported by the clinicians and recorded appropriately.

In hospitals the pharmacy staff should support in collaboration with the nurse in charge the provision of refill systems (Section 2.3.4 and 2.3.5). In facilities with larger cohorts pre-packing of drugs the day before may support more efficient service delivery for the clients.

In addition to ensuring activities outlined in Section 3.1 are carried out the pharmacist or pharmacy technician should perform regular (quarterly) supportive supervision to all clinics. These visits should be combined with existing visits for mentorship and supportive supervision by the DHE team to avoid the need for additional transport arrangements.

**Laboratory Scientist and Technicians**

The district and provincial level laboratory scientist or technician must ensure their facility and the clinics that they are supporting have access to the minimum package of diagnostic and monitoring tests required for the provision of HIV prevention, care and treatment services as outlined in Section 1.1. They must ensure timely ordering of supplies and have a system in place to ensure access to investigations can continue if a machine breakdown occurs. Adequate internal and external quality control must be ensured for all tests including rapid and other POC tests being performed at clinic level. In addition to ensuring activities outlined in Section 3.2 are carried out, the laboratory scientist or technician should perform regular (quarterly) supportive supervision to all clinics. These visits should be combined with existing visits for mentorship and supportive supervision by the DHE team to avoid the need for additional transport arrangements.

**Community Health Workers**

Village health workers and other community based cadres should:

- Conduct community mobilisation to increase uptake of HIV testing and counselling, care and treatment
- Act as a link between outreach and community based activities and the facility to support enrolment in care and treatment
- Provide community based treatment literacy to support adherence and retention
- Link with the facility to provide defaulter tracing for clients
- Facilitate the formation and running of community based ART delivery models where implemented (See Section 2.3.5)
- Ensure monitoring and evaluation of community based activities is linked to the respective facility
- Hold formal monthly meetings with the clinic to report on community activities (including referrals and support group activities).

**1.2.3 Capacity Building**

To provide the minimum package of HIV Prevention, Care and Treatment services the available human resources must be adequately trained. In addition to workshop based trainings provided through the
MOHCC ongoing on job training, clinical attachments and clinical mentorship must be scaled up and strengthened at local level through a district owned mentorship programme. Distance and e-learning is also under development from the MOHCC.

District health executives should ensure that a regular assessment of training needs is carried out and that there is a functioning district clinical mentorship team. Organisation of clinical attachments to the district or centre of excellence should be regularly scheduled to support nurses needing clinical skills enhancement in HIV Prevention, Care and Treatment. Rotation of staff must be planned, strongly considering their skills and investment in the staff through trainings, clinical attachments and mentorship, the aim being to ensure the appropriately trained and skilled staff are in the right department at the right time.

A national clinical mentorship programme in Zimbabwe was established in 2007. The goal of the programme is to scale up high quality comprehensive HIV Prevention, Care and Treatment services supporting decentralisation, building capacity in healthcare workers and motivating them with support. The programme is currently being scaled up with the goal of covering every district.

Mentorship entails site visits to provide face to face support to the mentees but also telephone and other electronic support for discussion of difficult cases. The province and district management teams must plan for clinical mentorship based on the decentralisation planning and prioritise which sites are selected first for mentorship. Initially sites should be mentored more frequently, then frequency reduced as mentoring objectives are met according to established monitoring and evaluation tools. The content of the mentorship should be guided by an assessment of skills, knowledge and confidence gaps of the mentee. Prioritisation of sites should be guided by performance in key focus areas such as paediatric ART initiation, care of special populations such as adolescents, pregnant women, TB/HIV co-infected and the management of treatment failure.

Mentorship should also address key elements of the system required to “block the leaks in the cascade” such as implementation of an appointment system, defaulter tracing system and client flow. (See section 2.3).

Each district should select appropriate mentors. Mentors should:

- Have substantial expertise in antiretroviral therapy and the management of opportunistic infections
- Be experienced, practicing health care workers with strong teaching and communication skills
- Be able to provide ongoing mentoring to less experienced HIV clinical providers by responding to questions, reviewing clinical cases, providing feedback and assisting in case management
- Mentoring teams should be multidisciplinary teams comprising of, but not limited to a medical doctor, nurse, pharmacist/pharmacy technician, primary counsellor and laboratory scientist/technician. The team should have the capacity to mentor across the whole spectrum of HIV Prevention, Care and Treatment including counselling
- Mentorship must be an ongoing process. The development of a trusting relationship between the district mentorship team and the health care workers providing services in the decentralised sites should strengthen the quality of service provision and motivate staff in their daily tasks.
1.2.4 Key Messages and Reference Materials

- Providing the HIV prevention, care and treatment minimum package requires **TEAM WORK**.
- **With the growing cohort of clients “who does what” will need ongoing evaluation.**
- All doctors, clinical officers, registered nurses and primary care nurses can initiate and follow up adults (including pregnant and breastfeeding women) adolescents and children on ART.
- Village health workers and other community workers should be actively involved in prevention, treatment literacy activities and defaulter tracing. Future inclusion as a cadre for testing should be considered.
- Clinic and district managers should be very clear who is responsible for each task within their facility.
- **All health workers should rotate through departments or activities so they become polyvalent but rotation of staff must be structured to ensure that adequately trained staff are available at any point to provide the minimum package of HIV prevention, care and treatment.**
- Ongoing capacity building is essential. All DHEs should undertake regular reviews of training needs.
- All DHEs in collaboration with the national mentorship programme should plan for implementation and ownership of a **Multidisciplinary** district mentorship team.
- Goals of mentorship should be agreed between the mentor and mentee at the start.
- Mentorship is an ongoing process which should also be linked with the goals of quality improvement (Section 3.4).

Guidelines for Clinical Mentoring of Comprehensive HIV Care and Treatment Services in Zimbabwe.

1.3 Decentralisation of HIV Prevention, Care and Treatment Services

1.3.1 Background

Access to ART for many clients still remains a challenge and for those who access it, many find it difficult to remain on treatment due to time and cost related constraints. Decentralisation of HIV prevention, care and treatment services where services are taken closer to the client’s place of residence is a strategy that may both reduce congestion at centralized sites and reduce the burden on the clients. Evidence suggests that decentralization of services can significantly reduce loss to follow up rates (5).
Decentralisation is a key principle for the organization and management of the National HIV care and Treatment Strategic Plan in Zimbabwe. According to a national ART outcomes study conducted in Zimbabwe for the 2007 – 2010 cohort, those initiating ART at primary health care facilities had better retention rates compared to those initiated at higher levels of care, this being attributed mainly to decentralization and nurse led provision of ART initiation services. Zimbabwe’s ART programme has expanded rapidly from the initial seven sites in 2004 to 1006 sites (61% of all health facilities) providing ART at the end of 2013. Of the 1006 sites, 401 are ART initiating sites with the remainder providing follow up services. The goal, by the end of 2015 is for all facilities in the country to provide the minimum package of HIV prevention, care and treatment services as stand alone sites. To achieve this all sites must be formally assessed and their capacity strengthened through ongoing trainings, mentorship and supervision support.

Decentralizing HIV care presents an opportunity to strengthen community engagement and linkages across the continuum of the HIV prevention, care and treatment cascade.

<table>
<thead>
<tr>
<th>Barriers to Decentralisation</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse led ART initiations not yet an explicit policy</td>
<td>Lobby for an explicit policy supporting nurse led ART initiation.</td>
</tr>
<tr>
<td>Primary counsellor and data entry clerk positions not in the current MOHCC staff establishment</td>
<td>Lobby for recognition of the PC and data entry clerk position to be included into the current MOHCC staff establishment.</td>
</tr>
<tr>
<td>Unchanged staff establishment since 1980s not in keeping with the changing disease burden in the country</td>
<td>Lobby for a revision of the current MOHCC staff establishment to align them with the existing disease burden.</td>
</tr>
<tr>
<td>High Staff turnover</td>
<td>Review of district HR utilization to maximize the positioning of trained HR.</td>
</tr>
<tr>
<td>Inadequate capacity by most district health executives (DHE) to carry out ART capacity assessment of their respective facilities</td>
<td>Capacitate DHEs to carry out capacity assessments using the capacity assessment tool for primary health facilities.</td>
</tr>
<tr>
<td>Weakened district mentorship support structures</td>
<td>Strengthen district mentorship support structures through facilitating clinical mentorship trainings.</td>
</tr>
<tr>
<td>Pharmacy:</td>
<td>Strengthen supply chain management system: Ensure guidelines for storage of drugs are followed and appropriate application made at district level for adaptations to be made (Section 3.1).</td>
</tr>
<tr>
<td>Laboratory:</td>
<td>To agree on a district sample transport plan (See Section 3.2) including result delivery.</td>
</tr>
</tbody>
</table>
1.3.2 Planning for decentralization

Adequate planning for decentralization of HIV care, treatment and support services is essential. The planning should be spearheaded by the District Health Executive team and should include the following core staff:

- District Medical Officer (DMO)
- District Nursing Officer (DNO)
- District HIV focal person
- District TB Coordinator
- District Pharmacy Manager
- District Health Services Administrator
- District Laboratory in charge
- District Health Information Officer (DHIO)
- District Environmental Health Officer.

Other key stakeholders such as representatives from the DAAC, community leaders, CBOs, Faith based organizations and People Living with HIV/AIDS should be consulted whenever possible throughout the process.

The planning team should ensure that it has the capacity to assess the ART readiness of a facility by using the Health Facility Comprehensive HIV/AIDS Capacity Assessment tool.

Key areas for assessment to ensure a functional decentralized site include:

- **Human resources - Nurses:** How many nurses have received the OI/ART/PMTCT/Paediatric HIV training and are able to provide the minimum package of HIV prevention care and treatment services?
- **Human resources - counselling:** How many trained nurses and/or counselors are able to provide HIV testing and counselling, ART preparation, follow up and enhanced adherence counselling for children, adolescents and adults (including pregnant and breastfeeding women)?
- **Human resources - Doctor:** Is there a medical doctor available for regular outreach to the decentralised sites and/or available for telephone mentorship support?
- **Pharmacy:** Is there capacity for supply to the site; is there capacity for medicine storage; are staff trained to order HIV related medicines (Section 3.1)?
- **Laboratory:** Is there a regular and reliable sample transport system; is there capacity at district level to process samples and ensure quality assurance from all sites (Section 3.2)?
- **Monitoring and Evaluation:** Are all the tools required for HIV prevention, care and treatment services available and are staff adequately trained to use them (Section 3.3)?
- **Community involvement and linkages:** To what extent is the community involved and is there a plan for community linkages to support access and retention as outlined in the minimum package?
- **Physical space:** Is there adequate space to ensure clients are consulted, counselled and examined confidentially and privately; is there secure and adequate space for storage of medicines?
- Functional communication, referral and client tracking system.
- **Mentorship:** Is there a district mentorship team formed and adequately resourced to support decentralized sites (Section 1.2.3)?
- **Supportive supervision:** Is there a plan for a district wide supportive supervision system?
The DHE should identify a priority list of sites (guided by population needs and geographical access) to capacitate first for decentralization and then carry out targeted capacity assessments using the Primary Health Facility Comprehensive HIV/AIDS capacity assessment tool. There should be direct feedback and a clear action plan made with the nurse in charge of the facility. Some issues will be able to be addressed at site level but others will need the support of district, provincial or national level. The assessment team must work with the site team to achieve the outstanding action points.

A simple project management tool (such as the one shown in figure 2 below) may be used to give a quick visual overview as to which clinics and what key areas should be prioritized to achieve successful decentralization.

At a quick glance it is easy to see that Clinic A needs most support to achieve it’s goals whereas clinic D should be almost ready for accreditation. System issues that need attention from the district team are ensuring supportive supervision and a functioning sample transport system.

Figure 2: Example of project management tool for decentralisation

<table>
<thead>
<tr>
<th>Area</th>
<th>Clinic A</th>
<th>Clinic B</th>
<th>Clinic C</th>
<th>Clinic D</th>
<th>Clinic E</th>
<th>Clinic F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trained Nurses</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
</tr>
<tr>
<td>Trained Counselling Staff</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
</tr>
<tr>
<td>Doctor available for mentorship &amp; management of complicated case</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
</tr>
<tr>
<td>Mentorship team visits clinic monthly</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
</tr>
<tr>
<td>Supportive supervision is carried out quarterly</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
</tr>
<tr>
<td>Adequate storage capacity for OI/ART drugs</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
<td>😞</td>
</tr>
<tr>
<td>Staff trained to order OI/ART drugs</td>
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<tr>
<td>Functioning sample transport system</td>
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<tr>
<td>M and E tools in place and trained HR for OI/ART M and E needs</td>
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<tr>
<td>Community Linkages have been adequately mapped and plans made for activities e.g. defaulter tracing</td>
<td>😞</td>
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<tr>
<th>Status</th>
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<tbody>
<tr>
<td>Achieved</td>
<td>😍</td>
</tr>
<tr>
<td>In progress: e.g. training booked for counsellor</td>
<td>😐</td>
</tr>
<tr>
<td>Not achieved and no plan in place</td>
<td>😞</td>
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1.3.3 Implementation of decentralization

Before decentralization of clients from a central site to a decentralised site several planning steps should be carried out. This includes conducting a mapping exercise to identify the number of clients to be decentralized; identifying the decentralised sites where these clients will be referred to; determining whether all these decentralised sites are ready; defining and communicating clear referral mechanisms between the central and decentralised site. The pharmacy manager for the central site in
liaison with pharmacy personnel of the decentralised site is expected to assist the decentralised site to order ARVs. The tool to support this can be found in the Capacity Assessment Tool.

Once a decentralised site has been successfully assessed and accredited, the central site must begin to request clients attending their site to be decentralized to their nearest clinic. Clients should not be forced to decentralize but should have the benefits explained to them and assurance that if needed they would be referred for further investigation and management. Clients should be booked for their next appointment at the decentralized site and given a standard transfer out letter. The patient care and treatment book should remain in the initiating site. A clear list of clients with contact details and their booked appointment dates should be communicated to the receiving site so that those clients can be booked into their appointment system. If they do not attend they should be traced.

1.3.4 Key Messages and Reference Materials

- The minimum package of HIV prevention, care and treatment services (Section 1.1.2) should be available at all health facilities in Zimbabwe.
- All nurses (RGNs and PCNs) after completing the integrated HIV/TB training should initiate and follow up adults (including pregnant and breastfeeding women), adolescents and children on ART.
- Successful decentralization requires nurses at primary care level to recognize serious “red flag” conditions including treatment failure that should be referred when appropriate.
- Successful decentralization requires a “safety net” referral site with capacity to investigate and manage complicated cases that cannot be managed at primary care level.
- All provincial and district health executive teams must have a coordinated plan for decentralization of the HIV prevention care and treatment minimum package to all facilities. Key components of planning include defining clear roles and responsibilities to be taken up by each stakeholder; conducting mapping exercises (for service providers and target population); development of action plans (for capacity building and implementation) and development of an assessment/accreditation system.
- Accreditation involves assessment of human resource capacity, pharmacy supply chain management system, laboratory services systems, monitoring and evaluation systems and infrastructure.
- Successful decentralization requires ongoing mentorship AND ongoing supportive supervision. This is the primary responsibility of the District Health Executive (DHE) with overall oversight provided for by the Provincial Health Executive (PHE).

Decentralization requires a strong link between the facility and community in order to mobilize the community to access HIV prevention, care and treatment services and to support ongoing retention and adherence.

Manual for Primary Health Facility Comprehensive HIV and AIDS Capacity Assessment.
1.4 Integration of Services

1.4.1 Background

The goal of integration (HIV/TB, SRH/MNCH/PMTCT or HIV/NCD) is to provide a one stop service for the client:
- Under the same roof
- On the same day
- By the same health care professional

Integrating services aims to reduce missed opportunities for initiation of ART, enhance long term adherence support and optimize client retention in care (3). TB as the most common co-infection has raised the challenge of one client simultaneously needing to be treated for two infectious diseases usually managed by two different programmes. With the massive scale up of PMTCT services the need for integrated MNCH and HIV services has also raised itself as a challenge to existing health care systems. Finally as people live longer with HIV the challenge of managing other co-morbidities such as hypertension and diabetes will also need to be incorporated into the service provision for clients on ART.

The challenges for integration of services vary according to the level of the health care system. At primary care clinics there are often only two or three nurses providing services and therefore if the minimum package of HIV Prevention care and treatment services is being offered on all days integration can be more easily achieved. In larger facilities where services are spread across departments, integration of services requires communication between departments, adequately trained staff and consolidation of monitoring and evaluation tools.

Table 8: Barriers and solutions to Integration of services

<table>
<thead>
<tr>
<th>Barriers to Integration</th>
<th>Possible solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verticalisation of management lines of the different programmes</td>
<td>Improved coordination at national, provincial and district levels across programmes</td>
</tr>
<tr>
<td>Lack of staff trained in all topics across different departments</td>
<td>Integrate TB and HIV into pre-service nursing curriculum; ensure all nursing staff have attended the integrated HIV Prevention care and treatment training</td>
</tr>
<tr>
<td>Coordination in large sites for referral across departments</td>
<td>Strengthen interdepartmental communication</td>
</tr>
<tr>
<td>Coordination of M and E in large sites</td>
<td>Strengthen interdepartmental communication</td>
</tr>
</tbody>
</table>

1.4.2 HIV/TB Integration

The aim of HIV/TB integration is to:
1. Increase HTC services amongst TB clients as an entry point to HIV care
2. Screen and diagnose active TB disease (including smear negative TB) in HIV-infected persons
3. Reduce the delay in initiating ART in co-infected clients.
The goal should be that all nurses are able to commence both TB and ART medicines and provide a one stop service for the client.

In large volume sites where the TB and OI/ART clinics are separate the goal is:
- For those clients whose first diagnosis is TB and who enter the system through the TB clinic they are initiated on ART within the TB clinic (where possible). After successful completion of TB treatment they are then transferred to the OI/ART clinic.
- For those clients on ART who develop TB they should receive their TB treatment within the OI/ART clinic (where possible) but ensure that they are registered accordingly as per requirements of the TB programmes.

For both scenarios the client must be able to receive their ART and TB treatment in the same consultation room from the same clinician.

**Intensified Case Finding (ICF)**

All HIV positive clients should be screened for TB at every visit (and all TB clients should be tested for HIV). Another opportunity for TB screening is during HTC. ICF serves two purposes: it identifies TB suspects who need diagnostic work up and possible treatment and it identifies those HIV positive clients with no TB symptoms who may benefit from IPT.

**Figure 3: TB Screening Algorithm for Adults and Adolescents Including Pregnant Women Living with HIV**

- **Adults and adolescents**, including pregnant women living with HIV
  - Assess also for ART eligibility if not already on ART

  **Screen for TB at visit or encounter with a health worker:**
  - Does patient have one of the following symptoms?
    - Current cough, Fever, Weight loss Night sweats
  - **No**
  - **Yes**

  **Assess for IPT eligibility:**
  - Does patient have any of the following?
    - Symptoms and signs suggestive of active TB;
      - Patient currently on treatment for TB treatment;
      - Completed IPT in the past 3 years;
      - Patients have been on ART for 3 months or less,
      - Signs of active liver disease or heavy alcohol use
  - **No**
  - **Yes**

  **Adhere to ART counselling of patients and give 300mg INH for six (6) months**
  - Follow up and consider IPT
  - **No TB**
  - **TB**
  - **Other Diagnoses**
  - **Treat for TB**
  - **Give appropriate treatment & Consider IPT**
  - **Counsel patient and do not give IPT**

  **Investigate for TB and other diseases according to nationally agreed guidelines**
  - **No TB**
  - **TB**
Figure 4: TB Screening Algorithm for Children More Than One Year of Age and Living with HIV

Isoniazid Preventive Therapy

Isoniazid preventive therapy is being phased in across Zimbabwe for PLHIV. If TB screening is negative and clients meet the eligibility criteria for IPT, a 6 month daily course of INH is given. Treatment should then be repeated every 3 years. For full guidance on IPT implementation see document entitled ‘Implementation of Intensified TB Case Finding and Isoniazid Preventive Therapy in Zimbabwe: Step by Step Guide. Collaborative TB/HIV Activities, April 2014.’

TB Infection Control

The most infectious patients are those not yet diagnosed i.e those coughing in your OPD. Infection control measures can be divided into administrative, environmental and personal. Making sure that simple infection control measures are in place can make a big difference to reducing the transmission of TB for health care workers and patients. Each hospital should have an infection control committee and each department or clinic an infection control focal person.

Administrative: Cough triage should be performed. Any coughing client should be identified and ideally given a surgical mask where resources permit. Cough hygiene should be promoted in the waiting area. Coughing clients or any known smear positive client until converted should be fast tracked for assessment.

Environmental: One of the most effective ways this can be done without costly interventions is to ensure there is good cross ventilation in a room and existing windows are opened. Position the desk and chairs so that any airflow is from the healthcare worker toward the client.

Personal: Ideally N95 masks should be worn always but they are often not available. Health care workers are however mandated to wear them if dealing with an MDR SUSPECT (not only a diagnosed patient).
1.4.3 **MNCH/ HIV integration**

The aim of MNCH/SRH/ HIV integration is to

1. Increase HCT amongst pregnant and breast feeding women and their partners
2. Reduce the delay in initiating ART for those who test positive
3. Ensure re-testing of those who initially test negative
4. Reduce loss to follow up of the mother and her exposed baby by providing a family centred approach in the under 5 clinic.

All women attending ANC, labour and delivery and PNC services must have access to HTC and PMTCT services as a one stop service. This means all nurse midwives must be trained in the provision of the HIV prevention care and treatment minimum package. The mother, child and ideally father should be seen within MNCH services until the exposed or infected child is 5 years old.

Women receiving HIV care should also be able to receive family planning services as a one stop service as part of the effort to reduce unintended pregnancies in HIV positive women of reproductive age.

For full details of all the SRH / HIV linkages refer to the Service guideline on SRHR and HIV Linkages August 2013 available in the reference materials.

1.4.4 **Key Messages and Reference Materials**

**Service providers should aim to provide a one stop service for clients**

- Same roof;
- Same health care provider;
- Same day.

**HIV/TB Integration**

- At primary care clinics both diseases should be managed as a one stop service
- Where there are separate OI and TB clinics a collaborative approach should be adopted
- All HIV positive clients should be screened for TB
- All TB clients should be offered HTC.

**SRH/ MNCH/HIV Integration**

- HIV testing and prevention (provision of condoms and promotion of VMMC) should be available at all SRH entry points (family planning, ANC, labour and delivery, PNC).
- Access to PMTCT should be available as a one stop service in ANC, labour and PNC.
- Stand alone FP units should be able to refer to facilities providing ART.
- All women on ART should be able to receive their ART and Family planning as a one stop service.
- Provision of the minimum package of HIV prevention care and treatment (Section 1.1) as a family centred approach should be provided within MNCH until the child (exposed or infected) is 5 years old. After which the mother, father and any positive child is referred back to the OI service.

Service guideline on SRHR and HIV Linkages August 2013
2. Providing Care Across the HIV Prevention, Care and Treatment Cascade

The HIV prevention, care and treatment cascade describes the continuum of care that a person passes through from diagnosis of HIV through to successful virological suppression on ART. Figure 3 describes the steps in the cascade. Unfortunately at every step people drop out. Reasons for these “leaks” can be related to both the way services are delivered and factors related to individual clients. Each of the subsequent sections will describe the extent of these losses, the challenges at each step and proposed operational solutions that may reduce the leaks in the cascade.

**Figure 5: The HIV Prevention care and Treatment cascade**

![Diagram](image)

Special Considerations for the PMTCT cascade

Pregnant or lactating women must also follow through the same steps of the cascade as outlined in Figure 5. There are however two important additions.

![Book and Pregnant Woman Icon](image)

On the left side of the cascade, before testing, the woman must be able to access ANC EARLY in her pregnancy so that ART can be started as soon as possible to reduce the risk of transmission to the baby. Community mobilisation is needed to increase awareness of the benefits of early ANC booking by 12 weeks gestation, both for antenatal care and PMTCT.

For those coming early pregnancy tests must be available at all facilities to confirm pregnancy and facilitate early testing and enrolment in ANC and PMTCT.

Retention of the exposed infant, including completion of the early infant diagnostic algorithm is also an essential component to monitor in the assessment of a successful PMTCT intervention.
2.1 HIV Testing

2.1.1 Background

Accessible and acceptable access to HIV testing and counselling is the critical first step of the HIV treatment cascade. Globally 118 million people received HIV testing and counselling in 2012. In all countries women are more likely to test than men, most likely due to their more frequent interaction with the health care service (6). Reaching men and clients who are well with higher CD4 cell counts requires a reflection of how, when and where testing services are offered. In addition to facility based strategies community based testing has been shown to identify more first time testers along with more clients with a CD4 exceeding 350 cells/mm³ (7).

In Zimbabwe 2,274,328 people were tested for HIV in 2013 with contributing the highest proportion of tests (63%) (1). Despite these numbers tested, the 2010-2011 ZDHS indicated that only 57% of women and 36% of men had been tested for HIV and received their results. Access to testing for older adolescents and young adults remained low with only 45% of young women and 24% of young men, aged 15-24 years, who had sexual intercourse in the preceding 12 months, testing for HIV and receiving their results in the same period (8).

In Zimbabwe to date, testing and counselling (HTC) strategies provided by MOHCC have focused on facility based HTC in conjunction with annual HTC campaigns. In addition mobile outreach HTC strongly supported by partners has provided additional access. Although PITC remains to be strengthened, especially for children, innovative HTC strategies are needed if the 2017 target of 85% of the population knowing their HIV status is to be met (8).

<table>
<thead>
<tr>
<th>Table 9: Barriers and solutions to HTC</th>
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<tbody>
<tr>
<td><strong>Barriers to testing</strong></td>
</tr>
<tr>
<td>Stigma and inadequate knowledge of the benefits of early diagnosis and treatment</td>
</tr>
<tr>
<td>PITC not systematically implemented in facilities especially for children and adolescents</td>
</tr>
<tr>
<td>Inadequate trained personnel to perform both rapid HIV testing and DBS for infants</td>
</tr>
<tr>
<td>Access to HTC limited by the distance to the facility; People with high CD4 cell counts feel well and are not visiting health facilities</td>
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2.1.2 Facility and Community based strategies to increase access to HIV testing and counselling

In Zimbabwe two approaches to HTC service provision are offered: client-initiated and provider-initiated. Both of these can be offered within two models of service delivery; facility based and community based. Testing is being provided by the MOHCC and through partners whose roles are complimentary. Linking testing to the provision of other services such as family planning, STI screening and treatment, VMMC, cervical cancer screening can also encourage clients to access HTC through a one stop “screening” approach.

Whatever the model of testing the 5 C’s should be ensured (consent; confidentiality; counselling; correct and accurate HIV test results; connections to HIV prevention treatment and care and support services). The 6th C is comfort during labour and delivery

The Role of the community

All facilities should map out potential linkages with community based organisations that may be able to facilitate uptake of HTC. Strengthening such linkages and increasing community awareness of the benefits of early HTC and early access to treatment for all men, women, pregnant women, children and adolescents is an essential element of any strategy to increase access to HTC. HTC advocates or champions should be identified within each community. Training selected community based cadres to perform HTC should also be considered as a strategy to operationalise door to door testing and scale up of mobile outreach services (in line with national guidelines and policy).

Ensuring provider initiated testing in facilities

PITC services with an opt out strategy should be provided to all adults, adolescents and children attending all health facilities as the recommended “standard of care”. In addition to rapid testing this must include access to DBS for DNA PCR testing for infants less than 18 months. Settings for HTC service provision include antenatal care (ANC), tuberculosis clinics (TB), sexually transmitted infection (STI) and outpatient clinics; medical and surgical, paediatric wards; maternal, newborn and child health (MNCH) services including EPI; reproductive health, family planning, adolescent SRH services, nutrition, mental health and male circumcision services.

Pre-test information on HIV should be given as a group after which the individual can decide whether to proceed or opt out. Those that opt in can proceed immediately to having the HIV test performed. Clients who opt out are the ones who require further individual pre-test counselling to understand their barriers to HIV testing. Once tested the main emphasis is on quality individual post test counselling.

In order to achieve effective PITC a critical review of human resource utilisation is needed. All departments should ensure that for every shift there is someone available and trained in HTC and DBS preparation in settings where infants are attending the facility or are admitted. All labour and delivery wards must have access to a trained provider of HTC (24 hours, seven days a week).

In OPD where possible the person responsible for the health education talk should give the group pre-test information first thing in the morning but also try and repeat it mid morning for latecomers to the clinic.
Strengthening Couple Testing

Providing couple HTC has a number of advantages. Because the couple has chosen to be tested together mutual disclosure is immediate and in the case of a sero-discordant couple treatment can be offered immediately to the HIV positive partner. Although couple HTC has been emphasised as part of ANC and PMTCT, couple HTC should be encouraged as a general approach.

Community and male mobilisation strategies to encourage couples to test for HIV, including raising awareness on the early access to treatment available for sero-discordant couples is an essential component for community networks to consider. Outreach HTC may also target locations where couples are more likely to attend together.

Community Based Testing Strategies

The 2013 Guidelines for antiretroviral Therapy for the prevention and treatment of HIV in Zimbabwe have increased the initiation threshold to 500 cells/mm³. Clients with such a high CD4 will generally be well and with the exception of women who are attending for MNCH services are unlikely to attend a health facility. “Seeking out” these well, but HIV infected individuals therefore requires innovative community based HTC strategies.

Advantages of community based testing HTC strategies include:
- Increased access to through reduced cost of transportation for the client; convenience for family members; reduction of stigma
- Can increase couple HTC and supports disclosure
- Can increase the number of first time testers
- Can increase the number of men and children tested
- Promotes early diagnosis and referral to early treatment as identifies HIV infected individuals who may not have presented unwell to facilities.

Strategies for community HTC as outlined in the 2014 HIV testing and counselling guideline include:
- Mobile and Outreach
- Workplace
- Educational institutions
- Campaigns
- Self-testing
- Home based, including index clients.

Some of the above strategies can be implemented now with existing resources and others are being piloted. Expanding the cadres that can be trained to test should be explored. This should include both additional health care workers at the facility, community cadres and selected members of the community (retired nurses, teachers etc). At all times these cadres should be under the supervision of the facility nurse and quality assurance be assured.

Mobile/ Outreach HTC campaigns have been strategies utilised for some time in Zimbabwe. Their frequency and how they are targeted however should be coordinated by the district health executive teams. Each facility should plan at least one outreach HTC activity per quarter. Analysis of the
facility’s HIV testing data should also guide where best to target these activities. For example if the proportion of men testing at the facility is low an evening outreach activity or one linked to a sporting event or a particular workplace may be more appropriate. If couple testing is low, testing at a church or other community gathering could be considered. Outreach activities aimed at educational facilities are also important to normalise HIV testing within the institution and encourage teachers and parents to test along with their children.

**HTC during EPI outreach.** EPI is an existing outreach activity where HTC for adults, children and infants could be integrated. For this to be effective without compromising the EPI activities additional staff may need to join the team. DHE teams should coordinate these activities and consider the addition of a PC or nurse to support testing activities. The location of the EPI activities should also be considered and measures taken to ensure confidentiality (provision of a small tent).

To enhance linkage (Section 2.2) point of care CD4 should be carried out immediately during any mobile or other community testing strategy. A district held PIMA could be rotated for such outreach activities between facilities.

**Index case HTC** is a strategy whereby family members of an identified HIV positive case are offered HTC. Asking the identified client to bring their family members to be tested is one option but this is often difficult for them. At each visit clinicians should remember to ask the client as to whether all family members have been tested but preferably the client should be linked with a village health worker or other community based cadre who can encourage family members to attend or ideally be tested in the community.

Other strategies involving **door to door testing activities and self testing** are being explored. These strategies will require additional cadres to be trained to test such as VHW, CBO members and people living with HIV. Provinces and districts should consult locally with community groups to assess the feasibility and acceptance of such strategies.

### 2.1.3 Performing HTC

To perform HTC the person must have attended the Rapid HIV testing course. The recommended rapid testing algorithm for Zimbabwe can be found in the job aid, 2014 HTC guidelines and the algorithm for early infant diagnosis in the Guidelines for Antiretroviral Therapy for the Prevention and Treatment of HIV in Zimbabwe.

Pre and Post test counselling should be performed with the pre-test given as a group wherever possible.
2.1.4 Re-Testing for HIV

Encouraging re-testing is increasingly important. Clients in the general population should be encouraged to retest 3 months after their initial test and at least annually thereafter. The re-testing algorithm for the general population is shown in Figure 7.

Figure 7: Algorithm for Re-Testing of HIV Negative Clients

- Follow national HIV testing algorithm/guidelines. Rapid HIV testing with same-day results is highly recommended.
2.1.5 Special Considerations for testing in Pregnant women

All pregnant and breastfeeding women should be tested for HIV at the first interaction with the health care facility and as early in their pregnancy as possible. Women who have missed their period and present early should have access to pregnancy testing to confirm if they are pregnant. Women who test negative at first test should be retested throughout pregnancy and breastfeeding as outlines below. This is because women who are still having sex with a partner who is HIV positive or of unknown status may seroconvert during the pregnancy or breastfeeding period. If this happens the viral load will be very high during this period, increasing the risk of transmission to the baby. This is why it is very important to follow the re-testing algorithms for pregnant and breastfeeding women (see National Guidelines on HTC 2014).

- Those tested in the first and second trimester, retest at 32 weeks or third trimester
- Those tested in third trimester, retest at 6 weeks post delivery and 6 months thereafter
- Those tested at delivery, retest at 14 weeks post delivery
- For lactating mothers, retest every 6 months till cessation of breast feeding and thereafter, with each pregnancy or annually if sexually active.

2.1.6 Special considerations for testing Children and Adolescents

Testing of infants less than 18 months should follow the early infant diagnostic algorithm outlined in the Guidelines for Antiretroviral Therapy for the Prevention and Treatment of HIV in Zimbabwe. Identifying HIV positive children (0-9 years), young (10-14 years) and older adolescents (15-19 years) is a challenge. A study in Zimbabwe showed that the HIV prevalence among children tested at a facility was high (5.3%) but that many children did not receive PITC due to the perception that the guardian they had come with was not suitable or due to lack of staff. Male guardians were also less likely to consent to testing (9).

Some of these older children and adolescents identified are “slow progressors”. This means they were infected through mother to child transmission often during the breast feeding period and have had a much less rapid progression of their HIV disease. Some adolescents and young adults will be starting to be sexually active and therefore at risk of HIV transmission. For both these reasons children and adolescents should be offered HTC.

Children and adolescents attending MNCH, OPD or in-patients units should be routinely offered PITC. To do this, staff trained to perform HTC and DBS preparation should be available across all departments. Ideally a child or adolescent friendly environment should be developed in each facility. Training peer youth counsellors to perform HTC may also provide an opportunity to scale up testing for adolescents ideally within the adolescent friendly corner of the clinic. Provision for testing outside school hours (late evening or Saturday morning) and outreach to schools may also facilitate access to testing for this vulnerable group (see Annex 12 for a Flow chart to guide the provision of Adolescent HIV and SRH services).
Wherever HTC is being offered the two following important considerations should be understood by the health care worker regarding testing of children.

**Age of Informed Consent for HTC:**

- Any child who is aged 16 years or above, or is married, pregnant or a parent, who requests HTC is considered able to give full informed consent.
- The consent of a parent or caregiver is required before performing an HIV test on a child who is below 16 years of age.
- A child below the age of 16 who is a mature minor may provide informed consent for HTC. A mature minor is a child or adolescent who can demonstrate that he or she is mature enough to make a decision on their own. A counsellor should consider the following factors in determining whether a child or adolescent should be treated as a mature minor:
  - The minor’s ability to appreciate the seriousness of HTC and the test result and to give informed consent
  - The minor’s physical, emotional and mental development
  - The degree of responsibility the minor has assumed for his or her own life, such as heading a household or living independently from a parent/caregiver.
  See Annex 13 for a full definition and checklist that can be used to determine mature minor.

If a parent or caregiver will not or cannot give consent for a child below 16 years of age, the health worker can exercise the ‘best interest of the child’ principle and seek approval from the person in charge of the clinic or hospital to perform the HIV test.

**‘Best Interests of the Child’ Principle**

A service provider should seek approval from the person in charge of the clinic or hospital in order to provide HTC without consent from a parent or caregiver when it is in the best interests of a child. This includes when:

- A child is ill and diagnosis will facilitate appropriate care and treatment
- A child is a survivor of sexual abuse
- A child is sexually active
- A child is concerned about mother-to-child transmission
- A child has been exposed to HIV through vertical or sexual transmission
- A child expresses concern that, given an HIV positive result, he or she will be denied access to care and treatment by a parent/caregiver.

Please do not avoid performing HTC for children and adolescents. Further details of how to proceed with counseling and testing for a child can be found in the 2014 National HTC guidelines and 2014 HTC Guidelines for children and adolescents. If you do not feel comfortable testing a Child or Adolescent please seek further support from your supervisor and local mentorship team.
2.1.7 Special considerations for increasing access to HTC for Men

HTC services should be provided in a male friendly environment. Some important considerations include the following:-

- HTC services should be offered during times that are flexible for men so they can attend after working hours. Consider having one day a week with extended hours for men to access health care services.
- HTC should be offered as part of a more general “male health” screening package (e.g. hypertension, diabetes, prostate, alcohol and smoking advice) or linked to the provision of VMMC.
- Outreach testing to workplaces and community gatherings where men may attend should be planned.

2.1.8 Providing HTC for Key populations

Key populations are at higher risk of being infected or affected by HIV. They include sex workers, injecting drug users, transgender people and men who have sex with men (MSM). They also include vulnerable populations such as adolescents, prisoners, mobile workers (e.g. truck drivers) and migrant populations.

Specific outreach HTC activities may be required to reach these populations and facilities should assess their local situation to consider where and when these populations may be best served. High risk groups such as sex workers, should re-tested every 3-6 months.

2.1.9 Documentation and M and E requirements for HTC

All clients undergoing HTC should be entered into the HTC register. A rapid test request form should be filled out for each client and the result slip completed. This result slip should be kept by the client to facilitate linkage to care either within the same facility or if being referred elsewhere.

2.1.10 Quality Assurance for HTC

Ensuring quality assurance both internal and external for all HTC sites is the responsibility of the district and provincial laboratory scientists.

A clear schedule of when QC samples are to be sent to the facilities (this must include all decentralised sites) should be made. In addition regular on-going supervision of HIV testing sites and competency assessment of personnel performing HTC is critical to ensuring high quality services are being offered in the program. As part of the QA system, the District/Supporting Laboratory Scientist should periodically (quarterly) carry out support and supervision visits to testing facilities. Full Details regarding QC can be found in the Zimbabwe 2014 HTC guidelines.
2.1.11 Key Messages and Reference Materials

- Implement PITC using the opt out strategy for everyone who attends a health facility (including visitors) (OPD, MNCH, EPI, TB, IPD). This must include access to rapid testing and DBS for DNA PCR for infants less than 18 months.
- All departments or facilities must have at least one person on duty who is trained in HIV testing and counselling. This includes access to HTC for IPD, labour and delivery wards especially at night time and at weekends.
- Increase access to HTC by extending opening hours for special population groups that are currently not attending (men, adolescents, key populations).
- Facilities should provide outreach HTC services at least quarterly. Those tested positive should ideally have a Point of care CD4 performed and must be more proactively linked to care and treatment (Section 2.2).
- Community based testing strategies, including training of selected community based cadres to conduct HTC, should be considered.
- Self Testing as a community based strategy should be considered after community awareness campaigns have been carried out and guidelines for health care workers developed.
- Re-testing of clients especially pregnant and breastfeeding women must be emphasised.

All pregnant or breastfeeding women must be offered HTC at their first contact with the health facility.

- Women must be offered HTC as early as possible in their pregnancy. Pregnancy tests should be available at the facility and even for community health workers in order to detect early pregnancy.
- Couple HTC especially in ANC must be increased though male mobilisation campaigns and community based HTC strategies.
- Ensure re-testing of pregnant or breastfeeding women who initially test HIV negative:
  - Those tested in first and second trimester, retest at 32 weeks or third trimester
  - Those tested in third trimester, retest at 6 weeks post delivery
  - Those tested at delivery, retest at 14 weeks post delivery
  - For lactating mothers, retest every 6 months till cessation of breastfeeding and thereafter, with each pregnancy or annually if sexually active (see retesting flow chart National Guidelines on HTC 2014).

Early infant diagnosis should be performed at 6 weeks and then followed up according to the national algorithm. Babies should be retested at 9 months (when the baby attends for the measles vaccine), 18 months or 6 or more weeks after cessation of breast feeding.

PITC for children and adolescents must be strengthened (Section 2.1.6). Health care workers have the right to test a if the child is considered a mature minor or where it is considered in the best interest of the child. PITC should be offered to all children and adolescents attending for other services (EPI, OPD).

Reference materials
- Zimbabwe National Guidelines on HIV Testing and Counselling 2014
- HTC Guidelines for children and adolescents 2014
2.2 Linkage of clients performing HTC to HIV prevention, care and treatment

2.2.1 Background

It is no longer good enough that clients just test for HIV. It is important that those that test HIV positive are linked to care and treatment services whilst those testing negative are linked to preventive services (VMCC). Considerable numbers of patients are lost between having a test and being started on antiretroviral therapy (10). Ensuring linkage into care is essential both for assessing ART eligibility and to ensure the Pre ART package is continued for those not yet eligible. Systematic reviews have revealed some interventions which can improve linkage. These include using point of care CD4 at the site of testing with same day results (11) and involving community outreach workers to identify those lost to follow up. Ensuring support and strengthening treatment literacy from peers and expert clients at time of diagnosis may also enhance linkage along with M-health strategies.

Table 10: Barriers and solutions for Linkage to care

<table>
<thead>
<tr>
<th>Barriers to Linkage</th>
<th>Possible solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of CD4 testing or long delays for CD4 results</td>
<td>Improve sample and result delivery systems to sites</td>
</tr>
<tr>
<td></td>
<td>Ensure functioning centralised CD4 capacity</td>
</tr>
<tr>
<td></td>
<td>Where appropriate utilise POC CD4; Use for all outreach testing</td>
</tr>
<tr>
<td>Clinic too far away from home or place of work</td>
<td>Decentralise to lower level health facilities complemented by outreach testing and linkage strategies in hard to reach areas</td>
</tr>
<tr>
<td>Lack of acceptance of status and concerns about possible drug side effects</td>
<td>Improve post test counselling and link with community supporters</td>
</tr>
<tr>
<td>Weak tracing/tracking systems</td>
<td>Utilise an appointment diary and tracing system (including referral slips for all clients that test positive (Section 2.3.3)</td>
</tr>
</tbody>
</table>

2.2.2 Clients testing at the facility

All clients who have been tested for HIV should be referred for the appropriate post test services at the same facility or another facility if the required service is not available. If tested in the same facility clients should be either referred to the OI unit in larger facilities or immediately assigned an OI number, a patient care and treatment booklet opened and the Pre ART package of services offered. (Section 2.4). Where clients are tested in different areas of the hospital and referred to HIV
prevention, care and treatment services the client should be referred on the same day and or accompanied if possible to ensure that they are linked to care. A checklist of all those who tested positive from each department should be kept and reviewed with the OI clinic at the end of each week to see if they have linked to care.

### 2.2.3 Clients testing through community testing strategies

Where community testing is offered a number of steps should be put in place to strengthen linkage.

POC CD4 testing should be performed routinely as part of outreach testing. Including a clinician and counsellor in the team who can also perform immediate initiation will also enable those who are eligible to be initiated. These clients should then be referred back to their nearest clinic providing HIV prevention, care and treatment services and post initiation counselling ensured during ART follow up.

Clients should be offered different local options in terms of sites offering HIV prevention, care and treatment and should be free to make an informed choice. The client must be given clear written instructions and a referral slip in order to access care at the facility of their choice. A clear referral document should be used, one part kept by the HTC provider and the bottom part given to the client for referral. They should also be asked for their consent to give their telephone number and be linked to a community health worker to facilitate tracing.

The community HTC provider should keep a clear record of positive clients to be followed up. The HTC provider should contact or visit the referral sites to confirm enrolment within an agreed time ideally within one month or, with the client’s consent, they may be followed up by phone or by a CHW or other community based cadre.

### 2.2.4 Key Messages

- Whenever a client is tested HIV positive he/she should be proactively linked to care.
- Within larger facilities staff should actively check whether clients tested within one unit (e.g. OPD or FP) linked with the HIV prevention, care and treatment clinic.
- Where outreach testing is performed a POC CD4 should be utilised to enhance linkage.
- Where outreach testing is performed the outreach HTC provider should ensure that linkage has occurred.
- If possible all those that test positive should be linked with a community health worker or other community cadre to support client literacy and tracing of defaulters.
- All clients should be traced if they do not link to care. When a client tests positive consent should be sought for them to be traced on a mobile number or by a designated VHW or other community cadre.
2.3 Operational strategies to enhance retention in Pre ART and ART services

2.3.1 Background Pre ART retention

In a review of 28 studies from Sub-Saharan Africa, 32% of the people considered eligible for ART were lost between their eligibility being assessed and ART being initiated (10). Retaining people during pre-ART care poses a significant challenge and the way we offer our services must be adapted to reduce these high rates of attrition.

Table 11: Barriers and solutions for Pre ART retention

<table>
<thead>
<tr>
<th>Barriers to Pre ART retention</th>
<th>Possible solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of CD4 testing or poor result delivery</td>
<td>Improved CD4 laboratory network</td>
</tr>
<tr>
<td></td>
<td>Reliable sample transport system (Section 3.2.2)</td>
</tr>
<tr>
<td></td>
<td>Use of POC CD4 in hard to reach clinics</td>
</tr>
<tr>
<td>Poor education as to the need for ongoing follow up and repeat CD4 testing when they are feeling well</td>
<td>Improved implementation of Basic HIV education with IEC materials</td>
</tr>
<tr>
<td></td>
<td>Provision of CTX has been shown to increase retention</td>
</tr>
<tr>
<td>Frequent visits to pick up cotrimoxazole, with consultation fee at each visit</td>
<td>Implement “refill” versus “clinical consultation” system (Section 2.3.4)</td>
</tr>
<tr>
<td>Long waiting times at the clinic</td>
<td>Supply 3 monthly refills of cotrimoxazole</td>
</tr>
<tr>
<td>No defaulter tracing for Pre ART clients</td>
<td>Implement appointment system</td>
</tr>
<tr>
<td></td>
<td>Implement defaulter tracing system (Section 2.3.3)</td>
</tr>
<tr>
<td>Lack of community support for Pre ART clients</td>
<td>Link Pre ART clients with support groups and CBOs within their local community</td>
</tr>
</tbody>
</table>

2.3.2 Background ART retention

The number of people receiving ARVs globally has tripled in the last five years with 9.7 million people on ART at the end of 2012 (65% of the global target of 15 million on treatment by 2015 (6). The introduction of the 2013 WHO guidelines however has increased that target to approximately 23 million people in need of antiretroviral treatment worldwide. Starting people on ART alone is not enough. Retaining them in care with a suppressed viral load is the ultimate goal of a successful ART programme. Data reported from 23 countries with cohorts of at least 2000 people on ART demonstrated average retention rates decreased from 86% at twelve months to 82% at 24 months (6).
In Zimbabwe the ART programme has expanded rapidly with the number of people accessing ART increasing from 5,000 in 2004 to 620,867 adults (73% coverage) and 47,100 children (45% coverage). In Zimbabwe a study of adults enrolled on ART between 2007 to 2009 retention at 6, 12, 24 and 36 months was 90%, 78%, 68% and 64% respectively (12). Factors associated with loss to follow up included being male, having more advanced disease at presentation and accessing care from centralised services. To achieve the target coverage for both adults and children of 85% by 2017 (8) and maintain quality of care, further efforts and novel strategies for ART delivery will be needed.

In addition to decentralisation there is a growing body of evidence that to further scale up access to ART and improve retention innovative community models, including out of clinic models of ART delivery will be necessary. There is no one size fits all for these models but community models can further strengthen ART delivery as long as there is a strong link to the facility (2). Options such as adherence clubs which are being rolled out in South Africa and community ART groups implemented in Mozambique (13) may offer innovative solutions to providing quality care to the growing cohort along with supporting self empowerment of the clients living with HIV.

**Table 12: Barriers and solutions identified for retention on ART (3)**

<table>
<thead>
<tr>
<th>Barriers to retention &amp; adherence on ART</th>
<th>Possible solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health System related</strong></td>
<td></td>
</tr>
<tr>
<td>High direct and indirect costs to users</td>
<td>- Access to antiretroviral care should be free</td>
</tr>
<tr>
<td></td>
<td>- Longer drug supplies (3 months) will reduce visits to clinic and hence</td>
</tr>
<tr>
<td></td>
<td>reduce transport related and other opportunity costs (e.g, day off work)</td>
</tr>
<tr>
<td></td>
<td>- Improved client triage and clinic flow to reduce waiting times e.g</td>
</tr>
<tr>
<td></td>
<td>implement appointment system</td>
</tr>
<tr>
<td></td>
<td>- Separate refills from clinical visits</td>
</tr>
<tr>
<td></td>
<td>- Ensure family focused care</td>
</tr>
<tr>
<td>ARV Stock outs</td>
<td>Strengthen supply chain management to prevent stock outs</td>
</tr>
<tr>
<td>Use regimens that have fewer tablets and that can be taken less frequently</td>
<td>First line FDC of TDF 3TC and EFV (one pill once a day)</td>
</tr>
<tr>
<td>Attitude of health facility staff towards clients</td>
<td>Treat clients with respect and improve clinician/ counsellor communication</td>
</tr>
<tr>
<td>Stigma and lack of disclosure</td>
<td><strong>Strengthen community mobilisation to increase community awareness on HIV and its treatment</strong></td>
</tr>
<tr>
<td>Limited education on ART and need for adherence</td>
<td><strong>Strengthen counselling at all facilities (ensure all facilities/ units have at least 1 PC)</strong></td>
</tr>
<tr>
<td>M and E systems not giving useful feedback to clinics on retention outcomes</td>
<td><strong>Engage community based cadres to strengthen adherence support in the community</strong></td>
</tr>
<tr>
<td></td>
<td>Strange M and E to report cohort outcomes (retention and % with viral load &lt; 1000 copies/ml at 12 and 24 months)</td>
</tr>
<tr>
<td><strong>Patient related</strong></td>
<td></td>
</tr>
<tr>
<td>Forgetfulness</td>
<td>Reminder Tools (alarm on mobile phone: M-health appointment reminders)</td>
</tr>
<tr>
<td>Co-morbid conditions (mental health issues, alcohol or other substance misuse)</td>
<td>Ensure integrated management with psychiatric and other support mechanisms for substance misuse</td>
</tr>
<tr>
<td>Cultural and religious beliefs(use of traditional healers and information on HIV in certain religious communities)</td>
<td>Increase information and education on HIV and mobilise the community to address these beliefs</td>
</tr>
</tbody>
</table>
2.3.3 Appointment systems and defaulter tracing

At all steps of the cascade the ability to be able to identify that a client has not attended their appointment will be dependent on the use of an appointment diary. In facilities utilising the EPMS daily lists of clients due that day can be generated for Pre ART and ART clients. In facilities without the EPMS a simple paper diary can be used (See Appendix 9 example). Clients need to be traced early. Clients should be traced 3 days after their appointment if they have not attended. (i.e this is about tracing clients to prevent them becoming lost to follow up)

- At enrolment clients should be asked if they agree to consent to tracing. Their decision should be clearly indicated on the front of the patient care and treatment booklet.
- All sites should have an appointment diary for HIV positive clients. In primary care clinics all clients should be booked in the same clinic diary. In larger facilities each clinic (OI, MNCH, TB) will have their own appointment diaries.
- The nurse in charge of the clinic must be clear which staff member (nurse, nurse aid, PC, receptionist) is responsible for updating the diary on a daily basis and for initiating the defaulter tracing process.
- All clients registered for Pre ART, ART and PMTCT (including the exposed infant) should be given an appointment date which is recorded in the clinic appointment diary. In some sites it may be appropriate to give a booked time, as well as a day in order to stagger appointments. If “group club refills” are implemented a booked time should be allocated.
- The OI number, client’s name, telephone number, category of client (Pre ART, ART or PMTCT) and the reason for the next appointment (clinical consultation +/- counselling, refill for drugs, blood draw for CD4 or VL etc) should be listed in the diary.
- The diary can be used to pull the patient care and treatment booklets the day before and also to pre pack refills in larger sites.
- When the client arrives they should be marked off in the diary that they have attended.
- At each visit whoever is registering the client should check that an up-to-date phone number is available.
- If the client does not attend for their appointment their patient care and treatment booklet should be kept aside in a tray or shelf allocated for late-attenders.
- If the client has not attended after 3 days the client should be traced. All clients when first registered should give consent to be traced.
- Ways of tracing include:
  - Phoning the client: every clinic should have a phone that can be used for defaulter tracing.
  - Linking with a community health worker, CBO or support group member to locate the client and request they attend the clinic. A simple “tracing slip” should be given to the community worker so that the outcomes of the tracing are reported back to the facility.
- The outcome of the defaulter tracing should be indicated in the diary and if dead or lost to follow up this should be entered in the Pre ART or ART registers.

Mobile phone SMS appointment reminders and using automatic SMS reminders to those who have missed appointments have been shown to improve retention. In sites with the EPMS this may be considered in the future.
2.3.4 Refill versus Clinical Assessment Appointments

When clients are clinically stable but are on a chronic medication (cotrimoxazole and/or ART) they do not necessarily need to see the clinician at every visit just to collect their medication. (See section 2.6 for the proposed follow up schedule for clients). Repeat prescribing systems – refill systems - aim to separate an interaction with the health facility where a clinical assessment is needed versus a simple drug refill. Implementation of these “fast track” refill systems have been shown to decrease the burden on both the health system (less face to face consultations) and the client (less clinic visits and shorter waiting times) (2). It is important to emphasise that if at any point the client has additional clinical needs they can be seen by the clinician at any time and appropriate follow up organised.

A clinical visit is a scheduled appointment where the clinician makes a thorough assessment and reviews monitoring blood tests. If refill visits will follow the appointment dates and prescriptions in the patient care and treatment booklet should be completed. According to the follow up protocol (Section 2.6.1) they are also reviewed by the counsellor. A routine clinical visit should take 10-15 minutes with the clinician and 15-20 minutes with the counsellor. For those clients with problems or treatment failure more time should be allocated. A client should aim to spend no more that 2-3 hours within the facility from time of entry to time of departure.

Clients attending for a clinical visits may be asked to pay a user fee by the facility

A refill visit is a scheduled appointment where the client has a pre-filled prescription and can attend the pharmacy directly to collect their medication. Refills should be able to be picked up at any time during the working hours of the clinic. Clients coming for a refill DO NOT need to see the nurse for a consultation, do not have vital signs performed and are not charged a user fee. If the client themselves raises any problems they can join the normal client queue for consultation. Patient are registered and documented as attended in the appointment diary but then can receive their medication directly from the pharmacy or dispensing room. The patient care and treatment booklets already have the prescriptions written and should be pulled and kept where the drugs are dispensed. The person dispensing can then mark off that the patient has attended (column 2) and on time (OT column 23). See ANNEX 10 for an example SOP for refill visits. If a group/club/family approach for refills is taken the group can be booked at a time best suited to the group members. A refill appointment should take from between 30 minutes for an individual drug pick up to 30-60 minutes for a club refill. This is the time within the facility from time of entry to time of departure.

Clients attending for refill visits should not pay a user fee

Clients must be educated on what symptoms and signs they should report in between appointments
- Any symptoms/ signs of TB
- Diarrhoea or vomiting
- Ongoing or severe headache
- Persistent Fever
- New rashes
- Symptoms signs related to possible side effects of their medications
A **blood draw** visit is a scheduled appointment where the client is only attending for blood tests. Where possible sample types (DBS or POC) should avoid having to bring back clients especially for blood draw.

An **unscheduled visit** is when a client attends in-between refills or clinical visits. **It must be clearly communicated to clients that if they develop any problems (Table 13) they should attend the clinic before their refill or clinical appointment date.**

**Pre ART refills**

Pre ART clients should be seen for a clinical assessment and repeat CD4 once every 6 months. For example if a client is seen in January two prescriptions covering the periods Jan- March and April- June should be written. The client will come back at the end of March to collect a refill directly from the pharmacy and will then be seen clinically again after a further 3 months. All appointment dates should be recorded in the diary on the day of the clinical consultation.

**ART Refills**

A stable client on ART is defined as someone who:
- has no current OIs, has a VL < 1000 copies/ml and is at least 6 months on ART
- Where viral load is not available the client should have no current OIs, a CD4 > 200 and be at least 6 months on ART.

Stable adult clients on ART who are being **monitored clinically +/- with CD4** should be seen for a clinical assessment and repeat CD4 **once every 6 months**. Two 3 month supplies of ART +/- cotrimoxazole can be written so that the client attends for one refill in between. All appointment dates should be recorded in the diary on the day of the clinical consultation.

**Stable adult clients on ART** who are being monitored with viral load should be seen for a clinical assessment and repeat VL once every 12 months. Four 3 month supplies of ART +/- cotrimoxazole can be written so that the client attends for three refills in between. All appointment dates should be recorded in the diary on the day of the clinical consultation.

See ANNEX 10 for the standard operating procedures for Refill systems

**2.3.5 Operational strategies for providing refills**

To decide on which model for refills may best suit a particular setting the facility **must consult with community representatives**. If possible a number of options could be offered within the same facility. **Clients should then be given the choice** of what type of refill system they prefer. Some clients prefer to simply collect medication for themselves in a timely manner while others may prefer the option of a group model where they can benefit from peer support. The system chosen will often depend on the cohort size in the clinic and whether the clinic is urban or rural. If clients are travelling very long distances to the clinic the community ART group model may have the most added value. For any of the proposed refill systems to work there **must be ownership by both the community and the facility** and **adequate accountability** (proper defaulter tracking and M and E) to ensure quality care.
Individual Refill from pharmacy

When a client who is booked for a refill appointment arrives they are documented as “attended” in the diary. If the client themselves raises any problems they can join the normal queue for consultation. If there are no problems the client will go straight to pharmacy. The pharmacy will be holding the patient care and treatment booklet where the repeat script has already been written at the last clinical consultation. The drugs are prescribed and the pharmacist or nurse ticks column 2 that the client has attended and marks the column 23 as on time (OT). At the end of the clinic the patient monitoring books are taken aside for entry into the pre ART register, ART register or the EPMS. Non-attenders must be traced.

Group “Club” Refill

For clinics with larger cohorts, clients booked for refills on a given day can be organised into groups of 15-20. This group becomes a “refill club”. Each club can be allocated a number and the patient care and treatment cards be grouped together. The club is assigned a time and date to attend for refill. When the group attends each individual is documented as attended “in the diary”. The group then gathers for 20-30 minutes to share experiences of taking treatment, their latest test results and give peer support. This can be facilitated by a peer educator or expert client but is not essential. The patient care and treatment booklets are pulled and kept where the drugs will be dispensed. The pharmacy dispenser ideally will have prepared the drugs for the group which can then be quickly distributed. The pharmacist or nurse dispensing will then tick column 2 that the client has attended and mark column 23 as on time (OT) in the patient care and treatment booklet. At the end of the clinic the patient monitoring books are taken aside for entry into the pre ART register, ART register or the EPMS. Non attenders must be traced. Often defaulter tracing is performed by the club members themselves. In the future these clubs could be held in community venues.

Family “ART Group” Refill

When a number of family members are on ART it may be possible to have one member collect for the others. If a child is involved it is essential the child follows the paediatric follow up schedule (Section 2.6) in order to ensure drug doses are adjusted correctly according to weight.

Where clinical +/- immunological monitoring is being used all the family members should have a clinical assessment and CD4 once every 6 months. For the refills in between the family members choose who collects the drugs.

Where virological monitoring is being used all family members should have a clinical assessment and viral load at the same time once a year. For the refills in between they choose who can collect the drugs.

The ART group refill form as used for the CARGs (ANNEX 11) can be filled by the family member and be presented to the nurse who can then complete the patient care and treatment booklets for all the family members. At the end of the clinic the patient monitoring books are taken aside for entry into the pre ART register, ART register or the EPMS. If there are any concerns raised about any of the family members they should be asked to attend the clinic for an individual consultation.
Community ART Group (CARGs) Refills

Community ART Groups are self-formed groups of clients on ART. They are usually from the same geographical area and are willing to disclose their status to each other. The system ensures that all members attend the clinic for their clinical visits and monitoring blood tests as per protocol, but for refill appointments, the group members take turns to collect each other’s drugs. Each group nominates a group representative. At each refill date when they meet in the community, a “ART Group Refill form” (Annex 11) is completed. This includes some red flag clinical questions and documentation of the pill count.

The nominated group member then attends the clinic. Each CARGs group should be given a number and their patient care and treatment booklets filed together. The Nurse discusses with the representative if there are any problems and assesses the details of the CARGs group refill form. If all is in order, she completes the refill form, the patient’s ART care and treatment booklets, dispenses the drugs, and completes the chronic ART register. The next CARGs appointment is then booked in the appointment diary.

The CARGs representative then returns to their group in the community to distribute the drugs and collects signatures confirming receipt on the refill form. ANNEX 11 outlines the standard operating procedures for this system. The forms mentioned can be found on the CD accompanying this manual. If this system is thought to be appropriate for your setting, it is recommended to seek support from a learning site.

2.3.6 Client Triage and Clinic Flow

Being able to easily identify what services the client is attending for will help to ensure clients receive the correct package of services.

Clinicians should write in the patient held book the return date and what the client will be attending for e.g. refill or clinical review + CD4 or enhanced adherence counselling. This will facilitate the healthcare worker allocated to triage clients at the next visit.

Clients needing any blood tests should be identified first and tests performed by an allocated member of staff. Where a client (according to the follow up schedule section 2.6) needs to see both counsellor and clinician, they should see the counsellor first.

The exact client flow may vary across sites. Each facility should develop a triage system and map out their client flow. This flow should be drawn on a poster and all clinic staff be made aware of the details.

2.3.7 Special Considerations for the Follow Up of Pregnant and Breastfeeding women

The follow up of pregnant and breastfeeding women should be integrated into MNCH services. Section 2.6 outlines the follow up schedule for a woman during the PMTCT period. In facilities where MNCH and OI services are offered in separate settings, the mother, exposed or infected infant and ideally the father should be followed in MNCH until the child is 5 years.
While pregnant and breastfeeding the women will have additional needs, (ANC, labour and delivery PNC care, bringing the exposed baby for follow up) the principles outlined in this chapter, including options such as the “club”, “family group” refills and ensuring systematic and early defaulter tracing, will all support retention for the pregnant and breastfeeding mother.

A number of specific models to support adherence and retention for pregnant and breastfeeding women have been implemented in Zimbabwe. These include the formation of peer support groups of HIV positive pregnant women or mixed groups of HIV positive and negative pregnant and breastfeeding women. These mixed groups meet to share the experience of pregnancy and having a young child, can facilitate breaking down of stigma and often raise opportunities for income generating activities.

Facilities may opt to identify a PMTCT champion. This is usually a woman who has been through PMTCT herself and is willing to support the facility to provide peer support to other women going through PMTCT and to facilitate defaulter tracing as outlined on section 2.3.3.

Importantly as treatment is now life-long it is essential that women have an ongoing support mechanism to support adherence and retention. The refill options available in their site should be discussed and a clear plan made with the woman as she approaches the end of the breastfeeding period.

2.3.8 Special Considerations for the follow up of children (0-9 years)

Children on ART need to be followed differently to adults. For an infant they should be followed monthly until 18 months old. According to national policy growth should be monitored monthly up to 5 years but after 18 months appointments for ART follow up and clinical review can be spaced to once every 3 months.

The exposed child or HIV positive child should be seen together with the positive mother (and father if available) at the same time in the MNCH department until the child is 5 years old. This is known as the family centred approach.

Where possible HIV positive children should be booked for follow up on the same day of the week/month for refills and clinical follow up. Children should be grouped according to those where the disclosure process has not started and those who have partially disclosed (taking the age of the child into consideration as well). Bringing the children together on the same day will allow parents to share experiences and challenges, and the children to be able to play together. Having the children on a particular day will also help the health care worker focus on the needs of the children and for both the nurse and counsellor to have their “child friendly” set of tools with them. In addition where feasible offering appointments after school hours or adapting refills to school holidays should be considered.
2.3.9 Special Consideration for follow up of adolescents (10-19 years) and young adults (20-24 years)

This age group has been shown in a number of settings to have high rates of loss to follow up and higher rates of virological failure (14). Addressing their specific psychosocial needs including sexual and reproductive health issues must be included in the support provided to this age group.

All clinics should aim to have a “adolescent” friendly area and/or youth focused program which creates a safe, comfortable space for youth to access information. This may include a space outside the clinic grounds in partnership with local organisation.

One of the most important aspects of the provision of adolescent care is the knowledge and attitudes of the health staff regarding their particular needs. Health care workers should be comfortable to address topics such as sexual and reproductive health and issues of disclosure. In the way we approach adolescents there are three groups to consider:

- adolescents who have grown up with HIV who were vertically infected and who may have been on treatment for a number of years; they are now entering adolescence and are having to continue to deal with the challenges of taking a chronic medication
- adolescents who were vertically infected but have been slow progressors and so have been diagnosed late
- adolescents who are sexually active and have been infected through sexual transmission.

A training on the care of HIV positive adolescents is available from the MOHCC.

If feasible there may be a place for an “adolescent champion” who can be present at the adolescent friendly corner of the facility in addition to linking to the community to raise awareness and encourage other adolescents to access services. Provision of adolescent sexual and reproductive health education and services should also be integrated into the care provided to HIV positive adolescents.

Adolescents can be grouped into young adolescents (10-15) and older adolescents (15-19). The 19-24 year old group are known as young adults.

Where possible adolescents should be booked on the same refill day. This will give an opportunity for peer support if a group refill approach is taken. The different ages have quite different needs so if possible it would be beneficial to have separate groups. Again it is important to consider the disclosure status although all children should be disclosed to by the age of 12 at the latest. Until on adult doses they should be seen for a clinical consultation every 3 months. Once on adult doses and fully disclosed adolescents can be seen 6 monthly with refills in between but different to adults their groups should be facilitated. (See the reference material to guide discussions for adolescent group refills). It may be beneficial to identify 1 or 2 older clients on ART who are able to be part of the adolescent group to answer specific questions.

2.3.10 Special considerations for men

In a study examining risk factors for loss to follow up in Zimbabwe men had a higher risk of being lost to follow up (12). Ensuring services are provided in a conducive environment and at times that are “male
friendly” should be reviewed. Consultation with community leaders could facilitate ideas as to how services can be made more attractive to men. Possible interventions that may improve access to care for men are:

- A weekly or fortnightly extended hours service that men can access. (NB these extended hours services should also be available to other clients as well).
- Adopt refill policies to reduce time spent at the clinic.
- Offer other “male health services” (BP, diabetes, prostate screening and health education advice on smoking and alcohol use) alongside provision of HIV Prevention care and treatment services.
- Offer flexible refills for men working away from home.

2.3.11 Special considerations for mobile populations

Depending on the movement pattern and frequency of return, mobile clients may require longer supplies of medication or transfer out letters that can be used both within Zimbabwe and in neighbouring countries (15).

- Depending on the availability of ARVS, **3-6 months of medicine can be provided.**
- It is advisable that a **transfer letter is completed** even if it is expected that they will return.
- As part of the adherence counselling (ANNEX 1,2 and 3) at initiation and throughout the first year **clients should be reminded to inform the health worker if they plan to travel. This includes to inform the person dispensing medication during any refill visit.**
- Likewise **health care workers should proactively ask about travel plans.**

2.3.12 Special Consideration for key populations

Clinics should provide a non judgemental environment for provision of services to key populations. Provision should be made regarding the time of day they may want to attend. Ensuring they have access to the full SRH package is also essential (STI treatment, family planning, cervical cancer screening).

2.3.13 Key Messages and reference materials

- All adults (including breastfeeding and lactating women) adolescents and children should follow the schedule for clinical AND counselling services (section 2.6)
- All Pre ART and ART clients should have appointments booked in a diary or in the electronic register so there is a clear list each day of who should attend (Section 2.3.3)
- Using the diary or the daily lists from the electronic register ALL pre ART (from the day of testing positive) and ART clients (including pregnant and breastfeeding women) who do not attend should be traced after 3 days (Section 2.3.3)
- All clinics should provide a drug refill system appropriate for their setting for stable pre ART and ART clients (Section 2.3.4 and 2.3.5)
- All clinics should make a documented plan of client triage and client flow to ensure clients receive all services they are booked for and waiting times are reduced (Section 2.3.6)
- Management of clients living with HIV requires **all the team members** (doctor, nurse, counsellor) **of the facility** to discuss cases and challenges faced in the provision of OI ART services. All clinics should organise a regular (weekly) clinic meeting to discuss challenging cases and other service provision issues
- Service organisation adaption for men, migrants and key populations (Section 2.3.10-2.3.12) will enhance access and retention for these vulnerable groups.
Children and adolescents:
- Organise a separate day per week or month (depending on your cohort size) for children and a separate day for adolescents. These groups should be made according to disclosure status and age. Having these days will allow for immediate peer support for the mothers and the children. Nurses and counsellors will also be able to focus on paediatric issues for that day.
- For school age children book appointments after school hours or on a Saturday and utilise school holiday dates.
- Consider having an adolescent “champion” among the healthcare workers and as adolescent peer educators within the district.

Pregnant and Breastfeeding women:
- Each facility should assess if there is a potential “PMTCT Champion” in their community. PMTCT Champions are women who have successfully completed PMTCT and are willing to mobilise within their community on PMTCT and link with the facility to meet with pregnant women on ART. Women identified as having challenges with adherence and retention should be identified for this additional peer support. These women may also support defaulter tracing.
- Alternative models for peer support include the formation of groups of HIV positive and negative pregnant women with the aim of creating demand for MNCH services and improving MNCH and PMTCT outcomes.
- It is essential that women after the PMTCT period are linked to the clinic based refill strategy. In some cases linking them to existing community ART groups could already build peer support for lifelong adherence.

Management of clients living with HIV, adults (including breastfeeding and lactating women), adolescents and children, should be supported through community members and organisations. A strong link between the facility and community needs to be established. All clinics should organise a regular (quarterly) meeting with community leaders and organisations involved in HIV Prevention care and treatment activities.

Annex 9 Standard Operating procedures for refills
Annex 10 Standard Operation Procedure for Community ART groups
Africaaid Support group session plans for adolescent support groups
2.4 Provision of Pre ART Services

2.4.1 Pre ART Care at first linkage with the facility

Once a client has tested positive at a facility or when a patient who has tested positive elsewhere links with a facility, they should be immediately registered in the Pre ART register and an OI number issued.

Once registered the client needs to pass through a number of steps with both the clinician and counsellor to determine if they need investigation and treatment for OIs and whether they are eligible for ART. These steps should be done on the same day as testing or when the client links to care.

**Step 1:** Clinical History  
**Step 2:** Physical Examination  
**Step 3:** Baseline Laboratory investigations  
**Step 4:** Treatment Plan

---

**First Clinical Assessment**

<table>
<thead>
<tr>
<th>History</th>
<th>A full medical history should be taken at the first visit</th>
</tr>
</thead>
</table>
- Are there any associated constitutional symptoms e.g. loss of appetite, loss of weight, night sweats. |
| **Past Medical History** | - **TB:** Past history of TB: was treatment completed. Has there been any recent/current contact with a TB case (drug sensitive or drug resistant).  
- **OIs:** Has the client been treated for or admitted for any staging OIs. |
| **Other conditions** | e.g. epilepsy, diabetes, hypertension. This is important as symptoms may overlap and they may predispose the client to a higher risk of side effects e.g. diabetes and hypertension may mean a higher risk of renal side effects with TDF; there may also be significant drug interactions which need to be taken into consideration. |
| **Previous psychiatric disorder** | anxiety and depression. |
| **Is there any prior exposure to ARVs** | (including PMTCT and PEP). The client may have previously been initiated on ARVs in another setting. |
**Drug History**
In particular look out for other nephrotoxic drugs – e.g long term NSAIDs or aminoglycosides - avoid TDF use with these drugs especially if creatinine cannot be monitored.

**Family History**
Does the client have a partner or children? Have they all been tested?

**Social History**
What is the clients support network at home? Are they employed – have they been able to maintain their job? Is there any history of alcohol or other substance abuse?

**Review of Systems**
- Any weight loss noticed by the client
- Any rashes: any history of a painful blistering rash (Herpes Zoster)
- Any diarrhoea (more than a month = stage 3)
- Any recurrent fever (more than a month = stage 3)
- Screen for STIs
- Screen for TB symptoms using the Zimbabwean TB screening tool
- Screen for symptoms of depression.

A full antenatal obstetric history should be taken at the first visit.

Record birth history and history of immunisations.

**Examination**
All clients should be examined from top to toe at the first clinical assessment. The purpose of the examination is to stage the client and to detect any signs of possible OIs or HIV related cancers prior to initiation of ART in order to avoid IRIS. A swollen cervical lymph node may be the only sign of TB in a client with HIV and may go unnoticed if the client is not examined.

To examine the client properly you must undress them and examine them on the couch. You will need a torch/flashlight to properly examine the mouth and a stethoscope to examine the chest.

What is the client’s general condition?

Check weight and height. If there is any previous weight documented in the client notebook have they lost more than or less than 10% (< 10% stage 2: > 10% stage 3)?

Check the vital signs (pulse, respiratory rate, oxygen saturations if possible, blood pressure and temperature): Is this client stable or unstable (if unstable consider the need to refer)?
Assess for any pallor (anaemia due to TB or HIV itself) or jaundice.

Assess from top to toe the skin – Herpes Zoster acute or scars; PPE; fungal rashes.

Examine the mouth and palate for signs of oral thrush, oral hairy leukoplakia or KS.

Examine the lymph nodes in the neck, above the collar bones under the armpits and in the inguinal region to see if they are enlarged.

Examine the chest for any signs of respiratory distress or focal respiratory signs.

Examine the abdomen – are there any masses or tenderness.

Examine the genital area for STIs.

A full obstetric examination will need to be performed.

Assess growth and developmental milestones. Remember to perform an ENT examination in children. Chronic otitis media is common in children with HIV and if untreated can lead to long term hearing problems.

**Baseline Investigation**

**Essential**
- TB testing (smear or Xpert MTB/Rif; CXR)

**Preferable**
- Baseline CD4 should be done wherever possible including for those groups being initiated regardless of CD4 count. Lack of access to baseline CD4 should however not delay initiation of ART.

  - If starting TDF check Creatinine at baseline if available. Ideally the laboratory will calculate the Creatinine Clearance for you if the weight is indicated on the laboratory request form. If not use the formula available in the clinical guidelines.

  - If starting AZT check Hb.

**Ideal**
- Pregnancy testing for women of child bearing age
- Syphilis screening
- Hep B and C screening
<table>
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<th><strong>Treatment Plan</strong></th>
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| Which conditions do I need to treat today or need investigation and management before I start ART if the client is eligible?  
What conditions need further investigation today?  
Should I start cotrimoxazole? (any stage 2, 3, 4 or stage 1 CD4 < 350)  
Should I start IPT if the TB screening questionnaire was negative?  

**Warning:** If CD4 is available at first visit *clients with a CD4 < 100 need special attention*. They are Late presenters. These clients need particular attention to screening for TB, examination for KS and enquiry as to any visual problems (potential CMV). These clients need to have blood sent to the laboratory to be screened for Cryptococcal antigen with CRAG testing. For further details on the clinical management for pre-emptive treatment of cryptococcal disease see the Guidelines for Antiretroviral Therapy for the Prevention and Treatment of HIV in Zimbabwe.  

Is this client eligible for ART? If yes refer to the counsellor for basic HIV education and ART education sessions (Appendix 1). If there are no outstanding OIs or other psychosocial issues a date for initiation should be made within 2 weeks.  

Clients with TB should be initiated after at least 2 weeks of TB treatment. Those with a CD4 less than 50cells/mm³ should receive ART within the first 2 weeks of TB treatment.  

Clients diagnosed with cryptococcal meningitis should take 2 weeks of amphotericin before initiation of ART. If amphotericin is not used at least 4 weeks of fluconazole treatment should be taken before ART is initiated  

If not eligible today and the CD4 count has not been performed book appointment for CD4 bleeding (and CR (Creatinine Ratio) where available) and an appointment to discuss the results. Refer to counsellor for basic HIV education counselling. |

---

**Basic HIV and ART education counselling sessions (Appendix 1)**

*Counsellors should write their findings in the notes section of the patient care and treatment booklet. Clinicians should refer to these notes and discuss face to face with the counsellor if problems have been identified.*
All clients can be referred for the first session of basic HIV education on the day of testing or first day of linkage to a facility (For session content and picture tool see Appendix 1)

If the client is assessed as being eligible after the initial clinical assessment (Stage 3,4, CD4 < 500 where CD4 available on the same day or one of the criteria for initiation regardless of CD4) the ART education session (For session content and picture tools see Appendix 1) may also be given on the same day. The counsellor must assess how much information the client is able to absorb. For some it may be appropriate to complete basic HIV education and ART education on the same day. For some these sessions should be scheduled 2-3 days apart. It is important to remember that clients may be travelling long distances to attend the clinic and may have to take time off work.

Clients without clinical or psychosocial complications should be booked for the ART initiation session (ANNEX 1) and be initiated no later than 2 weeks after having been assessed as eligible. In some instances depending on the clinical, psychosocial assessment of the client initiation could be performed on the same day followed up with post initiation counselling support. For those with clinical and psychosocial complications follow up appointments will need to be made as appropriate.

All clients who are assessed to be eligible and have appointments made for ART education and then initiation must have these appointments entered into the appointment diary. If they do not attend they should be traced as indicated in section 2.3.3

**Pregnant and breastfeeding mothers will have a rapid initiation performed (ANNEX 3).** This will be an adapted and combined ART education and initiation session but must be followed up with ongoing adherence support.

**Special Consideration for Pre ART counselling for Children and adolescents.** The way the basic HIV and ART education is carried out will depend on the age of the child and the decision made with the guardian around disclosure. The guardian should be given all the education as outlined in the disclosure session guides (ANNEX 8). Younger children should be included in the sessions and can participate without having to name HIV. Older children and adolescents should be disclosed to at least by the age of 12. If this can be supported early in the process of their diagnosis this has been shown to support adherence.

### 2.4.2 Follow up appointment for CD4 result if not available at first visit

At this consultation the clinician needs to:
- Assess the client for response to problems identified at the previous consultation and assess for any new problems today (perform systems review). In particular the client should be screened again for TB.
- Late presenters (those presenting with a CD4 < 100 cells/ μl) should be screened for cryptococcal meningitis and TB (regardless of symptoms). If a laboratory based CD4 was performed and is < 100 the laboratory should automatically have performed CRAG screening
- If now eligible (CD4 < 500 cells/mm³) refer to counsellor for ART education (Appendix 1). Book an appointment within 2 weeks for planned ART initiation or assess if patient ready to be initiated on the same day.
• If not eligible for ART explain to the client
  o The need to initiate/continue Cotrimoxazole unless they are stage 1 with a CD4 > 350
  o The importance of attending the clinic if they develop any new symptoms or signs even if it is before their next appointment: especially point out symptoms and signs of TB, weight loss, new rashes, severe headache, diarrhea
  o The follow up schedule:
    - Client to attend for refill of CTX in 3 months;
    - Client to attend for repeat CD4 2 weeks prior to next clinical appointment (unless clinic has POC CD4 PIMA available)
    - Client to attend for clinical and CD4 review in 6 months.

2.4.3 Pre ART Follow Up consultations

Pre ART clients should be given 3 monthly supplies of cotrimoxazole if indicated and reviewed clinically with repeat CD4 testing every 6 months in order to reassess eligibility.

Clients must be educated on signs and symptoms that they should report to the clinic in between booked appointments for refills or clinical assessment visits.

The clinician should use the headings of the patient care and treatment booklet to guide the consultation
  o Has the client attended on time— if not what were the barriers
  o Document weight; observe any downward trends- if YES ACT: Screen for TB, new OIs, assess nutrition, recheck CD4— is the client now eligible for ART?
  o Re-examine the client and restage - if stage 3 or 4 start ART preparation
  o Assess for pregnancy or family planning use including condom use for men and women
  o Screen for TB and other OIs
  o Any other complaints today
  o Assess adherence to cotrimoxazole
  o Review the latest CD4 result for eligibility;
    - if < 500 start ART education and book for an appointment to be initiated within 2 weeks
    - If still not eligible reinforce messages around reporting any new illness to the clinic in between appointments
  o Make next appointment;
    - for CTX refill in 3 months
    - for CD4 2 weeks prior to next clinical review
    - for Clinical review plus CD4 in 6 months.

2.4.4 Special considerations for children for Pre ART follow up

All children under the age of 5 years are automatically eligible for ART. Children more than 5 years who are not yet eligible should be reviewed clinically and with a repeat CD4 by the clinician every 3 months in order to reassess eligibility. Plotting weight and height at each visit and assessing any flattening or decline of growth is an essential part of the follow up of any child with HIV.
2.4.5 The Role of the Community in Pre ART care

The community should be actively engaged in supporting Pre ART care. Opportunities include using trained community based counsellors who can give or reiterate basic HIV education and ART education. They should also link with the facility to provide defaulter tracing. Mobilizing the community to be aware that ART needs to be started early (CD4 < 500) will support clients to attend regularly for repeat CD4 testing. In some settings community refill groups may also be utilised for clients to collect refills of cotrimoxazole.

2.4.6 Key Messages and reference materials

- All clients should receive appropriate management of opportunistic infections (See clinical guidelines for management of CCM and for management of KS).
- All clients who are stage 2,3 or 4 or CD4 < 350 should start cotrimoxazole prophylaxis (For children refer to the clinical guidelines).
- Screen all PLHIV in care for TB. If there are no TB symptoms start IPT for 6 months according to the IPT guideline.
- All clients with a CD4 < 100 should be screened for cryptococcal disease using CRAG testing and treated according to the clinical guidelines.
- All clients once tested positive should be given appointment dates for follow up that are recorded in the diary. If they do not attend they should be traced (Section 2.3.3).
- If the client is not eligible for ART give 3 monthly refills of cotrimoxazole. Review in a clinical consultation and recheck CD4 every 6 months.
- Clients should be encouraged to be part of a peer support group. Peer support may also be met through the refill systems (“club” or community refill groups).

Guidelines for Antiretroviral Therapy for the prevention and treatment of HIV in Zimbabwe 2013; Zimbabwe EDLIZ.

2.5 Initiation of ART

2.5.1 ART initiation session by the counsellor

At the appointment booked for initiation the client should see the counsellor first. A knowledge and psychosocial assessment (ANNEX 2) should be carried out to determine whether the client is ready to start ART. Depending on the knowledge of the client basic and ART education could be given as one session. Having a treatment buddy should be encouraged but is not compulsory to initiate ART.
Special considerations for ART initiation counselling in Pregnant and Breast feeding women

Pregnant and breast feeding mothers will all be initiated on ART (TDF/3TC/EFV) on the same day they test positive. Therefore the content of the counselling session has to be prioritised around 1) motivation for taking medication – to keep the baby negative and in the longer term to keep the woman healthy to care for her baby 2) How to take the medication. At subsequent sessions ongoing counselling and assessment of HIV and ART knowledge must be further developed. In addition at a later date the woman must be counselled, on planning a safe delivery, use of the NVP and cotrimoxazole syrups that her baby will need, testing her baby and infant feeding options.

**At first visit emphasise that this treatment is to keep her baby negative and to keep her healthy in order to look after the baby.** The medication is safer than the previous Option A (less anaemia) and is once a day. Also during breastfeeding it is a much easier way of keeping her breast milk safe than the previous syrups given to the baby. If the woman has concerns about life long treatment these should be further discussed during follow up sessions but for now encourage her that the immediate motivation is to keep her baby negative. In addition a baseline CD4 will be taken (needed to assess for late presenter treatment and to monitor treatment response if viral load not available). This will also guide further discussions. In a large cohort (more than 10,000) of pregnant women from Malawi and Mozambique approximately 75% of pregnant women had a CD4 < 500 cells/mm³ and therefore be eligible anyway (16). In future sessions it can also be explained that continuing on ART not only will keep her healthy but will also protect any future pregnancy much earlier and protect her partner if negative.

Lack of disclosure is a very common reason for pregnant or breastfeeding women not to take their medication. Start to discuss options for how she might disclose to her partner

ANNEX 2 gives guidance on the content of the rapid initiation session for pregnant or lactating women.

**Special considerations for ART initiation counselling in children and adolescents**

Younger children are dependant on their caretakers for administration of ART. It is therefore essential that these caretakers understand the importance of ART administration for the child. A very common reason for poor adherence in children is when there are multiple caretakers some of which have not been educated on the importance of taking the medication. It is useful if the family can identify at least 2 caretakers who can come to the preparation sessions but if this is not possible it must not delay initiation of ART. If the child is regularly left in another home try and include that caretaker in the preparation. Depending on the age of the child involve the child in planning of how and when they will take their drugs. Tools such as the pill pathway (ANNEX 9) can support adherence. Partial disclosure should be achieved at least by age 9 and full disclosure should be achieved at the latest by age 12 (ANNEX 8).
2.5.2  ART initiation checklist for the clinician

**Step 1:** Review reason for eligibility

- Any clients of any age with Stage 3 or 4 disease
- All clients with TB co-infection
- All pregnant and breastfeeding women
- All children less than five years of age
- All hepatitis B co-infected in the presence of chronic liver disease:
- Any adult adolescent or child more than 5 years with a CD4 < 500
- Any HIV positive client whose partner is HIV negative (serodiscordant couple)
- Any HIV positive sex worker

**Step 2:** Does the client have sufficient understanding about HIV and ART and is the client psychologically ready to start ART? The clinician needs to review the counsellors notes from the preparatory sessions to ensure that there are no outstanding issues that may affect initial adherence (severe depression, denial, plans to travel). For children, does the caretaker fully understand their responsibility for providing the child’s ART.

**Step 3:** Screen again for TB- this is essential to avoid episodes of TB IRIS. If positive initiate TB treatment. If negative start IPT if eligible.

Clients with TB co-infection should start TB treatment first. ART should be started after 2 weeks of TB treatment. Those with a CD4 less than 50 cells/mm³ should receive ART within the first two weeks of TB treatment.

**Step 4:** Ensure all OIs and other infections have been adequately screened for (Cryptococcal disease if CD4 < 100; TB; STI) and treated.

Clients diagnosed with cryptococcal meningitis should take 2 weeks of amphotericin B before initiation of ART. If amphotericin is not used at least 4 weeks of fluconazole treatment should be taken before ART is initiated.

**Step 5:** Examine the client

**Step 6:** Review the baseline laboratory tests- if performed- to decide on the choice of regimen

**Step 7:** Choose a regimen

*For adults (including pregnant / breastfeeding women) and adolescents more than 35kg*

- If Creatine clearance (CrCl) is more than 50ml/min and there is no underlying psychiatric illness start TDF/3TC/EFV
- If CrCl is less than 50ml/min check Hb with haemacue if available. If Hb > 8g/dl and no history of psychiatric illness start AZT/ 3TC/ EFV

NB if Creatinine testing IS NOT available do not delay ART initiation. Start with TDF/3TC/EFV.
If there is a history of psychiatric illness substitute EFV with NVP. Remember to start with once a day lead in dosing for 2 weeks. If CD4 is > 250 cells/mm³ consider initiation with a protease inhibitor—discuss with your local mentor.

For children less than 3 years
- If Hb is more than 8g/dl start AZT/3TC/ Lop/Rit
- If Hb is less than 8g/dl start ABC/3TC/ Lop/Rit

For children 3-10 years or any child less than 35kg
- If Hb is more than 8g/dl start AZT/3TC/ NVP
- If Hb is less than 8g/dl start ABC/3TC/ NVP

STEP 8: Review potential side effects of the medication with the client and ensure they know what symptoms to report to the clinic early about (Table 13). Be especially alert to side effects of TDF in the elderly, diabetic or hypertensive client.

Table 13: Symptoms and Signs Clients must report

<table>
<thead>
<tr>
<th>Important symptoms or signs a client should report to the clinic</th>
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<tbody>
<tr>
<td>Cough, night sweats, weight loss</td>
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<tr>
<td>Possible TB or other chest infection</td>
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<tr>
<td>Breathlessness, dizziness</td>
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<tr>
<td>Possible chest infection or anaemia if on AZT</td>
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<tr>
<td>Diarrhea or vomiting</td>
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<tr>
<td>Possible new OI or side effect of medication (Lop/rit; possible lactic acidosis)</td>
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<tr>
<td>New rashes</td>
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<tr>
<td>Possible side effect of NVP and EFV (less common with EFV)</td>
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<tr>
<td>Facial swelling or ankle swelling</td>
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<tr>
<td>Renal dysfunction possible side effect of TDF</td>
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<tr>
<td>Change in how they are urinating (especially if urination reduces or stops)</td>
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<tr>
<td>Renal dysfunction possible side effect of TDF</td>
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<td>Severe sleep disturbance; change in behaviour</td>
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<tr>
<td>Possible side effect of EFV (NB before attributing behaviour change or confusion to EFV ensure</td>
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<td>patient has been investigated for OIs –i.e has had a lumbar puncture performed)</td>
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</tbody>
</table>

STEP 9: If all of the above steps have been checked and the client is ready, initiate ART

STEP 10. Enter the client in the chronic ART register
### 2.5.3 Key Messages and reference materials

**Who to start:**
All stage 3 and 4; CD4 < 500 cells/μl; All pregnant and breastfeeding women; all children under 5 years; All TB coinfected; All hepatitis B co-infected in the presence of chronic liver disease; serodiscordant couples irrespective of CD4

**What to start:**
Adults (including pregnant and breastfeeding women) and adolescents > 35kg: TDF/3TC/EFV as first line

Children < 3 years 3TC/Lop/r as first line; 3-10 years AZT/3TC/NVP as first line

Clients should be assessed whether they are **psychologically ready** to start ART (and have enough knowledge) and if they are **clinically ready** to start ART

Guidelines for Antiretroviral Therapy for the Prevention and Treatment of HIV in Zimbabwe Appendix 1 for Counselling Materials

### 2.6 Follow up on ART

#### 2.6.1 ART Follow Up Schedule

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<th>Wk 2</th>
<th>Mth 1</th>
<th>Mth 2</th>
<th>Mth 3</th>
<th>Mth 6</th>
<th>Mth 9</th>
<th>Mth 12</th>
<th>Long term follow up</th>
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<td><strong>Clinical</strong></td>
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<td></td>
<td>3 monthly supplies of ARVS and cotrimoxazole should be given. If monitored with viral load see for clinical review yearly Mth 24,36 etc: If no viral load see for clinical review every 6 months18,24,30,36 etc. REFILL in between (3 monthly).</td>
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<td><strong>Counselling</strong></td>
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<td>Adherence should be assessed by the nurse at each clinical visit. At refill visits peer support for adherence is given by the group members if refill system is in a club or CARGs. After month 6 clients should see the counsellor only if a red flag sign is picked up by the nurse.</td>
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<td><strong>Laboratory</strong></td>
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<td>Viral load yearly If no viral load, CD4 6 monthly Creatinine (TDF), HB (AZT), ALT(NVP) should be checked if there is any suspicion of side effects.</td>
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Operational and Service Delivery Manual for the Prevention, Care and Treatment of HIV in Zimbabwe
## SPECIAL CONSIDERATIONS FOR ART FOLLOW UP FOR PREGNANT WOMEN AND CHILDREN

<table>
<thead>
<tr>
<th>First Year</th>
<th>Long Term</th>
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<tbody>
<tr>
<td>Pregnant or breast feeding women initiating ART as part of PMTCT undergo rapid initiation on the same day as testing. They should then be seen at week 2, Mth 1 and then monthly while they are attending for ANC and PNC / bringing the exposed baby monthly. An extra counselling session is given at week 2 to ensure more detailed HIV and ART education is given. Counselling follow up is adapted to the changing motivation for taking ART over time, discussion on delivery, infant testing and infant feeding should be included at the appropriate time.</td>
<td>Once the baby is diagnosed HIV negative (6 weeks post cessation of breastfeeding) the woman can decide which refill option she should consider for future long term follow up.</td>
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<tr>
<td>Infants Up to 18 months should be reviewed monthly. Thereafter children should be seen every 3 months until they are on adult doses. THIS IS BECAUSE THE DOSE MUST BE ADJUSTED FOR THE WEIGHT. For children follow the adult counselling schedule until month 6 and then see them 3 monthly until full disclosure is achieved. Plan to group your children on the same day each week / month. This automatically allows for peer support to enhance adherence.</td>
<td>Until on adult doses children should be seen every 3 months. Once on adult doses follow up as for adolescents. Children should continue to see the counsellor every 3 months until full disclosure is achieved.</td>
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<tr>
<td>If starting on adult doses adolescents can follow the routine follow up schedule as above for the first year. The counselling content should be adapted to their particular needs (SRH, coping with school, starting new relationships etc) Plan to group your adolescents (10-15) (15-19) on the same days. Then group “ club refills can be organised. For adolescents these should be facilitated (See tools for facilitating adolescent groups in the reference material)</td>
<td>Until fully disclosed (goal by age 12) continue to see clinician and counsellor every 3 months. Once disclosed and on adults doses adolescents should be seen clinically once every 6 months - unless serious psychosocial issues are identified - with a facilitated group refill in between.</td>
</tr>
</tbody>
</table>

### 2.6.2 Follow up of a client on ART by the counsellor

After initiation the client should see the counsellor at, Mth 1, 3 and 6. These sessions **could be done as a group if a few clients the same duration on ART are attending the same day or as individuals.** The client should see the counsellor before the clinician and the counsellor should document their findings in the notes section of the patient care and treatment booklet. A guide to the content of these sessions can be found in ANNEX 3. The counsellor should be guided by the client as to the specific challenges they would like to discuss but it is also important that some key issues are covered for all by the time they are 6 months on ART. These topics include:

- Planning for travel.
- Family planning: and planning your family.
• Understanding treatment failure and interpretation of CD4 and viral load results.
• Understanding the need for lifelong ART related to cultural and religious beliefs.
• Understanding and choosing a refill option for long term follow up.

After month 12 the client still needs ongoing adherence support. If the client becomes part of a refill club or community ART group, peer support for adherence has been shown to be very effective. At each clinical visit the nurse should assess adherence and identify any red flags as outlined below. If present the client should be referred to the counsellor for enhanced adherence (ANNEX 5). Red flags include:

- Clinical failure (Section 2.7)
- Immunological failure (Section 2.7)
- Viral load > 1000 copies / ml
- Late attendance to collect refill
- Any new psychosocial event that may impact on adherence
- Any excessive use of alcohol or other substance abuse

Special considerations for the counselling follow up of pregnant and breastfeeding women

An additional counselling session at week 2 is given for pregnant and breastfeeding women (See Annex 3). Additional topics related to their stage of PMTCT should be incorporated: planning a facility based delivery: NVP use; DBS testing; CTX use; Infant feeding advice. There are also some key “Transition points” in the journey of PMTCT where key messages should be emphasised.

- Planning where the woman will deliver or if she will travel away from the facility who has initiated her ART. Consideration of cultural practices such as Kusungirwa must be discussed and if needed extended drug supplies given or referral to another ART site.
- Exclusive breast feeding for 6 months is the recommended infant feeding option. When the woman is seen post delivery it is very important to explain that the medication she is taking is making her breast milk safe. The chances of transmitting HIV to her baby if she takes the medication daily is VERY VERY low. So her motivation for taking the medicine is still to keep her baby negative.
  - Family planning options should be discussed.
  - She should be reassured that the medication she is taking is not harmful to the baby.
  - During the subsequent sessions further discussion about lifelong treatment can be developed. When she is about to stop breastfeeding is an important stage as prior to this she has the additional motivation for treatment of keeping the baby negative. Now the treatment is for her own health. She should also understand that continuing on the ART will protect any future pregnancy.

Special Considerations for ART follow up Counselling for Children and adolescents

In addition to adherence counselling children and their caretakers need to be supported through the process of disclosure. Evidence suggests that older children who do not understand about their status have worse adherence and retention. Disclosure is a process. Partial disclosure (where the child understands what is going on in their body but does not name the disease) should start as soon as the child is able to understand simple story lines and should be achieved at least by age 9 with many children achieving this earlier. Full disclosure where the child also names the disease should be achieved at the latest by age 12. For some children full disclosure can be achieved earlier. Although it is
encouraged that the caretaker discloses, the healthcare worker must proactively initiate and guide the process. If full disclosure has not happened by the age of 10 this case must be taken seriously and a plan made with the guardian. ANNEX 8 gives an outline for these disclosure sessions and some picture tools that may be used.

2.6.3 ART follow up consultations by the clinician

Once initiated on ART the clients should be seen by the clinician at week 2 only if on NVP or pregnant or breastfeeding, month 1, 2, 3, 6, and 12. A refill appointment may be given for month 9. After this if the client is clinically stable (Section 2.3.4), clinical consultation can be every 6 months in the case where the client is being monitored clinically or with CD4. If viral load monitoring is being used the client can be seen for a clinical assessment once a year. In between clinical assessments the client can collect refills every 3 months directly from the pharmacy according to which system of refills the site has chosen.

See section 2.3.4 and 2.3.5 to review the concept of ART clinical consultation versus refill.

At each ART clinical consultation the following points should be addressed. Be guided by and complete the columns of the patient care and treatment booklet.

- Is the weight increasing or stable: assess nutritional status.
  - If the weight is decreasing - WHY? Screen for possible TB; assess the nutritional status; are there other signs of possible treatment failure?
- What FP is being used or is the client now pregnant and ANC / PMTCT interventions are now needed?
- Screen for TB: Is Isoniazid preventive therapy due?
- Screen for STIs
- Are there any other complaints today?
- Are there any side effects of the medication being prescribed (swollen ankles or face, oliguria, polyuria, haematuria for TDF; pallor, dizziness or breathlessness with AZT; sleep disturbance or altered mood with EFV; rash, yellow eye or right upper quadrant pain with NVP)?
- Check adherence to medications (not just the ART!)

It is essential that clients are educated that if they develop any new symptoms or signs they can attend the clinic any time.

It is essential that after month 12 the client should be referred to the counsellor if any of the following red flags are identified by the nurse or doctor. If there is evidence of failure the counsellor should start the enhanced adherence sessions (ANNEX 5).

- Clinical failure (page 65)
- Immunological failure (Page 65)
- Viral load > 1000 copies / ml
- Late attendance to collect refill
- Any new psychosocial event that may impact on adherence
- Any excessive use of alcohol or other substance abuse.
• Are there any blood results (CD4, viral load, creatinine etc) I should have documented and reviewed today? If yes have I acted on them?
  o Is the last CD4 less than 100cell/μl or less than baseline - if YES the client needs to be investigated for treatment failure (Section 2.7)
  o Is the viral load > 1000 copies/ml - if YES the client needs to start enhanced adherence (Section 2.7 and ANNEX 5)
  o If available and the client is on TDF is the last creatinine clearance more than 50ml/min. If NO discuss with nurse mentor or doctor regarding action
• Are there any blood tests that I should be ordering today? CD4 should be checked 6 monthly; when routine viral load is available it will be checked at month 6, 12 and then yearly on ART. If on TDF check Creatinine yearly if available; If on AZT check Hb after 6-8 weeks – thereafter check HB if the patient presents with symptoms of anaemia.

**Table 14: Monitoring blood tests for clients on ART**

<table>
<thead>
<tr>
<th>Test</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD4</td>
<td>Six monthly</td>
</tr>
<tr>
<td>Viral load</td>
<td>Month 6,12 and then yearly</td>
</tr>
<tr>
<td>Creatinine (if on TDF)</td>
<td>Month 6,12 then yearly if available</td>
</tr>
<tr>
<td>Hb (if on AZT)</td>
<td>At 6-8 weeks post initiation; then if triggered by symptoms</td>
</tr>
<tr>
<td>ALT (if on NVP)</td>
<td>If client developed jaundice, a painful liver or NVP induced rash</td>
</tr>
</tbody>
</table>

• Prescribe medications needed for today: cotrimoxazole and ART and any other medications for acute complaints
• Give next refill / clinical appointment dates – document these in the patient care and treatment booklet and the client held notebook
• Complete the chronic ART register and appointment diary (this may be more efficiently done at the end of a session referring back to the green books).

**Special considerations for the clinical follow up of pregnant, breastfeeding women and their exposed babies**

In addition to the points above women in the PMTCT programme must receive all the ANC, delivery and PNC interventions according to the national schedule. As described in section 1.4 this should be offered as an integrated one stop service.

Whilst pregnant, they will attend monthly and continue monthly post delivery in order to collect their refills and bring their exposed baby for monthly assessment, cotrimoxazole prophylaxis, testing according to the EID algorithm and immunizations. See Section 2.3.7 for programmatic options for following up pregnant or breastfeeding women on ART.
Once the baby has tested negative (at least 6 weeks after the cessation of breastfeeding) the mother can resume the normal follow up schedule utilising a refill system of choice being offered at their facility.

**Special consideration for the clinical follow up of children and adolescents on ART**

HIV exposed infants should be followed monthly until 18 months. The testing algorithm for exposed infants as in the Guidelines for Antiretroviral Therapy for the Prevention and Treatment of HIV in Zimbabwe should be followed. At each visit weight, height and nutritional status including assessment of infant feeding method should be assessed. NVP syrup is given for 6 weeks post delivery (or for six weeks from the first presentation at the facility while the mother starts her ART) and cotrimoxazole syrup from 6 weeks of age until proven negative at least 6 weeks after the cessation of breastfeeding.

Children and adolescents on ART need to be followed differently to adults. See Section 2.3.8 and 2.3.9 for further details of possible ways to organise follow up services for children.

For an HIV positive infant they should be followed monthly until 18 months. After this appointments can be spaced to once every 3 months. Children should still be seen by the clinician every 3 months in order to ensure the ARV dose is adjusted for the weight and to assess the growth and clinical condition of the child.

Once the child is able to take an adult dose they may be offered the option of a group refill system. They should however still be reviewed clinically at least every 6 months.

In addition to the points for ART follow up outlined on pages 58-59 there are some special considerations to be taken into account for the clinical follow up of a child on ART.

1. **Monitoring of weight and height is VERY important for assessing a child’s response to ART.** Weight and height should be plotted on the growth chart so trends can be followed. If the growth curve is flattening or dropping down the centiles we need to investigate WHY?
   - Screen the child for TB? Poor growth is a possible sign of TB in children
   - What is the nutritional status of the child?
   - Are there other signs of treatment failure (For definitions see section 2.7): New rashes, other OIs, recurrent cough, diarrhea?
   - Are there other intercurrent illnesses?

2. Assess developmental milestones (refer to clinical guidelines).

3. Are the child’s immunisations up to date?

4. The clinician should be aware of the child’s disclosure status and work together with the counsellor to ensure full disclosure is reached by the age of 12.

5. The doses of ARVS **must be prescribed according to the weight of the child. DO NOT JUST COPY** what you colleague wrote the last time. **If the dose is not increased this may lead to suboptimal dosing and possible development of resistance and treatment failure.**
2.7 Identification and Management of Treatment Failure

Clients on ART should be monitored for both toxicity of treatment and for success of their treatment. This means assessing their clinical status AND reviewing their CD4 or Viral Load monitoring.

Performing a CD4 or viral load test is not enough. The result needs to be acted on. A decision should be made whether the client is at risk of treatment failure and now needs a specific “risk of treatment failure” intervention.

Treatment failure can be defined in three ways
- Clinical
- Immunological
- Virological

Routine viral load is the monitoring strategy of choice and will be phased in across Zimbabwe over the next 3 years. Clients should be monitored clinically in all settings and immunologically where there is only access to CD4. Viral load has been chosen as the monitoring strategy of choice because virological failure is the first type of failure to occur. Only when there has been virological failure for some time does immunological and then clinical failure occur.
2.7.1 Definition of Treatment Failure

Definition of Treatment Failure in Adults

The client must have been on ART for at least 6 months before we consider treatment failure. Before this think about immune reconstitution inflammatory syndrome if the client becomes unwell or develops a new opportunistic infection.

In adults treatment failure is defined as:
- **Clinical**: A new or recurrent clinical event indicating severe immunodeficiency (WHO clinical stage 4) after 6 months of effective treatment.
- **Immunological**: CD4 count falls to the baseline (or below) OR Persistent CD4 levels below 100 cell/mm³.
- **Virological Failure**: Viral load above 1000 copies/ml based on two consecutive viral load measurements after 3 months of adherence support.

Definition of Treatment Failure in Children

Treatment failure in children is defined in three ways. The client must have been on ART for at least 6 months before we consider treatment failure. Before this think about IRIS if the client becomes unwell or develops a new opportunistic infection.

- **Clinical failure**: New or recurrent clinical event indicating severe immunodeficiency (Stage 3 or 4 condition).
- **Immunological failure**: If younger than 5 years if there is a persistent CD4 count below 200 cells/mm³ or CD4% < 100; if older than 5 years if there is a persistent CD4 below 100 cell/mm³.
- **Virological Failure**: Plasma viral load above 1000 copies/ml based on two consecutive viral load measurements after 3 months of adherence support.

2.7.2 Detecting Treatment Failure

Detecting Clinical failure

Although the definition of clinical failure is a new WHO stage 4 OI in adults or stage 3 or 4 in children clinicians should be alert to new stage 2 or 3 OIs, recurrent episodes of diarrhoea, respiratory tract infections, new rashes and to the weight decreasing (NB the importance of documenting sequential weights on the patient HIV monitoring booklet).

Where there is no access to routine viral load if there are new WHO stage 2, 3 or 4 OIs, a 10% drop in weight or where the client is recurrently unwell a targeted viral load should be requested. If viral load is not available and the client is very sick refer immediately to a doctor who will assess the client.

A client on ART presenting with new OIs needs URGENT assessment for possible treatment failure management. A targeted viral load should be taken.
Detecting Immunological failure

The 2013 WHO and Zimbabwean ART guidelines have two definitions of immunological failure. A CD4 < 100 cells/mm³ or less than baseline. Therefore the baseline CD4 MUST be clearly documented on the front sheet of the ART information card. If either of these criteria are met a targeted viral load should be requested.

A CD4 < 100 cells/mm³ or less than baseline needs action. A targeted viral load should be taken.

Detecting Virological failure: Planning for future Access to routine viral load

Routine viral load (Mth 6,12 and then yearly) will be rolled out in Zimbabwe over the next 3 years. During this phasing in period all clinics should still have access to targeted viral load at their district or provincial referral hospital. Blood should be drawn where the dried blood spots will be prepared and then transported to the viral load testing laboratory. Further details of how viral load will be rolled out will be available in the national viral load plan.

A viral load > 1000 copies/ml NEEDS ACTION

2.7.3 Educating clients and the community about treatment failure

As part of routine adherence counselling from ART preparation onwards, clients should be educated about signs and symptoms of possible treatment failure (weight loss, recurrent infections, new rashes, any new staging condition). This is important so they can report promptly to their health facility. Having community health workers and other CBO members educated about treatment failure will also provide additional support to ensure clients with possible treatment failure are encouraged to attend the facility before a booked appointment.

As viral load is rolled out client and community education on viral load is an essential step in the implementation plan. Clients should know when their viral load should be taken, why it is being taken and how to interpret the result. All clients should know that if the viral load is > 1000 copies/ml there is possible an adherence problem or resistance and action should be taken by the clinician and the counsellor. If CD4 monitoring is being used clients should know that if it is below 100 cells/mm³ or below their baseline action should be taken.

Messages on viral load should be given to clients during ART preparation and ongoing counselling. Knowledge of viral load should be checked prior to having their blood drawn and a reminder given. This can be as a group if patients are triaged for viral load blood draw together.

ANNEX 4 outlines some key messages on treatment failure and viral load that can be used to educate clients prior to having their monitoring tests performed. Several analogies have also been used to explain viral load.

1. Comparing the virus to the weeds in a garden. When you weed your garden regularly there are no weeds to be seen and the maize in the garden can grow tall and healthy. When you take
your drugs regularly the viral load is suppressed and the CD4 count can rise and you become healthy.

2. Comparing the virus to a spring. When we put pressure on the spring it becomes smaller. When we take our drugs regularly they suppress the virus so the amount in our blood becomes small. From the moment we release pressure or take drugs irregularly, the spring or the amount of virus in the blood becomes big again.

An undetectable viral load does not mean the virus is no longer there. Make sure the patient understands this and that they know that they must continue to take their ARVs.

2.7.4 Action plan for a client with a first Viral load (targeted or routine) more than 1000 copies/ml

Figure 8 outlines the algorithm for when to take a viral load and the action to be taken depending on the result. Apart from in some cases of clinical failure no client should be switched on the basis of one viral load. The viral load should always be repeated 12 weeks after the start of an adherence intervention.

Viral load to be tested on:
- Any patient with clinical or immunological failure
- If routine viral load available
  - 6 months after starting ART
  - 12 months after starting ART and then every 12 months (24 months, 36 months, etc)

VL < 1000 copies/ml
- Continue current regimen and routine yearly VL monitoring or 6 monthly CD4
- At each subsequent yearly VL à follow algorithm from the top

VL > 1000 copies/ml
- Refer for enhanced adherence counselling (EAC)

1st EAC (Enhanced Adherence Counselling) session day of result

2nd EAC session after 4 weeks (if required additional EAC sessions may be given)

Repeat VL 12 weeks after 1st EAC if EAC has been successful and adherence has improved

VL < 1000
- Continue current regimen
- Repeat VL at month 12, 24, 36, etc
- At each subsequent yearly VL * follow algorithm from the top

VL > 1000 copies/ml
- Refer to clinician experienced in switching to second line
- Gather information on patient from both clinicians and counsellors
  - If VL ≥ 1000 copies/ ml but > 0.5 log drop, * Repeat VL after 3 months
  - If VL ≥ 1000 copies/ml and < 0.5 log drop, and if no outstanding adherence challenges, consider switch to second line if > 6 months on ART
When a result more than 1000 copies/ml is received the file should be pulled and flagged (e.g. with a red sticker.) Unless the client is attending within the next 2 weeks the client should be traced and asked to come to the clinic as soon as possible.

When seen, the client should be assessed by the counsellor who will document their findings in the client care and treatment booklet and then by the clinician.

**Action by the counsellor for a client with VL > 1000 copies/ml**

The client should be seen by the counsellor and the clients details entered in the counsellors “Enhanced Adherence” notebook to ensure follow up is completed.

Suggested format of the enhanced adherence notebook is shown in figure 9.

**Figure 9: Example for Enhanced Adherence Notebook**

<table>
<thead>
<tr>
<th>First Names</th>
<th>Surname</th>
<th>OI Number</th>
<th>Age</th>
<th>Sex</th>
<th>Date First VL taken</th>
<th>First VL Result</th>
<th>First EAC on day result given (Date)</th>
<th>Second EAC (Date)</th>
<th>If further sessions write date</th>
<th>If further sessions write date</th>
<th>Expected Date Repeat VL</th>
<th>Date Repeat VL</th>
<th>Result Repeat VL</th>
<th>Outcome:</th>
<th>Comments / Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>1. Switched to second line</td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>2. Switched to improved first line</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>3. Remain on failing first line</td>
<td></td>
</tr>
</tbody>
</table>

A high viral load form (ANNEX 6) should also be filled as this will facilitate the multidisciplinary discussion of the client when being considered for possible second line treatment.

The first session of enhanced adherence (ANNEX 5) should be given on the day the viral load result is given. The goals of enhanced adherence are to discuss possible behavioural, cognitive, emotional and socio-economical barriers to adherence. In addition exploring the client’s motivation for taking medication often highlights reasons for non adherence. After presenting the result the best way to start the session is to ask the patient “what do you think is the reason for your high viral load?”. The second session of enhanced adherence is given 4 weeks after the first and aims at following up the strategies put in place during the first session. If the client requires more intensive adherence support this should be provided.

**Action by the clinician for a client with a viral load > 1000 copies/ml**

If the client already has signs of clinical failure discuss urgently with a doctor to decide on the future management. Adherence will need to be assessed but factors such as duration on treatment and previous ART exposure will need to be taken into account when deciding the timeline of the switch to second line.

The clinician should read the findings of the counsellor but also make their own assessment of adherence. The clinician should also make a thorough clinical assessment. All the standard steps of a ART follow up consultation should be completed but in addition the clinician should;

- Perform a thorough screening for TB
- Assess if there are any other OIs
- Has there been any history of chronic vomiting or diarrhea now or in the past (possible malabsorption)
• Has there been use of any traditional medicines or other medication that may interact with ARVS (e.g. rifampicin, carbamazepine, phenytoin)
• Has a child received inadequate dosing of ARVs at any point.

Findings should be noted in the patient care and treatment booklet and the high viral load form.

The client should then be given a one month supply and booked for the second session of enhanced adherence.

At the next appointment the client should be assessed again clinically and can be given a 2 month supply. They should be booked for 2 months time to have a repeat viral load taken (12 weeks from when the first VL result was given) and then reviewed with the result. If adherence is still poor further sessions can be booked. If necessary delay taking the repeat viral load is adherence is clearly very poor. Ideally the viral load should be repeated after 3 months of good adherence.

2.7.5 Special considerations for children and adolescents with risk of treatment failure

Children and adolescents have higher rates of treatment failure than adults. Children are usually dependant on a caretaker for administration of their ARVs and for many who are orphaned that caretaker often changes or is elderly. When a child is identified with a high viral load the multidisciplinary team at the clinic should discuss this case and consider a home visit. An assessment by a social worker may also be needed. Investigating further community support for this child should be considered. There may be another adult or peer on ART living in the same community who may be willing to support the child and their family as a daily “treatment buddy” to improve adherence to medication. Another common barrier to adherence for children and young adolescents is non-disclosure. Working with the caretaker to fully disclose is therefore an essential step in the enhanced adherence process for a failing child.

Ensuring this child’s follow up through enhanced adherence and repeat viral load is imperative. If the second viral load remains more than a 1000 the child’s case should be discussed with the nurse mentor or doctor as soon as possible.

2.7.6 Clinical Action Plan for the Second Viral load result

If the repeat viral load (12 weeks after the first enhanced adherence session) has suppressed to less than 1000 copies/ml the client should be congratulated and can continue on their first line medication. Discuss the ongoing importance of good adherence and the goal of maintaining a viral load less than 1000 copies/ml.

If the second viral load is still more than 1000 copies/ml the clinic team should bring this client forward for discussion in the clinic case discussion meeting. In this meeting the “high viral load” form should be reviewed.

Once the clinic team have discussed the case the client should then be discussed with the mentorship nurse / doctor either at the next visit if it will be within the next 1-2 weeks or by telephone.
The nurse mentor/doctor will then make the decision whether to switch or not based on whether there are ongoing adherence challenges, the clinical condition of the client and whether there has been a significant log drop (>1 log) in the viral load.

2.7.7 Switching to Second Line Therapy

The preferred second line treatments for adults and children can be found in the clinical guidelines and job aids.

Counselling preparation for Second Line

In the same way that a client must be prepared for starting their first line regimen, we must prepare the client for their second line. These clients are often those who have had challenges with adherence and it is particularly important that adherence to second line is optimal from the start. ANNEX 7 outlines the steps in second line preparation counselling.

Clinical Preparation for Second Line

Prior to switching to second line clients should have a full history and examination performed including a thorough screening for TB.

If TDF is in the first line check Hepatitis B serology. If Hepatitis B surface antigen is positive TDF MUST be continued in the second line.

If available check glucose and lipids.

Follow up then follows the same schedule as when 1st line was initiated, month 1, 2, 3, 6 and 12 on second line. If clinically well and virologically suppressed after 12 months on second line the client can return to a refill system.

2.7.8 Access to third Line Antiretrovirals

Clients failing second line antiretroviral regimens (i.e have had two consecutive viral loads more than 1000 copies/ml 3 months apart and after an adherence intervention) should be referred to tertiary level for assessment for possible third line regimen.

2.7.9 Key Messages

- Identification of treatment failure (clinical, immunological and virological) is a CRITICAL part of ART follow up
- As soon as any type of failure is identified we must act!
- The client needs adherence support, clinical assessment and ideally virological testing (2 viral load tests 3 months apart) before a decision to switch to second line is made.
3. Pharmacy, Laboratory and Strategic Information

3.1 Pharmacy

Access to quality and affordable ARVs and essential medicines is a fundamental component of any HIV prevention, care and treatment programme. With the increasing number of clients requiring ART the supply systems required to ensure a sustained supply of medicines will need to be strengthened. The following section outlines the key points that need to be considered for effective pharmacy management related to the HIV prevention, care and treatment programme.

3.1.1 Duration of supply to clients

Stable clients should receive a 3 month supply of cotrimoxazole.

Stable clients should receive a 3 month supply of ARVs.

3.1.2 Pharmacy requirements for decentralisation

In order to become an accredited ART site certain requirements must be met regarding pharmacy management. These requirements can be found in the Manual for Primary Health facility Comprehensive HIV/AIDS capacity assessment. The District Health Executive has the responsibility of ensuring that the facility meets these standards.

Ordering and supply

Reporting and ordering for both ARVs and essential drugs should be performed 3 monthly using the appropriate standard operating procedure for the level of the facility. To ensure adequate supplies, accurate documentation in the ART pharmacy registers is essential along with accurate reporting of ART data and consumption documentation. All reports should be submitted by the due date to avoid delays in receiving supplies from NATPHARM.

NATPHARM will supply up to 6 months of ARVs and essential medicines to the health facilities clinics.

Both ARVs and essential drugs will be delivered directly to the clinics by NATPHARM every 3 months.

If stock levels are equal to one or less than one month, facilities MUST place an EMERGENCY ORDER. In order to do this the pharmacy technician, pharmacist or nurse in charge must ensure that stock cards are kept correctly; transactions recorded as they occur and minimum and maximum stocks levels are updated regularly. Contact the District hospital pharmacy manager by the quickest possible means (phone, email, fax, visit) if stocks fall below the one month supply level.
It is good practice to review the ART needs for the coming month (especially for paediatric ARVs or clients on second line or less common regimens) in order to ensure the facility will be able to supply the clients. If an emergency order has not been delivered by NATPHARM the district pharmacy manager should be contacted or arrangements made with local clinics to borrow drugs. If this is done this should be clearly documented in the pharmacy records.

Only if efforts to receive an emergency order from NATPHARM or receive supplies from another facility have failed should clients be given a shorter duration of cotrimoxazole or ARVs for their refill. If this happens this should be reported to the district pharmacy manager. The reasons for this short supply should be explained to clients so they understand that this will be followed up and all efforts will be made to ensure a 3 month drug supply for stable clients. The role of the community in monitoring the supply chain of ARVs and essential drugs will also be a mechanism to report supply problems back to programme managers.

3.1.3 Specific drugs for opportunistic infections

Fluconazole:

Fluconazole is a B level drug (i.e can only be initiated at the hospital). This is under review. If a client is initiated on fluconazole for either oesophageal thrush or for cryptococcal meningitis and is then referred back to their local primary care clinic, the referring doctor must ensure that clear documentation in the client notebook regarding dosage and duration of treatment is made. In addition the district pharmacy manager must ensure that an adequate supply of fluconazole is sent to the receiving clinic. This requires improved communication between clinicians and pharmacy management.

Aciclovir

Aciclovir is a B level drug (i.e. can only be initiated at the hospital). Aciclovir should soon be available for treatment of both genital herpes and herpes zoster at all health facility levels

3.1.4 Key Messages and Reference Materials

- 3 monthly supplies of ART and cotrimoxazole can be given
- Decentralised primary care clinics must meet the pharmacy requirements as outlined in the Manual for Primary Health Facility Comprehensive HIV and AIDS capacity assessment
- Clinics should follow the ZAPS SOPs and hospitals the ZADS SOPs or ZIPS SOPs for ordering
- Clear documentation of prescriptions dispensed should be made in the ART pharmacy register and patient care and treatment booklet
- Reporting, ordering and supply of drugs will be performed every 3 months
- If stock levels are equal to one or less than one month, facilities MUST place an EMERGENCY ORDER.

REFERENCE DOCUMENTS
Zimbabwe Assisted Pull Systems (ZAPS) Standard Operating Procedure
Zimbabwe Informed Push System (ZIPS) Standard Operating Procedure
Standard Operating Procedures Manual for the Zimbabwe ART Distribution System (ZADS)
3.2 Laboratory

3.2.1 Background

To implement the new clinical guidelines and strengthen service delivery across the cascade increased support to laboratory and diagnostic services will also be needed. Quality assurance systems for all testing services need to be in place and acted on. The challenge of an increasing number of point of care tests deployed at multiple settings also poses challenges for supervision and quality assurance.

3.2.2 Supporting a dedicated sample transport system

Sample transportation is an essential part of the provision of the HIV prevention, care and treatment minimum package. Not only do samples need to be delivered to the central laboratory but it also serves as a mechanism for result delivery.

Different settings may have different challenges regarding sample transport but each district should have a written plan as to how reliable weekly sample transport from each decentralised site is provided. The district receiving laboratory should be responsible for the sample transportation schedule to ensure specimens are received throughout the week and the laboratory is not overloaded on any particular day.

Some possible solutions include:

- Employment of 1-2 dedicated personnel or assignment of 1-2 EHTs for this task for sample transportation for the district. Scheduling is organised by the laboratory receiving samples.
- Several EHTs are responsible for assigned clinics (a solution for when they are away on other duties must be found). The district laboratory should still be responsible for the scheduling of these EHTs.
- Clinics delegate a nurse aid or general hand or volunteer to take specimens to the laboratory via public transport. The overall cost of this for the district should be analysed.

Whatever the system there must be a plan for weekly specimen collection from all sites that is overseen by the district laboratory in charge. The system should be regularly monitored.

If motorbikes are used a district plan for maintenance and fuel should be clearly documented in the sample transport strategy.

3.2.3 Quality Management Systems

Ensuring a comprehensive quality management system including internal and external quality control is essential.

The quality management system should be;

- Implemented within the laboratory network and all remote testing sites
- Be incorporated into the routine testing procedures and monitored
• Ensure that ALL testing sites undertake quality control
• Ensure that all testing sites are enrolled in an external quality assessment scheme (proficiency testing programme)
• Ensure the use of standard operating procedures for all processes including specimen collection and processing, test methods, interpreting results and reporting. Where testing has been decentralised these SOPs need to be ensured through regular site visits
• Ensure the use of standardized logbooks or electronic data management and reporting, including identification of errors and non-conformances
• Ensure that all equipment at all facilities is maintained both with preventive and curative actions.

3.2.4 Role of the laboratory in mentorship and supportive supervision

When planning for district mentorship and supportive supervision the district (or provincial) laboratory in charge must be included. Ongoing implementation of training and quality assurance will require scheduled visits to all sites. Especially when new interventions are introduced close liaison between the clinical mentoring staff and the laboratory in charge will be needed.

3.2.5 Key Messages and reference Materials

The minimum package of laboratory investigations should include:

- **At primary facility**: HIV testing kits; DNA PCR kits; Pregnancy tests; Syphilis rapid tests; Hb; urine dipstick and any available point-of-care technology where appropriate (i.e. CD4, EID or viral load)
- **At District Level All of above plus**: TB diagnosis (smear or Xpert MTB/Rif); CRAG testing for blood and CSF (at minimum access to Indian ink); Creatinine (TDF use); ALT (NVP use); CD4 (at least for baseline); Hep B and C screening
- **At provincial or central level all of above plus**: Viral load (this will be gradually phased in)
- **At national level**: Genotyping; TB Culture and drug sensitivity testing
- A dedicated weekly, reliable sample transport system should be in place for all facilities providing the minimum package of HIV Prevention care and treatment services (Section 3.2.3)
- Health workers who perform a test (any rapid or point of care test) must be adequately trained for that task
- Quality assurance (internal and external) must be in place for all tests and all sites performing those tests
- The laboratory scientist/ technician must participate in the district mentorship and supportive supervision teams and have scheduled visits to all sites.
3.3 Monitoring and Evaluation

3.3.1 Background

Monitoring and Evaluation is an essential part of the programme cycle. In the same way we **Assess** a client's health by taking a history and examination, design a treatment **plan**, implement the treatment plan, **monitor** the client's progress and **evaluate** the success of treatment, the same steps should be taken when we are managing our facility activities.

*Figure 10: The Programme Cycle*

Monitoring and evaluation has three main purposes:
- M and E helps us to make informed **decisions** for programme planning
- M and E allows us to **assess our performance**. Often our performance is assessed against set targets for specific indicators
- M and E provides **accountability**. This may be required for reporting back to stakeholders.

3.3.2 Data Management

There are four steps in data management:
- Data Collection
- Data verification
- Data analysis
- Data for decision making and dissemination
It is essential that every facility designates **someone who is responsible** for the data management process.

Details of how to enter data both in the paper registers and in the EPMS can be found in the monitoring and evaluation training manual provided in the reference materials.

Data must be submitted **in a timely manner** according to the protocols. At every level, facility, district, provincial to national the person responsible must ensure the necessary quality checks have been performed and the data has been verified. Figure 11 outlines the flow of reports and timelines.

**Figure 11: Expected Flow of Reports and Timelines**

At facility level there are two copies of the report: 1 stays at the facility; 1 is sent to the district office.

In addition to ensuring the data from the facility is submitted correctly there must be strengthened **coordination between the facility and any community based activities** in order for those activities to be reported under the facility catchment area.
3.3.3 Data Dissemination

It is very important that we share and use the data we collect. Disseminating data is positive for:

- Transparency
- Accountability
- Sharing Experiences
- Demonstrating our achievements against set targets.

All sites must provide a plan for dissemination of their data at their facility and to their DHE. Possible options for doing this include:

- Use regular staff meetings to discuss what the data could be showing you- brainstorm on ideas as to why a certain trend is happening
- Plan a regular quarterly meeting at district level to share data amongst facilities. Use these sessions to see how other facilities are performing (e.g. how many paediatric initiations were performed or how many DBS samples performed were positive). Use the data to brainstorm and share experiences
- Use the data to inform the community about performance at the health facility. For example are HTC rates decreasing or are very few men coming for testing or women are coming very late to ANC – use this data to encourage community mobilisation on these issues
- Use the data to advocate and lobby for change. For example workload data may allow lobby for additional human resources.

3.3.4 Supporting National Surveys

Facilities will be expected to participate in national surveys such as the HIV drug resistance, the transmitted drug resistance, HIV serosurveillance, ANC and Adherence and Retention surveys.

3.3.5 Key Messages and reference materials

Monitoring and evaluation is performed in order for us to assess how effectively we are delivering services in our clinics, districts, provinces and at national level.

- Data must be collected, verified, analysed and then disseminated. If data is not fed back to the staff doing the job it will not benefit client care. Each facility should have a plan for data dissemination.
- Track some simple indicators on a monthly basis using graphs on the wall (similar to how EPI activity is monitored) e.g. number of adults and children accepting HTC each month and the number of adults and children initiated each month. It is not just about the monthly activity but is about following a trend.
- Each facility must have a focal person for M and E who must have received adequate training.
- Data must be submitted at the correct time across all levels.

3.4 Quality Improvement and Implementation Research

3.4.1 What is quality improvement?

Quality in healthcare is defined as proper performance (according to standards) of interventions that are known to be safe, that are affordable to the society in question, and that have the ability to produce an impact on mortality, morbidity, disability, and malnutrition.

Quality improvement is an interdisciplinary process designed to raise the standards of the delivery of preventive, diagnostic, therapeutic and rehabilitative measures in order to restore and improve health outcomes of individuals and populations. (American College of Medical Quality).

This chapter gives a brief overview of the core principles of quality management.

Principles of Improvement

- Understanding work in terms of processes and systems
- Developing solutions by teams of health care providers and clients
- Focusing on client needs
- Testing and measuring effects of changes
- Shared learning

Benefits of Quality Improvement

- Reduces morbidity and mortality of clients
- Reduces health care costs and waste of resources
- Enhances client satisfaction – provides care that is responsive to clients and communities needs and expectations
- Improves safety of staff, clients and communities
- Cultivates teamwork and effective communication
- Provides good reputation of health institutions and health workers
- Improves staff motivation

Rationale for Quality Improvement

- QI tools provide a simple, systematic way to monitor, assess and improve care
- Improves quality for the majority of clients, not just the tough cases
- Uses real-time clinic performance data to guide changes
- Takes the time to assess how care is being provided – not just counting
- Improves systems, not just individual provider performance
- Fosters learning from peers & spreading effective practices

3.4.2 Plan-Do-Study-Act (PDSA) Cycle

The process by which quality improvement interventions are guided is known as the Plan Do Study Act (PDSA) Cycle. The PDSA cycle guides the tests of a change to see if the change is an improvement.

- **Plan (Plan a change)**. The team identified a change and plans how they will implement this change.
• **Do (Try it out on a small-scale).** The team members test the proposed change to see whether it results in an improvement.

• **Study (Observe the results).** Once the results are analyzed and reviewed, the project team needs to answer the following questions: Did we meet our goal? What worked and what didn’t? Do we need additional test cycles?

• **Act (Refine the change as necessary).** The team maximizes the impact of successful changes by increasing the sample size involving providers and expanding the test cycles.

### 3.4.3 Steps for implementing a quality Improvement plan

1. Agree on what needs to be done by answering the question “What are we trying to accomplish?”
2. The goals and targets set should be according to the needs of the consumers as well as the national standards/guidelines,
3. Sensitize all the stakeholders, including the consumers, on the goals and objectives to be achieved
4. Set up a project team
5. Measure current performance and determine the performance gap
6. Develop indicators and agree on measurement cycles
7. Abstract, validate, analyse, report and disseminate the results
8. Assess the capacity of the organization to improve care
9. Identify problems and causes of the performance gap
10. Process mapping
11. Root cause analysis (brainstorming, 5 WHYS, Fishbone diagram)
12. Decision matrix for prioritizing the problems and the possible interventions
13. Develop an improvement plan
14. Outline how (activities/ processes), by who (responsible person), when (specific timelines), using what (resources required) and where (location/ department)
15. Implement the improvement interventions according to the plan
16. Support through coaching and mentoring as well as peer learning
17. Review progress
18. Measure performance at the end of the cycle
19. Get feedback from the consumers and other stakeholders
20. Disseminate the results to all the stakeholders
21. Sustain the improvements

### 3.4.4 Implementation Research

Implementation research aims to answer questions raised in real world conditions with populations being affected by an intervention. In HIV/TB health service provision this means questions being faced by the service providers on the ground. These questions may be developed through use of health information systems to track cases or the impact of prevention and treatment. Implementation research is especially concerned with the users of the research who may be programme managers and clinicians on the ground. The outcomes of implementation research should lead directly to actions and policies to promote improved health service provision.
Some key questions to assess research designs or reports on implementation research are: (17)

- Does the research clearly aim to answer a question concerning implementation?
- Does the research clearly identify the primary audience for the research and how they would use the research?
- Is there a clear description of what is being implemented?
- Does the research involve an implementation strategy?
- Is the research conducted in a real world setting?
- Does the research appropriately consider implementation outcome variables?
- Does the research appropriately consider context and other factors that influence implementation?

HIV/TB related implementation research carried out within MOHCC facilities should be performed under the guidance of the MOHCC. A research framework has been developed for HIV/TB which may help guide those who are thinking of developing implementation research proposals. For further information on support for carrying out implementation research please contact the Operations Research Fellow in the AIDS and TB Unit.

3.4.5 Key Messages and reference materials

- Quality improvement is an essential element of running HIV prevention care and treatment services.
- Involving health care workers in the process of quality improvement encourages accountability for assessing the quality of their service and engagement in the processes to assess and implement quality improvement changes.
- National Quality Improvement Program Guide: for the improvement of HIV prevention care treatment and support services in Zimbabwe.
ANNEX 1: Counselling Tools For Basic HIV and ART Education

Key to pictures
Basic HIV education Session (Group or individual as needed): Picture 1

For each step assess client’s initial knowledge first

**Health and diseases:** Diseases like TB, flu, malaria, HIV and others are caused by germs, bacteria and viruses. These diseases are your enemies and can make you sick.

**CD4 and the immune system:** The CD4 (in green) are cells that live inside the blood and protect the body against diseases. They are like “soldiers” in your body fighting the diseases which are your enemies. All the CD4 cells together make up the army of your body. This army is your immune system.

**What is HIV:** HIV (in red) is a virus that enters your body. It can enter your body when having sex, through the womb or through breast milk or through contaminated blood products or sharp objects such as needles. The virus destroys the CD4 cells meaning it destroys the soldiers that protect you.

**The CD4 Count:** The blood test you had / will have taken is called a CD4 count. This measures how strong the immune system is – how many soldiers are left in your army. The CD4 test helps us decide if you need to start treatment and if we need to give you other tests or medicines to prevent infections.

**Opportunistic Infections:** When the HIV kills the CD4 cells diseases can enter the body and make you sick. We call these opportunistic infections. The most frequent infection is tuberculosis.

**The importance of starting early treatment:** The best time to start taking ART medication is when your CD4 has just reached 500. It used to be 350 but now we know that there are benefits to starting earlier. Taking medication early helps you to prevent getting infections and prevents transmission of HIV to others including your baby if you are pregnant and to your partner if they are HIV negative.

**The importance of cotrimoxazole:** Cotrimoxazole is an antibiotic that acts on a number of infections that we might get if our CD4 count is low (i.e our army is weak). Cotrimoxazole can reduce the risk of getting these infections. Cotrimoxazole does not act against HIV itself. Only ARVs can suppress the virus. Cotrimoxazole should be taken once a day. Try to set a regular time as this will start to help you develop a schedule for taking ARVs if you need them. If you start cotrimoxazole you will continue to take it just the same as for ARVs. Cotrimoxazole can sometimes cause a rash. If you develop a rash come back to the clinic immediately to be assessed by your clinician.

**The importance of appointment dates and rechecking CD4:** Once you are diagnosed with HIV and started on cotrimoxazole you will be given regular appointments. Sometimes this will be to see the clinician and the counsellor, and sometimes for blood tests. You need to attend regularly so we can assess whether you need ARVs and to make sure we start you on time before you get sick. If once you have got your CD4 result and you are not yet eligible for ART you will be given 3 monthly supplies of cotrimoxazole.
**ART education Session (Group or individual as needed) Pictures 2-5**

**ARVS are drugs which stop the HIV multiplying:** When HIV stops making more viruses in our bodies, our CD4 cells can start to fight back and increase in numbers. Our army starts to get strong again and is able to fight off diseases. ARVs (in blue) do not kill all HIV in the body but they knock the HIV virus out - making it sleep. This allows our army to gain strength.

We need to take **3 different ARVs every day for the rest of our lives** to keep the HIV virus suppressed (asleep). Fortunately we now have one pill that contains all three drugs that we need.

**ARV medication is for life.** The better you take your medication the healthier you will be. HIV positive people who take their medication well live as long as people who are HIV negative.

We monitor how your ARVs are working by seeing that you are more healthy. Two tests also help us to know if your drugs are working. **Viral load** measures how much HIV virus there is in the blood - we want this test to be very low (less than 1000 copies/ml). The **CD4 test** measures the soldiers in your body - we want this to increase.
The Medication Schedule: ARVs must be taken every day as close to the same time as possible as the drugs only work for a certain number of hours. Most clients will need to take their treatment once a day. Some ARVs (including paediatric regimens) will need to be taken twice a day – every 12 hours. The client must choose the best time to take the medication according to their habits. If you are due to start ART we will look at some simple tricks to remind you when to take your drugs.

Make sure the client can name the drugs they are taking. This is important if the client travels and gets caught out without their medication or documentation.

Support System: it can be a big help if you are able to disclose your status to someone. This person could help you to remind you to take your drugs, listen to your problems and also accompany you to the clinic if needed. Even if you have not disclosed we will be able to start treatment but we will continue to support you on this.
**What is poor adherence to ART?** ARVS should be taken every day as close to the same time as possible. Poor adherence is when we take our pills late, when we forget to take a dose or when we don’t take the pills at all. For example if we stop the treatment because we are feeling better.

**What happens if we don’t adhere?** The virus becomes strong again and starts to battle against our CD4 cells (soldiers). If this goes on for long enough we will start to get sick again and diseases come back (in yellow). Secondly if we don’t have a regular amount of the ARVs in our blood the virus becomes clever and changes it’s form so that the drugs cannot work to suppress it any more (the purple virus in the picture) – this is known as resistance.

**What side effects might you experience?** Many clients will have some slight side effects at the start of treatment. Most of these symptoms disappear within a few weeks of starting treatment.

The most common adult regimen is TDF/ 3TC/ EFV. It has a few but rare side effects which normally disappear after a few weeks.

Rare side effects of TDF include nausea, vomiting, diarrhoea, dizziness, rash. Though rare the most serious side effect of TDF is kidney problems. Clients must report if they are passing little or no urine or develop ankle or facial oedema.

Side effects of EFV include dizziness, insomnia, nightmares, depression, confusion and hallucinations. Rarely EFV can cause skin rash and jaundice which can be severe in some cases. If you develop skin rash, yellow eye or pain in the right upper side of the abdomen you must come back to the clinic straight away. Side effects of EFV usually settle but if they are very bad or are persisting please inform your clinician.
**Planning for travel:** It is important that you take your medication regularly every day. If you are planning to travel please let us know. Your nurse can discuss whether it is possible to give you a longer drug supply or advise where you can access ARVs in the place you are travelling. Always take your patient notebook with you when you are travelling in case you need to access medical care while away. If you think you will be away for a long time we will need to give you a transfer letter so that you can be registered at another facility.
ANNEX 2: ART Initiation Counselling Guide

ART Initiation Checklist (For PMTCT women see below)

Assess readiness to start
• Ask patient what would be 3 important reasons for them stay healthy and alive
• Assess willingness to start ART

Recap knowledge of ART education session (Annex 1). Can the client describe:
• Routes of transmission of the HIV virus and ways to prevent transmission— including how to use condoms
• The evolution of HIV infection with and without any ARV treatment
• What happens if ARVs are not taken as prescribed (development of resistance and treatment failure)?
• What we want to see happening to CD4 (going up) and viral load (going down)?
• Recognise the red flag symptoms and signs (OIs and side effects) that they must come immediately for consultation
• Why they are eligible to start ART today and that ART treatment is lifelong
• For each of the drugs know the name, frequency and side effects that might occur
• Use of herbs: Why it’s important to stick to ARVs as a treatment.
• Why it is important to come on the review date given and what to bring (all remaining medications)?
• What to do in case of travel.

Plan with patient how they will take the drugs:
• what would be best timing for you to take your drugs taking into account your daily habits?
• what tools will you use to remind to take your drugs (alarm, school, …)?
• where will you store your drugs?
• where will you keep extra doses in case you are out of the house?
• how will you manage missed doses?
• what will you do in case of side effects?

Explain Follow Up Plans: In the beginning of ART treatment your follow up will be quite intense ((D14 if on NVP regimen), M1, M2, M3) but appointments will be more spaced out with time. We will discuss options for long term follow up at later counselling sessions.

Ask their consent that if they miss an appointment they will be called or be traced.

Document your findings and refer to clinician.
Rapid Initiation Session for Pregnant and Breastfeeding Women

Give emotional support after post-test counselling
- Ask how they feel about their positive test result

Explain ways of transmission of HIV
- Explain 3 modes of transmission:
  - Explain different ways mother can infect her child: during pregnancy 17%, at delivery 50%, during breastfeeding 33%.
  - Explain chances of transmission from mother to child: With the correct follow-up on ART, there are high chances that your baby will be HIV negative!

Give ART education in a nutshell
- Finding out you are HIV+ is a lot to deal with today but it is important that we already speak for a moment about the health of your baby. You could have a HIV- baby if you take the right precautions:
  - Start ART as soon as possible: HIV has no cure but there is a treatment to control HIV in your body. All pregnant women are to start this treatment as soon as possible as this gives a high chance of preventing the transmission of the virus from you to your baby. We invite you to start taking the treatment today, but it is up to you to decide if you feel ready for this.
  - Delivery in a health facility: It is safest to go to a health facility for delivery and inform the staff you are HIV positive; then the staff will be able to take all precautions to protect the baby during delivery.
  - Correct feeding of the baby: After delivery, it is important to only give breast milk for the first 6 months. After 6 months other foods can be introduced, while continuing breastfeeding until at least 12 months.
  - Correct treatment of the baby: The baby will be given different protective syrups right after birth until you stop breastfeeding.

Through these 4 actions you will protect your baby and the chances of him or her becoming infected are very small. Today we will focus on how to take the treatment correctly and we will cover other topics at later sessions. We will make a plan together to enable you to take the medication correctly.

Make a plan with the patient on how to take ARVs? Cover the following aspects
- Check and explore the motivation to start ART.
- What would be best timing for you to take your drugs taking into account your daily habits?
- What tools will you use to remind to take your drugs (alarm, school,...)?
- Where will you store your drugs?
- Where will you keep extra doses in case you are out of the house?
- How will you manage missed doses?
- What will you do in case of side effects (EFV related-dizziness, confusion, and Tenofovir related)?
- What are you travelling plans in coming months (mobility issues ‘Kusungirwa’, etc)?

Make a plan for disclosure and testing of partner:
Discuss strategies to get their partner to come for testing (invitation letter clinic, communication with partner, retest both partners together) and how she may be able to disclose her status.

Ask them if they have any questions and explain they are going to be booked for a second session at week 2 on ART

Aim to link the woman with a community health worker or PMTCT “Champion” who can support them in the community

Ask their consent that if they miss an appointment they will be called or be traced.
ANNEX 3: ART Follow Up Counselling

Assess Adherence:
- How are you doing after starting treatment?
- What has changed in your daily life since you started ARVs?
- What problems have you encountered (doses missed, side effects, disclosure issues). Develop an individual plan together with the client on how he/she can overcome these problems
- Are you experiencing any side effects? (Mention that most of them will go away with time. Stress the importance of not stopping the treatment in case of side effects, but always seek medical care and advice.)
- What time do you take the ARVs? Why should ARVs be taken every 24 hrs?
- What reminder tools do you use?
- Assess adherence.

Give basic HIV and ART education and see what the woman knows (ANNEX 1). Recap as needed

Give PMTCT specific education according to whether ante or postnatal:
- Making a delivery plan:
  One of the key moments where transmission of the virus can occur is during delivery. This is why it is best to deliver at a health facility. If you inform the health staff about your status, they will know how to handle the delivery so that the risk if transmission to the baby is as low as possible.
  Preparing well for delivery means:
  - knowing to which hospital or health centre you will go
  - knowing how you will tell the medical staff you are HIV+
  - having identified someone who will take you there
  - knowing how you will reach the hospital (transport)
  - having prepared enough of your own medication to take with you.
  If you cannot deliver at your regular health facility:
  - If you will travel and stay at a different house, you need to prepare enough medication for yourself and the baby: discuss this with the clinician so they can give you a transfer letter and enough drugs
  - Identify a treatment site near where you will be, for the delivery, ART drug refill and for check-up and drugs for your baby.
- Explain about exclusive breastfeeding in first six months and inclusion of other foods later on
- Explain about treatment for the baby.

Right after birth, the baby will need to take a protective syrup for 6 weeks, called Nevirapine, this as well as the medication you are taking will protect the baby from becoming HIV positive.

Six weeks later we need to change the syrup to another one, which the baby will take for the full period of breastfeeding. This syrup is called Cotrimoxazole and will protect him or her from other infections. If you tested positive during breastfeeding, your baby will need to be given both syrups at once.

We will show you how to administer this syrup to the baby. As with your own treatment, it is important to give this syrup every day without skipping a day.
Demonstrate to the group how to administer the syrup with a syringe.

**Testing of the baby**
The chance for your baby to become infected will be very small if you take the right precautions, but it's still possible. It is important to know as soon as possible if the baby is HIV+, so that he can start to take the treatment. This treatment will keep him strong.

We will propose an HIV test for your baby a few times during the period of breastfeeding - the first test can be done 6 weeks after birth. We will send some blood for analysis, after 4-8 weeks you will receive the results. As during breastfeeding, the baby can still get infected, it is only after you have stopped breastfeeding that we will take a final and conclusive test.

**Assess Disclosure and testing of partner**
- Discuss whether she has been able to disclose and also to get her partner to come for testing (invitation letter clinic, communication with partner, retest both partners together).

**Ask them if they have any questions and explain they are going to be booked for a 3rd session at month 1**

**Note the important transition points in PMTCT counselling (delivery, stopping breastfeeding) See Section 2.6.2**

**Session content for ART follow up Counselling at Month 1, 3 and 6. At each session:**
- Recap on Adherence knowledge and consequence of poor adherence
- Positive Living
- Recap on importance of informing the clinic of any travel plans
- Address issues raised by the client today

**Topics to cover by month 6 should include**
- Family planning (including when is a good time to have children- ideally when viral load suppressed)
- Knowledge of treatment failure and interpretation of CD4 and Viral load
- Living with HIV in the context of cultural and religious beliefs
- Adapting to life on ART now the client is feeling well
- Long term refill options – what would suit their lifestyle?

**Checklist for Adherence follow up sessions:**
- How are you doing after starting treatment?
- What has changed in your daily life since you started ARVs?
- What problems have you encountered (doses missed, side effects, disclosure issue)
- Identify client’s personal, interpersonal and social resources (using previous experience/knowledge of the client) and develop an individual plan together with the client on how he/she can overcome these problems.
- Are you experiencing any side effects? (Mention kidney problems, as possible life-threatening side effects that need urgent medical care.)
- What time do you take the ARVs? Why should ARVs be taken every 24 hrs?
- What reminder tools do you use?
- What is adherence? (Not only taking the right drugs in the right amount at the right time, but also being responsible for one’s treatment, coming to clinic appointments, and bringing pills/book on review dates)
- What do you do if you forget to take your pills? What do you do in case of vomiting?
- Who is supporting you?
- Are there any other things in life that are worrying you at the moment.
Pre-CD4 or viral load information

Why is a CD4 or viral load test taken today?
- You have been taking ARV’s for the past 6 months, so this test is to see how well you have been taking your drugs and measure if the virus is suppressed or for CD4 whether your soldiers are getting stronger.
- If VL monitoring is available: Viral load is done at month 6, 12 and then once a year.
- If VL monitoring not available CD4 should be checked every 6 months.

What is a viral load?
- What is viral load? It is a test that measures the amount of HIV in blood.
- What is the effect of ART on viral load? ART stops HIV from multiplying in the blood.
- When is a viral load test done? At M6 after ART initiation, then at month 12 and annually thereafter.
- What do viral load results mean? They alert the medical team on whether your ARV’s are working well.
  - Detectable viral load: ART is not effective and HIV continues multiplying in the blood
  - Undetectable viral load: ART is effective and HIV is no longer multiplying. Undetectable viral load does not mean that there is no more HIV in the blood, the amount is just too small to detect.
  - If your viral load is more than 1000 your clinician and counsellor must act. You should be referred for more in depth support and have the viral load repeated in 3 months.

What does my CD4 result mean?
- The CD4 count is measuring the number of CD4 cells (soldiers) in the blood.
- When the drugs are working well our soldiers get stronger and our CD4 count should increase.
- If your CD4 is < 100 or goes below your baseline CD4 (the one just before you started ART) your clinician must ask for a viral load to be performed.

How to get your Viral load or CD4 Result

If the viral load is > 1000 or the CD4 is < 100 or below your baseline the clinic should contact you and you will be asked to come for further assessment as soon as possible. Please if possible give us an accurate mobile phone number on which we can contact you.

If your result is normal you will be informed of your result at your next refill appointment.

After month 12 adherence should be assessed by the nurse at each clinical visit using the same checklist as above. Peer support for adherence should be provided at the refill visits if a club or community ART group approach is taken.

If any of the adherence red flags are detected the client should be referred for enhanced adherence (discuss with the clinician about the need for a targeted viral load to be performed).

- Clinical failure (page 65)
- Immunological failure (Page 65)
- Viral load >1000 copies / ml
- Late attendance to collect refill
- Any new psychosocial event that may impact on adherence
- Any excessive use of alcohol or other substance abuse
## ANNEX 4: Key Messages on Treatment Failure and Use of Viral Load

<table>
<thead>
<tr>
<th>Topic</th>
<th>Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the goal of ART therapy?</td>
<td>You are taking ARVs on a daily basis to fight HIV in your body. Due to the ARVs the number of HIV copies will decrease in your body, while your soldiers (CD4 cells) will increase and protect you from diseases.</td>
</tr>
<tr>
<td>What is a viral load test?</td>
<td>A viral load test measures the number of HIV viruses in your blood. The test is done by taking a sample of blood by a finger prick or by drawing blood and sending to the laboratory for testing.</td>
</tr>
<tr>
<td>When to have a viral load test?</td>
<td>All those on ART treatment will be offered a viral load test as part of your routine follow-up at 6 months, 12 months and then yearly on ART or according to your health condition. If routine viral load is not available a viral load must be done if you are starting to have recurrent infections, if you develop TB or other symptoms related to HIV (maybe some of the symptoms you had before you started ART). If this is the case ask your health care worker if you can have a viral load. You should also have a viral load if your CD4 is &lt; 100 or is less that baseline (The CD4 just before you started your ARVs). You should ask your clinician what your baseline CD4 was. You can always remind your health worker for your need to get a viral load test or ask them for the results of your test. It is important not to miss your appointment date for your viral load test and to come for the results on time as instructed by your health care worker.</td>
</tr>
<tr>
<td>What does an undetectable viral load result mean?</td>
<td>Undetectable viral load means that you have less HIV in your blood. Undetectable viral load in the blood does not mean you no longer have HIV, but the amount of HIV in your blood is too low to be measured. Undetectable viral load means your treatment is working well, because your ARV’s are fighting HIV and thus reducing the amount of HIV in your blood.</td>
</tr>
<tr>
<td>Topic</td>
<td>Messages</td>
</tr>
<tr>
<td>------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>What does a detectable viral load &gt;1000 copies result mean?</td>
<td>Detectable viral load means that there is a lot of HIV in your blood. When your viral load is detectable, the health worker will suspect treatment failure. Treatment failure means your HIV treatment is no longer working as it should: HIV is multiplying in your body while your soldiers (CD4) reduce in number and you become more likely to develop opportunistic infections.</td>
</tr>
<tr>
<td>What could explain a detectable viral load?</td>
<td>You have problems taking your treatment on a regular basis: stopping to take your pills for a while, skipping many doses. You have developed resistance to the treatment which means that the HIV in your blood has changed and your treatment is no longer able to fight the changed HIV. The resistant HIV is now multiplying rapidly in your blood.</td>
</tr>
<tr>
<td>What to do when you have a detectable viral load?</td>
<td>Together with the counsellor you will identify the reason for your detectable viral load and look at ways to address possible adherence problems. If your viral load continues to be detectable and there is no longer any treatment adherence problem, you might be changed to another type of drug treatment.</td>
</tr>
<tr>
<td>How to avoid resistance and treatment failure?</td>
<td>Adhere to your ARV treatment in order to maintain undetectable viral load, a strong immune system and a long life.</td>
</tr>
</tbody>
</table>
### ANNEX 5: Enhanced Adherence Counselling

#### Enhanced Adherence Session 1
(These sessions are for clients found to have a viral load > 1000 copies/ml. Where targeted viral load is not available any client with one of the other red flag indications for enhanced adherence counselling should be considered for these sessions.)

Provide the viral load result
- Provide VL result and explanation of result. You have a detectable viral load. This means your ART is not effective and HIV continues multiplying in the blood. If viral load is detectable, it is important to determine whether the treatment is failing due to drug resistance or poor adherence.
- How does the client feel concerning the result?
- Explain the process of enhanced adherence. Aim of the session to identify what barriers the client has to adherence and find solutions.

Assess possible barriers to adherence
- FIRST ASK: What do you think is the reason for your high viral load?

Cognitive barriers (ART/HIV knowledge)
- What is HIV? What is AIDS?
- What is immune system and CD4 cells?
- What are ARVs and how do they work?
- What should you not do when taking ARV? What are the side effects?
- Why is it important to be adherent? And How?
- Why do you have to come on review dates? What to bring?

Behavioural barriers:
- Review how client takes drugs
  - How does treatment fit in daily routines?
  - What reminder tools do you use? (e.g. mobile phone alarm)
  - What do you do in case of visits, travel, side-effects?
  - What are the most difficult situations for you to take drugs?
- How is your life style: e.g cardiovascular, exercises, smoking.
- Check for alcohol abuse (accepted amount per week: male 21 units, female 14 units).

Emotional barriers:
- How do you feel about taking drugs every day?
- What are your ambitions in life?
- Check for depressive signs (sad mood, disturbed sleep, poor appetite, weight loss, loss on energy, loss of interest, decreased sexual drive, loss of concentration, hopelessness, helplessness, feelings of worthlessness and guilt, suicidal ideas).

Socio-economical barriers
- Disclosure to partner.
- Support from treatment buddy.
  - If client came with treatment buddy, assess input of relative.
  - If client did not come with treatment buddy, explain the role on treatment and encourage client to come with a relative.
- Support in family/community/support group.
- Profession, income generating resources.
- Specific barriers to come to health centre on regular basis.
- Religious beliefs.

Elaborate a strategy with the client to overcome difficulties. For example:
- Behavioural barriers: use of reminder tool, pill box, daily planning, change routines.
- Socio-economical barriers: move on in disclosure process, identify treatment buddy, refer to support group, refer to CBO/NGO for economical support.
- Emotional barriers: emotional support or refer to clinician.

#### DOCUMENT FINDING IN THE NOTES SECTION OF THE PATIENT CARE AND TREATMENT BOOKLET

- Summarize previous session.
- Review the client’s barriers to adherence documented during the first session and if strategies identified have been taken up. If not- why not and make a concrete plan.
- Indicate client will get 2 months’ supply and await second Viral Load bleed at Week 12 (M3) after the start of enhanced adherence counselling. If client needs further sessions, ask them to return after 4 weeks for further enhanced adherence counselling.
- Give a hint on possibility of 2nd line if the Viral load remains >1000.

---

**Enhanced Adherence Session 2 (4 weeks after session 1)**

- Summarize previous session.
- Review the client’s barriers to adherence documented during the first session and if strategies identified have been taken up. If not- why not and make a concrete plan.
- Indicate client will get 2 months’ supply and await second Viral Load bleed at Week 12 (M3) after the start of enhanced adherence counselling. If client needs further sessions, ask them to return after 4 weeks for further enhanced adherence counselling.
- Give a hint on possibility of 2nd line if the Viral load remains >1000.
## HIGH VIRAL LOAD FORM

(For Enhanced Adherence Counselling and Second Line Consideration)

### Patient Information

<table>
<thead>
<tr>
<th>Name:</th>
<th>-health centre:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age:</td>
<td></td>
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<tr>
<td>Sex:</td>
<td>M F</td>
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<td>Pt Number:</td>
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### ARV Information

<table>
<thead>
<tr>
<th>ARV Regimen</th>
<th>Date of initiation:</th>
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<tr>
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</table>

### Viral Load Results

<table>
<thead>
<tr>
<th>Viral Load before EAC:</th>
<th>Date:</th>
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<tbody>
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<td>1</td>
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### Enhanced Adherence Counselling (To be filled by the Counsellor)

For each session, assess major barriers for possible poor adherence (cognitive, behavioural, emotional, socio-economic)

<table>
<thead>
<tr>
<th>Date of 1st session:</th>
<th>Summary:</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

ARV-intake demonstration by patient/caretaker done? Y N
Pill count done? Y N
Pill intake: __%

<table>
<thead>
<tr>
<th>Date of 2nd session:</th>
<th>Summary:</th>
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</tbody>
</table>

Pill count done? Y N
Pill intake: __%

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<thead>
<tr>
<th>Date of extra session:</th>
<th>Summary:</th>
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</tbody>
</table>

Pill count done? Y N
Pill intake: __%

Did the patient attend all the appointments? Y N
If no, any reason? _______________________

Your impression about patient’s adherence before EAC:

- Likely to be good
- Likely to be NOT good (relevant barriers identified)
- clearly poor (defaulter)

Your impression about patient’s adherence during and after EAC:

- Likely to be good
- Likely to be NOT good (relevant barriers identified and not cleared)
- clearly poor (defaulter)*

(*) If patient is defaulting, repeat Viral Load should be deferred and EAC extended. Share decision with the team.

Major remaining barriers identified after EAC sessions:

- Behavioural Y N
- Socio-economic Y N
- others (Disclosure, Religion) Y N

<table>
<thead>
<tr>
<th>Date of collection of repeat Viral Load:</th>
<th>Summary:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Counsellor: ______________________
Date of assessment: __/__/____

### OUTCOME (To be filled by the Nurse)

Repeat Viral Load result: __ c/ml
Date: __/__/____

Was it a significant drop in the Viral Load (fulfilling criteria of good response to EAC)? Y N

Is this patient currently a TB suspect? Y N
Investigations done? Y N
If yes, results: ______________________

Is this patient presenting any other OI or signs of immunosuppression? Y N
If yes, describe: ______________________

Hx of chronic diarrhea or vomiting? Y N
Use of traditional medication? Y N

Other investigations:

- Cd4 count: __
- Hepatitis B screen: __
- Creatinine Clearance: __
- Hb: __

Regarding the ARV regimen, what is the plan?
- continue current regimen
- refer to doctor for further management

Nurse: ______________________
Date of assessment: __/__/____

### Outcome for patients with persistent high Viral Load (To be filled by the Doctor)

What is the plan for this patient?
- Patient is suitable for Second-line Regimen. New regimen: ______________________
- extend adherence sessions before new Viral Load (in 2-3 months time).

Comment: ______________________

Doctor: ______________________
Date: __/__/____
### ANNEX 7: Preparation for Second Line Treatment

#### Second Line Preparation Session

**Provide repeat (second) viral load result**
- If \( VL > 1000 \) with good adherence, client will switch to second line after team discussion. The decision to start 2nd line ART is taken as a team (nurse & counsellors) supported by the mentors.
- In case of adherence problems, the 2nd line treatment will not be started until these problems are solved.
- How does the client feel concerning the result?

**Give general info on 2nd line Treatment**
- Explain how 2nd line treatment consists of other drugs, which will be able to fight the virus, if taken correctly.
- Explain the benefits of 2nd line treatment: CD4 will increase, OI will decrease, and viral load should be undetectable.
- Explain that 2nd line treatment can have some side effects (yellow eye with ATV /Rit; Dizziness, breathlessness with AZT).
- Explain the need for good adherence on 2nd line treatment, if not the client will get resistant to these drugs also, and there are limited options for other treatment.
- Revise strategies identified during EAC on how to ensure good adherence.

**Assess readiness to start 2nd line treatment**

**Counselling and clinical follow up after Second line initiation** is the same as for First Line initiation. Ensure to follow the client and give adherence support at
- Months 1 (M1)
- M3
- M6 – emphasize client will be bled for CD4 or Viral Load
- M12
- Then to follow refill option of choice
ANNEX 8: Disclosure Sessions for Children

Disclosure preparation Session for caretaker (to be repeated before each following step in disclosure process)

Show the picture to the caretaker and ask what her/she sees. Ask what is the worry of each person on the bus.

Ask what questions their child is asking about coming to the hospital and taking drugs. Explain that these questions are very normal. Assess how are they answering those questions at the moment.

Ask how they feel about discussing with the child about their HIV status. Explain that the fears they have are very normal and common amongst other caretakers.

Explain that telling a child about their HIV status is like going on a journey. We move along little by little making some stops along the way. At the start we can give simple explanations on health, diseases and drugs. Later on we explain the HIV infection without naming it and the importance of treatment adherence. On another day we will name the infection. When entering adolescence discussing relationships and avoiding transmission of HIV becomes more important.

When we are hiding something from the child they usually know and this makes them worried. The best way to disclose is to follow the rhythm of the child's questions and not to lie.

Generally children between 7 and 12 years can understand about HIV if it is well explained. Children who know their status generally take drugs easier and have fewer worries.

Progressive disclosure should be done by the caretaker but we will help you along the way.

Assess where the caretakers is now in the disclosure process.

Propose to move on in the disclosure process and go through the images that you will use the session with the child (partial disclosure 1 or 2, or full disclosure). Ask permission to the caretaker for us to do this session in presence of the caretaker.
To tell or not to tell?

I know something is going on

I have to help them

No disclosure

Partial disclosure

Full disclosure
Partial Disclosure Session 1

(Do not name the virus as HIV in front of the child)

Show the image to the child and discuss together what's happening in the picture

What games are the children playing?

What food are they eating?

What does the child/the counsellor think is the funniest image?
Show the child the picture about “the visit to the hospital or clinic”. Ask what they see in the picture.

Explain that when the child comes to the hospital he/she has to pass through different steps, getting weighed so we know if they are eating well and growing, the nurse or the doctor to check they are well, sometimes the laboratory or another nurse will collect blood in order to count the number of green soldiers in the blood or the number of the red attackers in the blood, the counsellor to see how the treatment is going and to get the pill pathways picture for next time and finally the pharmacy to collect the medicines that are making them strong.
**The Immune System.** Ask what they see in the picture.

Explain to the child that their body has green soldiers that protect them. These soldiers are always alert and on guard for any invasion. If a germ enters the blood to cause disease the green soldiers will fight against it. When they do this we will stay healthy.

Allow the child to then draw a picture of themselves and their soldiers.
Partial Disclosure Session 2

Let the child draw for a while to make them comfortable.

See if they can tell you what they remember about the story of the green soldiers. Use the picture from partial disclosure session 1 to recap.

Ask what the child sees in the picture below.

Explain to the child that the red germ is the one in their body and is different from the other yellow germs.

Explain to the child that when the red germs enter the blood they attack our green soldiers.

When our soldiers cannot fight anymore we become sick.
Ask the child what they see in the picture.

Explain that with time the green soldiers became tired of fighting against the red germ who becomes stronger and stronger and the green soldiers started to disappear.

When the green soldiers collapse and disappear your body is unprotected and you start to feel bad. You might get headaches or lose weight.
Beginning the Treatment

Ask the child what they see in the picture.

Explain to the child that these pills are the drugs they will need to take. They are a new type of soldier in the body that will help the green soldiers and fight the red germs.

Explain that they are going to start (are taking) the medication to fight the red germs. When this happens the green soldiers become strong again and can fight infection. When this happens they will start to feel well again.

Explain to the child that if he takes the pills everyday at the right time the new soldiers will make the red germ go to sleep. The pathway can be used every time the child takes the medication to show that they are taking the new soldiers into their body. The child can colour the square every time they take some medication. When all the squares are complete (they may be given up to 3 pathways) it is time to go to the clinic to get some more medication.
Full Disclosure Session (Full disclosure should be achieved at the latest by the age of 12)

Explain to the child that the name of the red germ is HIV (in case caretaker agrees you to say so)

Assess with the child and parent how they feel about knowing that the red germ is an illness called HIV (in case caretaker has named HIV at home)

Review with the child their knowledge of the immune system, the infection with the red germ and how the medication is working (use the pictures from the previous partial disclosure sessions and give correct names like CD4, ART, HIV)

Explain ways of transmission to the child and review the family history

Discuss with child and caretaker whom the child can trust and with whom they can talk about their HIV status

Ask the child to look at the picture below and point to the child that looks like how they are feeling

Explore these emotions with the child
ANNEX 9: Pill Pathway for Children on ART

PDF available on the CD provided with this manual

This pill pathway can be given to children and their caregivers, with the aim to make the child responsible for taking his/her treatment and have a tool to communicate around adherence with the child. The child is asked to mark the path each day when taking the pills. This tool needs to be well-explained for it to function well.
ANNEX 10: Standard Operating Procedures for Refills

On the day of the clinical visit all appointments and prescriptions for the given period should be documented in the patient care and treatment booklet, the patients notebook and in the clinic appointment diary.

Figure 1: Example of patient care and treatment booklet filled on day of clinical visit for a patient attending once a year

<table>
<thead>
<tr>
<th>OI/ART NUMBER</th>
<th>P</th>
<th>F</th>
<th>D</th>
<th>D</th>
<th>-</th>
<th>S</th>
<th>S</th>
<th>-</th>
<th>Y</th>
<th>Y</th>
<th>Y</th>
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<th>A</th>
<th>-</th>
<th>S#</th>
<th>S#</th>
<th>S#</th>
<th>S#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit No.</td>
<td>Date of review (Only tick if patient presents self for review)</td>
<td>Weight (kg)</td>
<td>Height for children &lt; 15 years (cm)</td>
<td>Pregnant Y/N (Y, insert EDD &amp; ANC8; F, insert code below)</td>
<td>Functional Status (see codes below)</td>
<td>WHO Clinical Stage (1-4) refer to P1</td>
<td>TB Status (see codes below)</td>
<td>New OI, other problems (see codes below)</td>
<td>Coccidiodomycosis Prophylaxis</td>
<td>Isoniazid Preventive Therapy (PT)</td>
<td>Reasons for not starting or stopping PT (see codes below)</td>
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</tr>
<tr>
<td>1</td>
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<td>X</td>
<td>67</td>
<td>N</td>
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</table>

<table>
<thead>
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<th>OI/ART NUMBER</th>
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<th>F</th>
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<th>D</th>
<th>-</th>
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</thead>
<tbody>
<tr>
<td>Flucambazol</td>
<td>ARV Status (see codes below)</td>
<td>ARV reason (see codes below)</td>
<td>ARV combination regimen (see codes below)</td>
<td>ARV medicine</td>
<td>*CD 4 count / % &amp; test date</td>
<td>*Viral Load</td>
<td>*Other diagnostics test (lab, chest xray, etc.)</td>
<td>*Referred To: (see codes below)</td>
<td>New Review Date</td>
<td>Visit Status (see codes below)</td>
<td>Follow up Status (see codes below)</td>
<td>Name of clinician (initials)</td>
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<td>TDF 3TC EFV 30</td>
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</tbody>
</table>
For each visit all clients should be documented in the diary as attending either for a clinical visit (+/- counselling +/- investigation) or a refill visit.

**Figure 2: Diary example**

<table>
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<th>JAN 29th</th>
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<table>
<thead>
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<th>Category of patient</th>
<th>Reason for Appointment</th>
<th>Attended Y/N</th>
<th>Outcome of Tracing (Dead; lost; returned to care)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>ART</td>
<td>Clinical + Cd4</td>
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</table>

For those clients booked for drug refills (CTX or ART) the patient care and treatment booklets can be pulled the day before and taken to the pharmacy or room where ART is dispensed. If needed drugs can be pre-packed.

When the client arrives at the health facility the client notebook and diary will indicate that they are coming for a refill. The client should go straight to pharmacy or gather in their “club” meeting place, where the ARVs will be dispensed. For family or community ART group refills the representative will see the nurse face to face to review the community refill form.

Clients need to be documented as “attended” in the appointment diary and as OT in their patient care and treatment booklet. The pharmacy register will be completed as normal.

**Figure 3: Documentation in diary and patient care and treatment book for refill**

<table>
<thead>
<tr>
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<table>
<thead>
<tr>
<th>Name</th>
<th>OI number</th>
<th>Telephone</th>
<th>Category of patient</th>
<th>Reason for Appointment</th>
<th>Attended Y/N</th>
<th>Outcome of Tracing (Dead; lost; returned to care)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>ART</td>
<td>Refill</td>
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<td>Refill</td>
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<tr>
<td>F</td>
<td>Pre ART</td>
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<tr>
<td>G</td>
<td>ART</td>
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<td>H</td>
<td>ART</td>
<td>Clinical + Cd4</td>
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</table>
At the end of the session the patient care and treatment books can then be used to complete the ART registers or EPMS systems as normal.

If clients do not attend for refill visits - identified from the diary and the remaining care and treatment books not filled at the end of the day- they should be flagged for defaulter traced as usual.
### JAN 29th

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<thead>
<tr>
<th>Name</th>
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ANNEX 11: Standard Operating Procedures for Family or Community ART Group Refills

Note: Clients should be given a choice as to which refill option they would like to follow. Sites should first consult with their communities and client groups to assess what options may be most appropriate for their setting.

Organisation of the Community ART groups must be coordinated by the nurses and counsellor at the facility.

When each group is formed a basic training for the group and the group focal person must be carried out by the facility nurse and or primary counsellor.

All members of the group (whether 6 monthly or yearly) will have their clinical visit aligned. i.e all members will attend on the same day for clinical assessment and CD4 or VL monitoring.

For each CARGs group the patient care and treatment booklets are kept together in a folder with a CARGs member form completed. Each CARGs group should be assigned a number for monitoring purposes.

Steps in a CARGs Refill:

Step 1: CAGS meet in the community on their booked refill day (or day before).

The CARGs focal person fills their section of the Refill form. This includes basic health questions and a pill count (soft copy available on the CD accompanying this manual).

Step 2: The CARGs representative (possibly two) nominated for that month goes to the clinic.
Step 3: CARGs group folder with all patient care and treatment booklets cards has been pulled ready.

The nurse fills the **CARGs refill form** and the standard **patient care and treatment booklet**.

Drugs are dispensed in **individual named bags** and the appointment diary and ART register updated.

Step 4: The CARGs representative takes the drugs back to the group.

Each member signs that they have received their medicines.

At the next refill date in 3 months the process is repeated. The CARGs focal person completes a new refill form to take to the clinic and also brings the form from the previous refill. The nurse must cross check that all members have signed that they received their drugs and this form is kept in their CARGs folder at the clinic.

If a CARGs member has any red alert sign (clinical, immunological or virological failure, failure to attend for refill meeting) they should be asked to be seen individually at the clinic and undergo enhanced adherence as necessary. The CARGs group members should however continue to provide peer support for this member even if they temporarily are attending the clinic more often.
ANNEX 12: Flow chart for Provision of Adolescent HIV and SRH services by age (under 15s, 16-19, 20-24)

Under 15 years

Assess if they qualify to be treated as a “mature minor”

If yes, use the 16-19 flow-chart

If no, determine reason for visit to the health facility on day.
Provide the following in response to their concerns
- Give IEC material
- Life skills education
- Counselling
- Linkages to prevention services
- Check for accurate information on HTC, contraception, and other SRH issues
- Invite them to return with a parent or guardian to access any additional SRH/HIV services they might require?

If presenting with an acute health issue, use the “best interest of the child principle” to treat or refer child?

Best Interest of Child Principle (HTC guidelines for children, section 2.2.2 v)

“A service provider should seek approval from the person in charge of the clinic or hospital in order to provide HTC without consent from a parent or caregiver when it is in the best interest of a child. This includes when,
- a child is ill and diagnosis will facilitate appropriate care and treatment
- a child is a survivor of sexual abuse
- a child is sexually active
- a child is concerned about MTCT
- A child has been exposed to HIV through vertical or sexual transmission
- A child expresses concern that, given an HIV positive result, he or she will be denied access to care and treatment by a parent/caregiver.”
Flowchart for 16 - 19 and 20 - 24 year olds

HIV pre-test counselling, test and post - test counselling

HIV positive

- Link client to care and treatment in accordance to HIV, care and treatment guidelines
- Offer family planning services, stressing condom use
- Offer STI screening if presenting with STI symptoms
- Provide couples counselling for those who are in relationships /unions
- Provide disclosure support
- Provide information on safe conception
- Offer linkages to Antenatal Care services
- Provide cervical cancer screening if sexually active
- Offer post abortion care services if needed
- Offer adherence support
- Refer for peer counselling if needed

HIV negative

- Link client to Prevention services
- Stress the importance of re-testing after 3 months and stress importance of re-testing annually, if sexually active
- Offer family planning services, stressing condom use
- Offer emergency contraception if needed
- Offer STI screening if presenting with STI symptoms
- Provide couples counselling for those who are in relationships /unions
- Refer to Antenatal Care if needed
- Provide cervical cancer screening if sexually active
- Offer post abortion care if needed
- Offer PEP if needed
- Offer PrEP and microbicides if needed
- Offer post – rape services if needed
- Refer to peer counselling if needed
- Offer professional counselling

If declined testing

- Determine reason for visit to the health facility on day.
- Give IEC material
- Offer Life Skills education
- Offer counselling
- Link client to prevention services
- Check for accurate information on HTC

Provide
- Linkages for extra support
- Peer support
- Referrals to economic livelihood programmes
Annex 13: Definition of a Mature Minor

Mature minor defined

The mature minor doctrine is a statutory, regulatory, or common law policy accepting that an un-emancipated minor patient may possess the maturity to choose or reject a particular health care treatment, sometimes without the knowledge or agreement of parents or guardians, and should be permitted to do so. It is now generally considered a form of patient rights; formerly, the Mature Minor Rule was largely seen as protecting health care providers from criminal and civil claims by parents of minors at least 15 years of age.

Guidance from the 2014 HIV Testing Guidelines for Children and Adolescents

According to the current HTC guidelines, a mature minor is defined as “a child or adolescent who can demonstrate that he or she is mature enough to make a decision on their own.”

A counsellor should consider the following factors in determining whether a child or adolescent should be treated as a mature minor: “1) The minor’s ability to appreciate the seriousness of HTC and the test result and to give informed consent; 2) The minor’s physical, emotional and mental development; 3) The degree of responsibility the minor has assumed for his or her own life, such as heading a household or living independently from a parent/caregiver.” Page 6 section 2.2.2 iv (National HTC guidelines for Children and Adolescents)

Who can interpret “mature minor” / who can make the decision of who qualifies as a “mature minor”

- Doctors
- Nurses
- Counsellors
- Any Health care worker

Here is a check list health service providers can use to determine who is a mature minor. If health care workers check at least one of these, the minor is deemed a “mature minor”.

<table>
<thead>
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<th>Tick relevant box</th>
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<tr>
<td>Minor is married and under the age of 16</td>
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<tr>
<td>Minor is heading a household and under the age of 16</td>
</tr>
<tr>
<td>Minor is responsible for their own welfare</td>
</tr>
<tr>
<td>Minor is economically independent from parents or guardian</td>
</tr>
<tr>
<td>Minor living apart from parents / guardian and managing their own affairs</td>
</tr>
<tr>
<td>Minor is living on the street and managing their own affairs</td>
</tr>
<tr>
<td>Minor has a chid(ren) of their own</td>
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<tr>
<td>Minor capable of comprehending and demonstrate complete understanding of the</td>
</tr>
<tr>
<td>implications of the HIV test</td>
</tr>
<tr>
<td>Minor capable of paraphrasing in their own words what they are consenting to</td>
</tr>
</tbody>
</table>
REFERENCES

1. Performance Monitoring Report. AIDS and TB Unit MOHCC. HIV prevention, PMTCT, OI/ART. 2013

2. March 2014 Supplement to the consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection. WHO 2014
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http://apps.who.int/iris/bitstream/10665/85321/1/9789241505727_eng.pdf


http://apps.who.int/iris/bitstream/10665/85326/1/9789241505734_eng.pdf


8. Zimbabwe HIV Care and Treatment Strategic Plan 2013-2017. MOHCC


### LIST OF PARTICIPANTS

#### (a) OSDM STEERING COMMITTEE 2014

<table>
<thead>
<tr>
<th>NAME</th>
<th>DESIGNATION</th>
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<tr>
<td>1. Dr T Apollo</td>
<td>Deputy Director ATP</td>
<td>MOHCC</td>
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<tr>
<td>2. Dr Murungu</td>
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<td>3. Dr M Mhangara</td>
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<td>8. Mr R Sabumba</td>
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<td>20. Dr C Chimbetete</td>
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<td>21. S Page</td>
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#### (b) DEVELOPMENT OF OSDM STAKEHOLDER CONSULTATIVE MEETING 19 - 20 JUNE

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<td>2. Dr Apollo</td>
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<td>4. Dr A Mushavi</td>
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<td>5. Dr Milton Chemhura</td>
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<td>12. Salome Mandebvu</td>
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