Operational Manual on Planning and Provision of HIV Services at Health Facilities

National AIDS Programme

Ministry of Health and Sports

2019

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Columbia University
Mailman School of Public Health

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Foreword

HIV prevalence in Myanmar is estimated to be 0.57% of the adult (>15 years of age) population in 2016, with approximately 224,026 people living with HIV (PLHIV). Key populations are disproportionately affected by the HIV epidemic. The Ministry of Health and Sports have made great strides to control the HIV epidemic in Myanmar, in collaboration with local and international partners. As of 2017, a total of 146,826 (57%) PLHIV were receiving ART, which is a significant increase compared to ART coverage of 17.4% of PLHIV receiving ART in 2011. As a result, AIDS related deaths have reduced significantly from 15,601 in 2011 to 7,800 in 2015.

In May 2017, Myanmar launched the National Strategic Plan (NSP) on HIV and AIDS (2016-2020). The NSP is in line with the UNAIDS global strategy, *"On the Fast-Track to End AIDS,"* with the aim of ending HIV as a public health threat in Myanmar by 2030. The NSP III describes new approaches, including the prioritization of townships by burden of HIV and differentiation of service delivery models that will expand ART services within public facilities. This Operational Manual is intended to support the successful expansion of ART services, in conjunction national guidelines, standard operating procedures, job aids and additional tools.

The Operational Manual is very comprehensive and inclusive manual, consisting of 14 chapters. It includes a brief HIV epidemiological profile of Myanmar and an overview of Myanmar NSP on HIV and AIDS (2016-2020). It provides guidance on how to set up an HIV clinic and contains technical guidance on HIV prevention, care and treatment as well as other service delivery components. In addition, the Operational Manual emphasizes the role of PLHIV's involvement along the care continuum. The organization of the manual allows health facilities to refer to chapters that are relevant for their local HIV burden.

Given the comprehensive nature of this document, I am confident that the Operational Manual will address barriers in ART expansion and thereby play an important role in assisting Myanmar to achieve the UNAIDS 90-90-90 goals.

Dr. Thar Tun Kyaw
Permanent Secretary
Ministry of Health and Sports

Acknowledgements

A set of standardized guidance and tools are required for Myanmar to reach its goal of ending HIV as public health threat by 2030 as outlined in the country's National Strategic Plan (NSP) on HIV and AIDS (2016-2020). This "Operational manual on planning and provision of HIV services at health facilities" is an essential component of operationalizing the NSP. This manual will help health facilities immensely by serving as a reference for the expansion of HIV care and treatment services.

The National AIDS Programme (NAP) appreciates and acknowledges Dr. Thandar Lwin, Deputy Director General of Disease Control of the Department of Public Health, for providing excellent leadership and guidance throughout the development of the Operational Manual. The valuable contributions and efforts of NAP team members who supported the development of this manual are also gratefully appreciated.

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Dr. Htun Nyunt Oo
Programme Manager
National AIDS Programme
Department of Public Health
Ministry of Health and Sports

List of Abbreviations

3TC	Lamivudine
ABC	Abacavir
AFB	Acid Fast Bacilli
AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral Drug
ATV	Atazanavir
AZT	Zidovudine
CBO	Community Based Organization
CCP	Comprehensive Condom Promotion
CD4	Cluster of Differentiation 4
CHBC	Community Home Based Care
CNS	Central Nervous System
CSF	Cerebrospinal Fluid
CT	Computed Tomography
DBS	Dried Blood Spot
DC ART Sites	Decentralized ART Sites
DHIS2	District Health Information System 2
DIC	Drop In Center
DNA	Deoxyribonucleic Acid
DRV	Darunavir
DTG	Dolutegravir
EFV	Efavirenz
eGFR	estimated Glomerular Filtration Rate
EID	Early Infant Diagnosis
EQA	External Quality Assurance
ETV	Etravirine
FFP2	Filtering Facepiece 2
FP	Family Planning
FSW	Female Sex Worker
FTC	Emtricitabine
GP	General Practitioner

HA	Health Assistant
Hb	Hemoglobin
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HCW	Healthcare Workers
HIV	Human Immunodeficiency Virus
HTS	HIV Testing Services
IEC	Information, Education and Communication
INGO	International Non-governmental Organizations
INH	Isoniazid
IPD	In-Patient Department
IPT	Isoniazid Preventive Therapy
KP	Key Populations
KSC	Key Populations Service Center
LHV	Lady Health Visitor
LPV/r	Lopinavir + Ritonavir
M&E	Monitoring and Evaluation
MDR-TB	Multi-Drug Resistant Tuberculosis
MDT	Multi-Disciplinary Team
MMT	Methadone Maintenance Therapy
MO	Medical Officer
MOHS	Ministry of Health and Sports
MRI	Magnetic Resonance Imagine
MS	Medical Superintendent
MSM	Men who have sex with men
Mtb	Mycobacterium Tuberculosis
NAP	National AIDS Programme
NAT	Nucleic Acid Testing
NEQAS	National External Quality Assurance System
NGO	Non-governmental Organizations
NHL	National Health Laboratory
NSP	National Strategic Plan
NTP	National Tuberculosis Programme
NVP	Nevirapine
OI	Opportunistic Infection
OPD	Out-Patient Department

OST	Opioid Substitution Therapy
OVC	Orphan and Vulnerable Children
PCP	Pneumocystis Jirovecii Pneumonia
PEP	Post-exposure Prophylaxis
PHL	Public Health Laboratory
PICT	Provider Initiated Counselling and Testing
PLHIV	People Living with HIV
PMTCT	Prevention of Mother to Child Transmission
PPE	Papular Pruritic Eruptions
PrEP	Pre-exposure Prophylaxis
PWID	People who inject drugs
RAL	Raltegravir
RDT	Rapid Diagnostic Tests
RHC	Rural Health Center
RNA	Ribonucleic Acid
RO	Regional Officer
SC	Sub-Center
SMS	Short Messaging Service
SN	Senior Nurse
SOP	Standard Operating Procedure
SRH	Sexual and Reproductive Health
ST ART Sites	Satellite ART Sites
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TB	Tuberculosis
TDF	Tenofovir Disoproxil Fumarate
TG	Transgender
THN	Township Health Nurse
TL	Team Leader
TMO	Township Medical Officer
TN	Trained Nurse
UHC	Urban Health Center
UN	United Nations
UNAIDS	The Joint United Nations Programme on HIV/AIDS
VL	Viral Load
WHO	World Health Organization

Chapter 1: Introduction

1.1 Objectives of the manual and intended audience

This operational manual embraces different service components such as Planning and Administration, HIV Prevention, PMTCT, TB/HIV, Pre ART Care and ART including decentralization, Supply Management, Monitoring and Evaluation, Coordination, etc. The primary objective of this manual is to give a standard guidance for healthcare workers for successful implementation of service components relevant to their specific facility.

The target audience includes Medical Superintendent (MS), Township Medical Officers (TMO), HIV Focal, NAP staff providing coordination support and other healthcare workers involving in HIV and TB related services such as Medical Officers (MO), Township Health Nurses (THN), Health Assistants (HA), Nurses, Midwives, I/NGOs staff etc.

This manual is developed based on the following documents and guidelines:

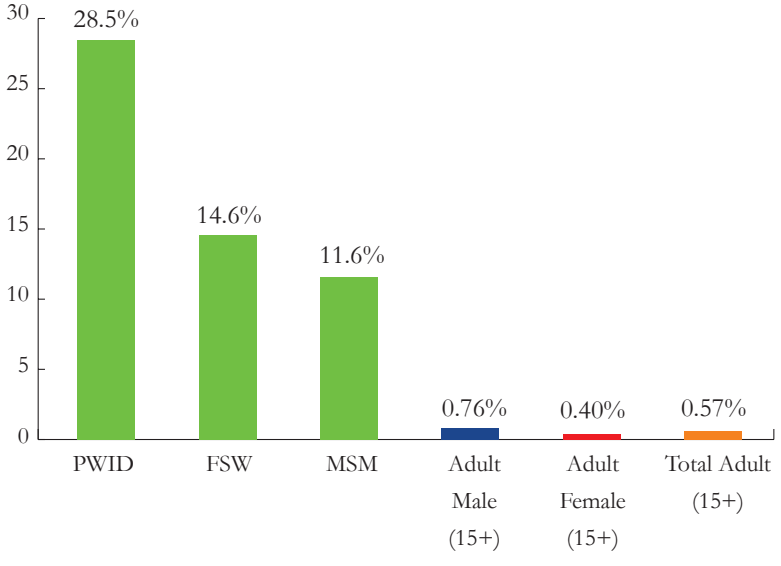
- Guidelines for the clinical management of HIV infection in Myanmar. Fifth Edition. National AIDS Programme, Department of Public Health, Ministry of Health and Sports, Myanmar. 2017.
- National Strategic Plan on HIV and AIDS in Myanmar, 2016-2020
- A Core Package for HIV Prevention Amongst Key Populations in Myanmar, National AIDS Programme (NAP), December 2014.
- Myanmar Guidelines on HIV Testing Services, National AIDS Programme (NAP)/ MOHS. 2018.
- Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection, Recommendations for a public health approach, Second Edition, World Health Organization, 2016
- Standard operating procedures (SOPs) for Logistics Management Information System (LMIS), MOHS/ UNOPS, November 2015.
- Updated Myanmar National Monitoring and Evaluation Plan on HIV and AIDS, 2011-2016

Therefore, a revision will be needed when there are significant changes in those documents and guidelines.

1.2 Overview of HIV in Myanmar

In 2016, at a national level the prevalence of HIV among adults 15 years and older seems to have stabilized at below 1% and there has recently been a significant decline in deaths (from 15,601 in 2011 to 7,800 in 2016). However, in 2016 it was estimated that there were 224,026 people living with HIV, with the epidemic heavily affecting the key populations of people who inject drugs (PWID), female sex workers (FSW), men who have sex with men (MSM) and the intimate partners of these groups. National level HIV prevalence was estimated to be 28.5% among people who inject drugs in 2014, and 14.6% among female sex workers and 11.6% among men who have sex with men in 2015 (Figure 1).

Figure 1: HIV Prevalence among populations in Myanmar (2015)



Reference: AIDS Epidemic Model prevalence based on Integrated Bio-Behavioral Survey (PWID 2014, FSW and MSM 2015) and HIV Sentinel Surveillance 2014; Myanmar Spectrum, AEM 5.41 (2016)

1.3 Strategic Objectives of the National Strategic Plan (NSP) 2016-2020

The Myanmar NSP on HIV and AIDS (2016-2020) has a vision to end HIV as a public health threat in Myanmar through fast-tracking access to a continuum of integrated and high quality services that protect and promote human rights for all. The overall goal of the strategy is to reduce HIV transmission and HIV-related morbidity, mortality, disability and social and economic impact.

To achieve this Goal, three Objectives and five Strategic Milestones were identified.

Objective 1:
Reduce incidence among priority populations and their partners

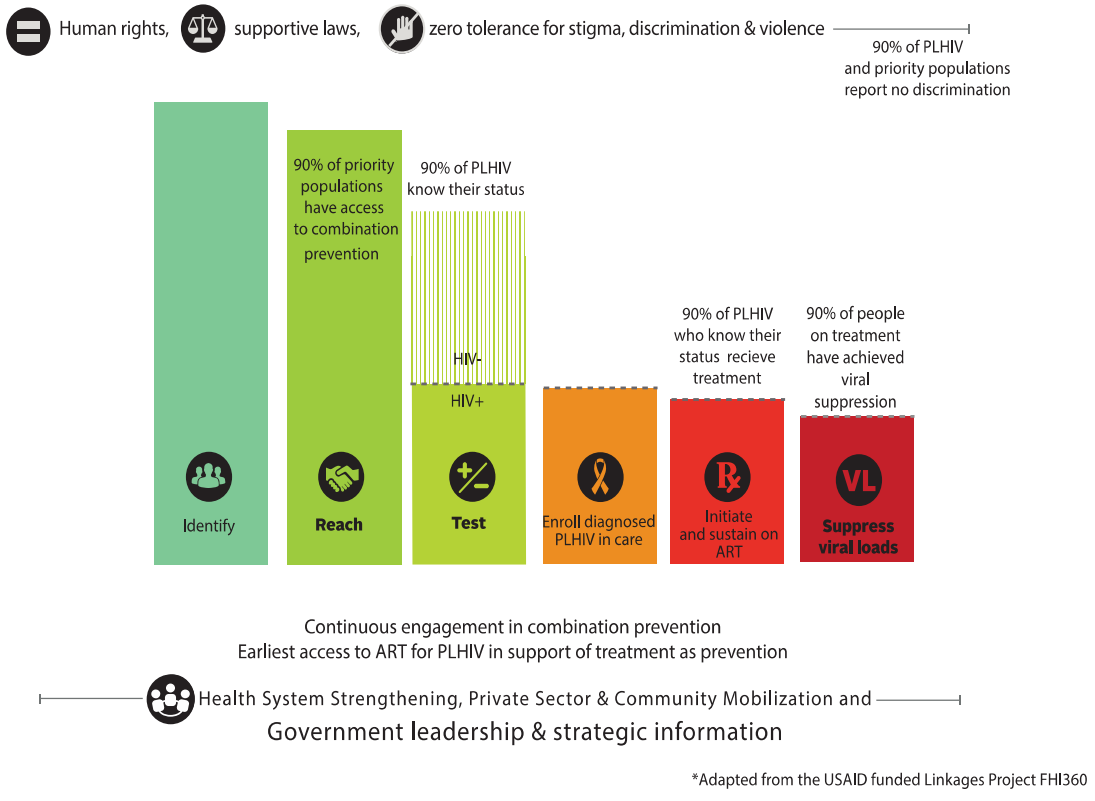
Objective 2:
Facilitate and ensure viral suppression for all PLHIV

Objective 3:
Improve the enabling environment to support the response

- 90% of sex workers, men who have sex with men, people who inject drugs, prisoners and migrants have access to combination prevention services
- 90% of people living with HIV know their status
- 90% of people living with HIV who know their status receive treatment
- 90% of people on treatment have achieved viral suppression
- 90% of people living with, at risk of and affected by HIV report no discrimination, especially in health, education and workplace settings

The Myanmar 2020: HIV Prevention, Care and Treatment Continuum model was developed to illustrate how the strategic approach to HIV has changed in Myanmar NSP on HIV and AIDS (2016-2020). It illustrates the inherent connections of the strategic elements of the HIV response.

Figure 2: HIV Prevention, Care and Treatment Continuum Model



*Adapted from the USAID funded Linkages Project FHI360

In order to achieve the objectives of National Strategic Plan, it is crucial for health facilities to be able to deliver quality services effectively. And this manual will serve as a reference document for successful implementation of those services.

Note: Please refer to Myanmar NSP on HIV and AIDS (2016-2020) for more details information about National Strategic Plan, 2016-2020.

Chapter 2: Planning and administration

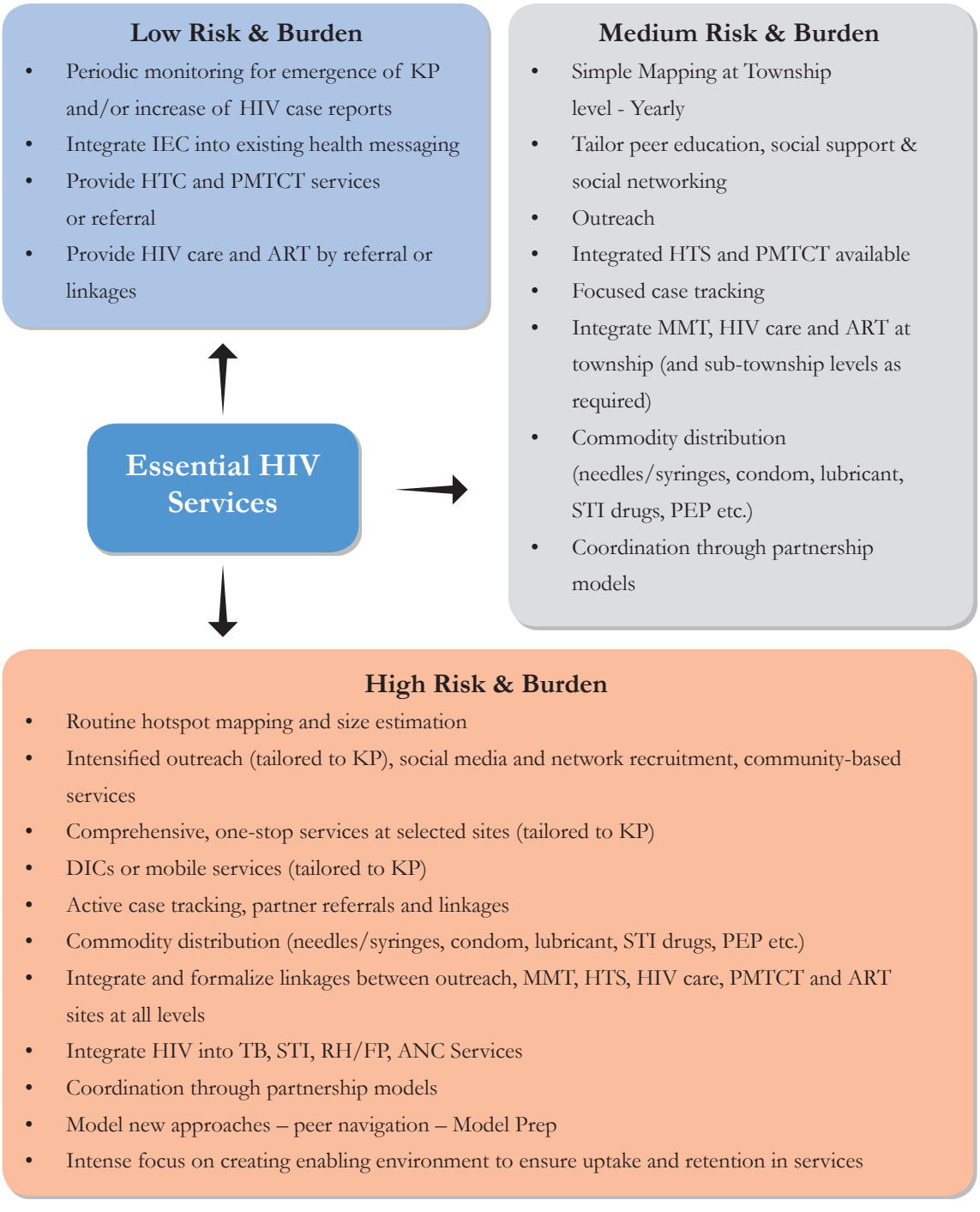
Delivery of HIV services should be focused more intensely on geographic areas at elevated risk. Focusing HIV services on people at greatest risk and key locations can increase prevention impact even without increasing expenditure. This will not only require intensifying programs where they are needed most but also reducing spending where programs are needed less

The townships can be categorized into 3 groups as Low Risk and Burden Township, Medium Risk and Burden Township and High Risk and Burden Township. Under Myanmar NSP on HIV and AIDS (2016-2020), essential HIV services will be available in all townships, either through direct service provision or through referral to nearby townships. These services include:

- HIV prevention
- Integrated HIV testing and counselling services
- HIV clinical care and ART (including PMTCT)
- Sexual and reproductive health (SRH) (including STI management)
- Safe blood supply
- Enabling environment.

Beyond the essential HIV service package, HIV services will be tailored to the township needs. The following description provides guidance for HIV service packages.

Figure 3: HIV service packages by township risk and burden



Based on the category of the burden, the respective facility can prepare and plan for HIV services according to this manual.

2.1 Human resources

2.1.1 Formation of Multidisciplinary Team (MDT) at the facility

No single provider can deliver the diverse services needed by patients with HIV infection. Therefore, formation of Multidisciplinary Team (MDT) is important for ensuring provision of quality care to PLHIV and their families. The process including inter-team referrals, case discussions, and regular meetings is also critical to be a functioned and an effective multidisciplinary team.

The site-level multidisciplinary team should include as many stakeholders as possible including the clinicians (doctors, nurses, health staff trained for medical care and treatment), counsellors (nurses, medical social workers and PLHIV), data staff, laboratory technicians, pharmacy staff, administrative staff, peer educators/expert patients (PLHIV), and representative patients on ART.

2.1.2 Roles and responsibilities of MDT members

The following table provides composition of standard MDT team and roles and responsibilities of each member. However, each facility can decide to share the tasks among staff based on the availability of human resource and workload or number of patients attending the facility.

One person can hold more than one position (for example, the Nurse can be functioned a nurse as well as a pharmacy staff or data staff). Likewise, one particular task can be assigned with more than one person (for example, consultation can be carried out by MO or HA or HIV Nurse depending on the availability and capacity of the staff.)

Designation	Primary Roles &Responsibilities	Other
Multidisciplinary Team Leader (e.g. MS, TMO, AIDS/STD Team Leader)	Act as manager of MDT at facility **Administrative** - Responsible to ensure functioning MDT and provision of quality HIV care services - Responsible for defining or reallocation of roles and responsibilities of his/her team members **Coordination** - Responsible for the overall coordination (administrative and technical) of HIV activities. - Represent and strengthen linkages with multi-sector stakeholders - Delegate daily coordination responsibilities to the HIV focal point **Leadership** - Organize regular team meetings - Ensure regular clinical meetings among clinical staff - Lead for team building and ensure team unity - Create and ensure client-friendly facility - Ensure all the members understand and keep patient confidentiality at all time **Monitoring and Evaluation** - Oversee the data recording and reporting to ensure the quality of data (cross checking and data triangulation) and timely reporting - Ensure availability of IEC materials - Ensure ARV and OI drugs are available at all time and no stock out	- Provide Clinical care
Medical Officer	**Function as HIV Clinical Team Leader** - Responsible for provision of quality clinical management - Assess OI including screening of TB and other clinical problems - Assess drug side effects - Ensure regular laboratory monitoring	- Share/Disseminate information among the team members - Support to prepare reports as necessary (monthly, quarterly and annually)

Designation	Primary Roles &Responsibilities	Other
	- Assess drug adherence briefly - Note down prescription in the patient booklet (that is kept with the patients) and fills in the relevant sections in the white card - Patient referral for further management as needed within and outside of the facility (E.g. to TB, PMTCT, RH services, main ART center or other specialist consultations, decentralization sites) - Provide technical support to other team members	
HIV Focal - Nurse (THN/ SN/ TN) - HA - LHV - Medical Social Worker	Function as focal person for HIV team and support/assist MDT Team Leader – including during non- ART clinic days **Coordinating HIV services** *(Under the leadership of the head of facility/team leader, serve as the clinic focal point and coordinate the HIV activities: within the facility (i.e. with other departments such as TB, ANC, IPD) and outside the facility (i.e. with other facilities within the local networking of public facilities and with other partners (CBOs, INGOs, PLHIV SG..) within the geographical area of the facility)* - Facilitate interaction between the HIV multidisciplinary team and services within the facility - Ensure linkages and referrals with other facilities and partners are functional - Organize regular meetings of the HIV team (multidisciplinary team) to discuss new cases, difficult cases, and plan to provide additional support - Identify and address bottlenecks related to HIV service provision **Coordinating case management** - Plan and coordinate medical and psychosocial services according to patients needs - Coordinate service providers including PLHIV peer counselor for case management including navigation for patients to move from "point A to point B" within or outside the facility - e.g. from the ART clinic to lab or to general hospital - Ensure appointment system, referral, transfers and tracking patients who did not show-up (see section on patient tracking) are functional	- Dispense drugs to the patients if needed - Perform counseling if needed - Support laboratory specimen transport as necessary - Create and maintain a well-functioned reimbursement process - Link and communicate with internal members and external multi-stakeholders for proper functioning of activities - Linkage with Midwives of reporting and support PMTCT program - Linkage with TB Focal Person for HIV/TB collaborative activities

Designation	Primary Roles &Responsibilities	Other
	In addition to coordination and case management function, the HIV focal point may undertake other tasks depending on the facility and context – including: **Recording and Reporting** - Responsible as first point of contact for registration of newly transferred or newly diagnosed patients - Responsible to store records properly and in a confidential manner - Ensure correct and complete filling of White Cards - Ensure all the forms and registers are available - Ensure proper documentation and availability of quality data (Correct, complete, consistent and timely data entry) - Compile data from RHC and HIV clinic - Develop quality data reports (monthly, quarterly, annually) **Consultation** - Support/Assist Medical Officer's task as needed - Discuss and explain about treatment regimen to the patients including importance of adherence and inform drug side effects - Monitor and document patient's follow up and medication pick- up as a means of monitoring adherence and retention to care **Supply and commodities** - Ensure all the supplies and commodities (ARV etc.) are available at all time and no stock out - Ensure availability of IEC materials	
TB Focal (TB Focal in hospitals should involve in MDT Team.)	- Ensure HIV Testing Services are offered for presumptive and diagnosed TB cases - Refer HIV positive presumptive and diagnosed TB cases for ART initiation. Strengthen tracking of HIV positive cases to ART in collaboration with HIV Focal Person. - Strengthen follow-up for HIV positive TB cases in collaboration with HIV Focal Person. - Ensure adequate TB infection control at the TB Clinic - Educating and counseling on TB, its treatment and adherence	- Ensure TB Infection Control

Designation	Primary Roles &Responsibilities	Other
	Recording and Reporting - Responsible to store records properly and in a confidential manner - Ensure correct and complete filling of TB Treatment Card - Ensure all the forms and registers are available - Ensure proper documentation and availability of quality data (Correct, complete, consistent and timely data entry) - Develop quality data reports (quarterly and annually) **Supply and commodities** - Ensure Anti TB drugs are available at all time and no stock out - Ensure availability of IEC materials	
HIV Nurse	Responsible to provide nursing care and to assist HIV focal and Medical Officer **Consultation** - Screens for the signs of TB and other OIs when requested - Continue with the prescription of already initiated ARV and prophylactic medicine, by using consultation checklist - Support/Assist Medical Officer's task as needed - Make sure patients needing further consultation are referred properly - Discuss and explain about treatment regimen to the patients including importance of adherence and inform drug side effects - Monitor and document patient's follow up and medication pick- up as a mean of monitoring adherence and retention to care - Fill the patient information in the relevant sections of White Card and update other forms and registers	- Also act as counsellor, data staff or pharmacy staff if assigned by MDT Team Leader - Ensure TB Infection Control

Designation	Primary Roles &Responsibilities	Other
Counsellor - HCW or lay counsellor who have been trained for counselling	Responsible for provision of proper HIV related counselling - Pre- and post-test counselling to all clients referred for HIV testing - Pre-ART information/counselling - ART Adherence counselling - Couple/partner counselling and Family planning counselling - Early Infant Diagnosis - Infant feeding counselling - Responsible to present cases needing psychosocial and more adherence support to the ART team and discuss for better approaches - Ensure appropriate linkages and referral of the patients and families for medical care and treatment, and other social services - Facilitate, support and participate in patient group meetings - Fill counselling forms and daily registers properly and send to staff responsible for Reporting and Recording in time	- Perform Patients Tracing if necessary
Lab personnel	Responsible to provide HIV related quality laboratory services - Perform laboratory tests available at the facility - Ensure proper sample collection, packaging (cold chain if appropriate), transportation and follow-up of results - Responsible for proper storage of laboratory reagents (including temperature monitoring and expiry dates) and commodities - Responsible for proper maintenance of laboratory equipment - Provide regular laboratory updates and changes - Record in all laboratory related forms and registers - Prepare laboratory related reports and submit to MDT TL regularly - Maintain record of laboratory commodities according to the SOP - Responsible for forecasting and ordering laboratory commodities (Reagents, test kits, equipment, etc.) in order to avoid overstock and/ or stock-out	- Ensure infection control and waste managment - Participate in quality assurance system

Designation	Primary Roles &Responsibilities	Other
Pharmacy staff	Responsible for pharmacy and stock management and dispensing drugs - Responsible for correct drug dispensing according to the prescription including ARVs - Discuss the regimens with patients including adherence, pill counting and side effects - Provide feedback to the clinicians if there is any inconsistent found in the prescription - Record in the drug dispensing register and stock register properly and regularly - Responsible for pharmacy management (including temperature monitoring, proper storage, First Expire to First Out (FEFO), expiry management, etc.) and stock management of HIV related commodities - Assist MDT TL and HIV Focal in forecasting and ordering ARV/ OI related drugs - Prepare logistics and stock data report and submit to HIV Focal	- Assist MDT TL and HIV Focal for other logistic management if needed
Data staff (If there is no designated Data Staff, other staff should take responsibility of his/her own data.)	- Ensure completion of reporting forms, and aggregation and organization of data in a correct, consistent and timely manner - Analyse the data and provide feedback to the MDT team - Prepare data reports regularly and submit to HIV Focal - Enter data correctly to the electronic records and database - Retain the patient cards - Assist in supplies and commodities forecasting and ordering - Prepare and make the patient cards (White Card) of the appointed patients ready on the appointment date	- Assist MDT TL and HIV focal for logistic management if needed
PLHIV peers	**Peer Counsellor** - Provide counselling (refer to counsellor section) - Assist in defaulter tracing - Assist in case management including communications with KSC - Provide psychosocial support	- More than one functions may be covered by a PLHIV

Designation	Primary Roles &Responsibilities	Other
	Peer supporter - Support PLHIV in receiving services at facility level - Identify PLHIV who need additional support, and link to relevant service providers - Assist tracking of patients who missed appointment - Assist referral/transfer to other clinics/hospitals, laboratories, other organizations and KSC - Accompany PLHIV for referral/transfer, if needed/ feasible - Assist in blood sample transportation, if needed - Conduct regular peer group meetings to discuss concerns and address issues - Facilitate communication between service providers and clients - Sensitize health care workers on PLHIV and KP to reduce discrimination - Support demand creation e.g. raising awareness on available services among PLHIV in the community **Care giver/Care taker** - Act as care givers of patients in hospitals - Facilitate linkages with social organizations	
Patient	- Responsible for their own adherence - Share correct information among patients (if willing to disclose) - Create demand generation - Provide feedback to staff and Peer Counsellor - Participate in regular peer group meeting/public awareness events	- Responsible to disclose their status to their partners and family members at risk - Responsible to direct partners and family members at risk into appropriate care, testing and treatment

2.1.3 Task shifting

Task shifting or delegating tasks performed by MO to other staff such as Nurses, THN or HA, is considered a mean of expanding HIV services including provision of ART.

2.2 Capacity building/Training

It is critical to enhance the capacity of staff to be able to provide quality care in provision of HIV related services at the facilities. The recommend trainings can be seen in the following table.

Recommended trainings

Topic	Participants	Training Module
HIV Testing Services	HIV Focal, THN, HA, Nurses, Midwives, Peer counsellors, Lab personnel	- Rapid Diagnostic Testing (Screening and Confirmation) - Testing strategy - Stock and commodities management - Registration and Reporting
PMTCT	MO, THN, HA, Nurses, Midwives	- PMTCT training including EID and Registration and Reporting
Counselling	Counselling Staff, Peer Counsellors or anyone providing counselling	- HIV Testing Services - ART Adherence Counselling - PMTCT Counselling - Family Counselling - Couple Counselling - Child Counselling - Adolescent Counselling, etc.
Clinical Management of HIV Infection (including TB/HIV management)	TMOs, HIV Focal, MOs, Nurses and Health Assistants	- Theoretical training - On-The-Job trainings
M&E	HIV Focal or responsible staff	- Reporting and Recording - Data Quality Assurance - Data Analysis and Interpretation
Stock and commodities management	HIV Focal, Lab staff, Pharmacy staff, etc.	- Stock and commodities management training including drug consumption tally with the register - Logistics Management Information System
Laboratory	Lab Personnel	- Training for sample collection and transportation - On-The-Job Training of available tests - Standard Precaution

Topic	Participants	Training Module
Healthcare Workers (HCW) sensitization for Key Populations	All staff of health facilities	- Health Care Worker Sensitization Training
TB Infection Control	Staff assigned for TB Infection Control	- Managerial activities - TB infection control measures, etc

Note: The list of the trainings mentioned here may not be exclusive. Frequency and duration of the training, ad hoc training, the content of the training and refresher course may also be needed to adapt to the situation of the facility-size, staff turnover, etc.

2.3 Infrastructure

2.3.1 Requirements for HIV testing services

- There should be a designated area for HIV testing that ensures
  - client confidentiality
  - adequate space to perform activities in a safe manner
  - sufficient lighting available
- Patients waiting area
- Counselling room with privacy
- The testing area appropriate for HIV rapid testing:
  - clean
  - well organized
  - designated 'dirty' area to perform test

2.3.2 Requirements for HIV care and treatment services

- A reception area where patients can notice easily on their arrival to inquire information.
- Signage to guide the patients to find the services they need (e.g., direction to Dispensing Room, Laboratory, Counselling Room etc.)
- Patients consultation area/rooms with privacy
- Patients waiting area
- Counselling room with privacy
- Dispensing area or Pharmacy with proper ventilation and enough space

2.3.3 Requirements for Medical Store

Medical store should have proper spacing and it should be dry, well-lit and well-ventilated. Regardless of the storage facility size, storage has to ensure the physical integrity and safety of products and their packaging, until they are dispensed to clients.

Note: For more details about storage, handling of supplies, etc., please refer and follow the standard operating procedures (SOPs) for Logistics Management Information System (LMIS), MOHS/ UNOPS, November 2015.

2.3.4 Requirements for Laboratory

Laboratory room should have regularly monitored cold chain facilities for storage of test kits and reagents and enough space for specimen handling. If there are other equipment like CD4 machine, Biochemistry machine, etc., setting of the equipment and the room should be in accordance with manufacturer's instructions and manual.

In regard to infection control, laboratories must have easy to clean working surfaces (avoid wood) to allow proper disinfection. They should also have large windows to let in sunlight and allow natural ventilation if the lab has no mechanical ventilation.

2.3.5 Proper TB Infection Control

In developing countries including Myanmar, TB is the most frequent life-threatening illness and leading cause of death among people living with HIV (PLHIV), including those who are on ART. PLHIV are at significant risk of acquiring TB in health care facilities and congregate settings. They are also facing emerging threats of drug-resistant TB such as multidrug resistant TB (MDR TB) and extensively drug resistant TB (XDR TB). Therefore, it is extremely important to address Infection Control in healthcare facilities providing HIV/TB care.

2.3.5.1 Managerial Activities

Managerial activities are policy and programme level activities which need to be in place to facilitate the implementation of effective TB infection control.

At facility level, the managerial activities ensure the smooth implementation of control measures at specific patient service areas: departments and rooms.

Managerial activities at healthcare facilities

- Assign a responsible committee/focal person
- Conduct a facility TB infection control assessment and re-assessments with technical support from region, state or district supervisors
- Plan TB infection control activities as integral part of the annual facility plan
- As part of the plan, rethink patient flow and the use of spaces, and consider renovations and installation of fans and germicidal ultraviolet units
- Determine need for training & refresher training every 2 years
- Ensure visible TB infection control information, available in the local language for staff, patients and visitors
- Monitor occurrence of TB disease among staff and do TB screening, if the notification rate is 1% or more (approximately three times of the general population rate)
- Monitor the implementation of the plan (dashboard) and staff compliance with standards
- Participate in operational research to measure and improve the effectiveness of TB infection control

The first step in developing an infection control plan is assessing the health care facility's risk for TB transmission. All health facilities should have a risk assessment yearly to check patient flow, high risk areas and potential improvements in infection control**.** Assigned staff should regularly perform random reviews of infection control practice and take necessary actions for improvement if any problem were identified.

2.3.5.2 TB Infection Control Measures

TB infection control is based on a hierarchy of controls, namely administrative and environmental controls, and personal protective equipment. Each control operates at a different level in the TB transmission process:

- Administrative control measures reduce the chances of exposure to airborne droplet nuclei
- Environmental control measures reduce the concentration of airborne droplet nuclei
- Personal protective equipment protects HCWs from inhaling infectious droplet nuclei

Administrative controls

Administrative control measures serve as the first line of defence against the spread of TB. They have the potential to have the greatest impact on preventing the transmission of TB and should be prioritised in all healthcare facilities and congregate settings. These control measures, respective work practices and procedures prevent droplet nuclei containing Mtb from being spread in the facility, hence reducing the risk of exposure to TB for both HCWs and patients. Administrative control measures include

- Promptly identify persons with symptoms suggestive of TB (triage)
- Separate or isolate potentially infectious patients
- Control the spread of pathogens (cough etiquette)
- Minimise time spent in healthcare facilities by persons with symptoms suggestive of TB
- Limit hospitalization to the greatest extent possible
- Provide a package of HIV and TB care and prevention, that may include TB screening for staff.

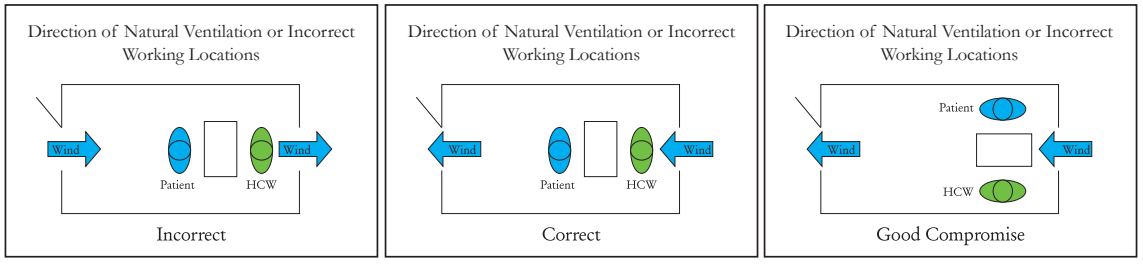
Environmental controls

Environmental controls are of secondary importance after administrative controls in the prevention of TB transmission. In healthcare facilities and congregate settings with inadequate administrative controls, environmental control measures alone will not eliminate the risk of TB transmission. Environmental control measures include methods to reduce the concentration of airborne droplet nuclei, and methods to control the direction of movement of contaminated air.

- Ensure sufficient air exchange and control airflow direction by using natural and mechanical ventilation systems
    - Natural ventilation system: The simplest and least expensive technique is to remove and dilute the air from TB patient care areas away from patients without TB by maximising natural ventilation through open windows and doors.
    - Mechanical ventilation system: More complex and costly methods involve the use of mechanical ventilation (e.g. simple window fans to complex supply-exhaust ventilation systems).

- Allow direct sunlight to enter patient care settings and other service areas
- Inactivate TB bacilli in suspended droplet nuclei by using upper-room Germicidal ultraviolet irradiation, in combination with slow-moving ceiling fans.

Figure 4: Showing the direction of airflow

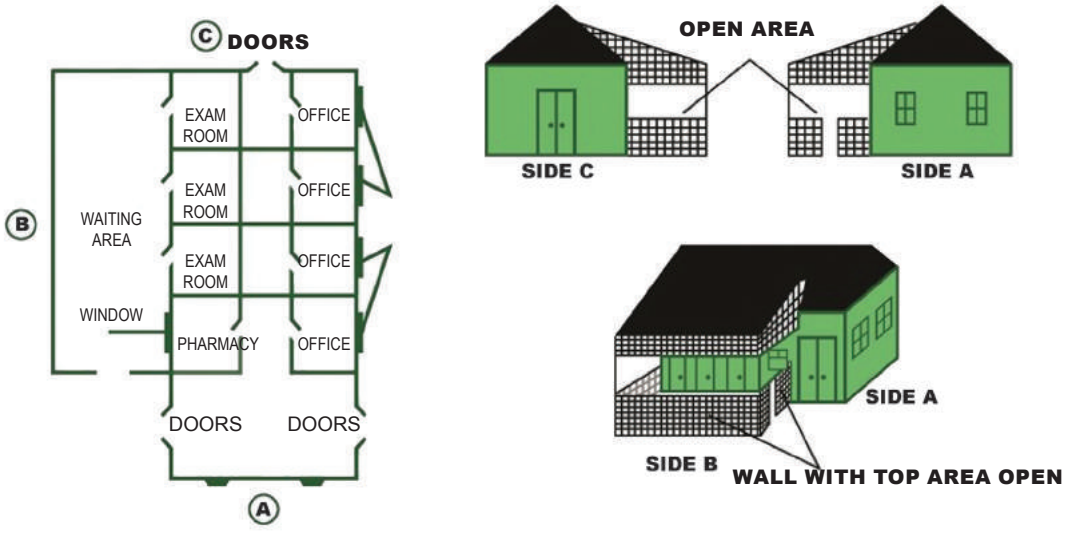


Directional air flow should be maintained from a "clean" area, across the HCW, across the patient, and to the outside. The area where air is entering should be located away from the exhaust area to avoid re-entry of contaminated air.

Airborne infection control should always be considered during the planning/ construction stages of new health facilities and those being modified. It is important to achieve the following:

- Building layout and design with maximized natural ventilation and sunlight
- Specific areas (open air, sputum collection booth, etc.) should be reserved
- Allow patient flow that reduces exposure of patients at risk to patients that are infectious (e.g. separate waiting rooms, one patient per room in hospital or separated TB ward)

Figure 5: Examples of floor plan of a health facility with proper ventilation



Personal protective equipment

Reduce the inhalation of infectious particles, by breathing air which has been effectively filtered to 0.3 microns with a particulate respirator. Respirators are the last line of defence against TB transmission. Unfortunately, even the combination with administrative and environmental controls can never provide 100% safety.

Respirators are recommended for HCWs when caring for patients with presumptive or confirmed infectious TB. In particular, respiratory protection is needed during the performance of specific aerosol-generating procedures, to supply the desired level of safety.

The main limitation of respirators is that they may not be practical to wear at all times, and they are often not used when unsuspected (untreated) TB patients are being seen.

They are disposable but can be re-used repeatedly if they are taken care of properly. The general rule is to use them for a maximum of one week if used frequently, and two weeks if not used daily.

Note: For more details about TB Infection Control, please refer to "TB Infection Control Manual. National Tuberculosis Programme, Department of Public Health, Ministry of Health and Sports, The republic of the Union of Myanmar. Second Edition. February 2017."

2.4 Ensuring availability and use of reference documents

With the support of NAP Regional Officers or Team Leaders, every health facilities providing HIV services should have the most updated version of following documents at all time:

- The Guidelines for the clinical management of HIV infection in Myanmar. Fifth Edition. National AIDS Programme, Department of Public Health, Ministry of Health and Sports, Myanmar. 2017.
- A Core Package for HIV Prevention Amongst Key Populations in Myanmar, National AIDS Programme (NAP), December 2014.
- Myanmar Guidelines on HIV Testing Services, National AIDS Programme (NAP)/ MOHS. 2018.
- Guidelines for the Programmatic Management of TB/HIV in Myanmar, National TB Programme, National AIDS Programme, July 2017.
- TB Infection Control Manual. National Tuberculosis Programme, Department

of Public Health, Ministry of Health and Sports, The republic of the Union of Myanmar. Second Edition. February 2017.

- Standard operating procedures (SOPs) for Logistics Management Information System (LMIS), MOHS/ UNOPS, November 2015.
- Operational Manual on Planning and Provision of HIV Services at Health Facilities, 2017.
- Job-aids provided by NAP.
- Standard Operating Procedures (SOP) for the Decentralized Site for ART Services in Myanmar, NAP.
- Relevant IECs

2.5 Township work plan for HIV services

With the support of National AIDS Programme and State/Regional Health Department, each facility should formulate its own detailed plan of action (Microplan and Workplan) based on their available HIV services according to risk and burden of each township. The work plan should be incorporated into Inclusive Township Health Plan.

Chapter 3: HIV/AIDS: The Basics

3.1 What is HIV?

HIV stands for Human Immunodeficiency Virus. It is the virus that can lead to acquired immunodeficiency syndrome, AIDS. It weakens a person's immune system by destroying important cells that fight disease and infection.

No effective cure currently exists for HIV. But with proper medical care, ART, HIV can be controlled. It can dramatically prolong the lives of many people infected with HIV and lower the chance of infecting others.

3.2 Modes of transmission

HIV is transmitted through unprotected sexual intercourse (anal or vaginal), transfusion of contaminated blood, sharing of contaminated needles, and between a mother and her infant during pregnancy, childbirth and breastfeeding.

HIV does not survive long outside the human body and it cannot be transmitted by air or water, insects including mosquito bites, saliva, tears or sweat, causal contact like shaking hands, sharing toilets or household utensils.

3.3 Natural history of HIV/ Stages of HIV

When people get HIV and don't receive treatment, they will typically progress through three stages of disease. Antiretroviral therapy (ART) helps people at all stages of the disease if taken the right way. Treatment can slow or prevent progression from one stage to the next.

Acute infection: This usually occurs within 3 to 6 weeks after infection with HIV, and about half of all patients may experience with flu-like symptoms. This is called acute retroviral syndrome (ARS) or primary HIV infection. This is the body's natural response to the HIV infection.

Clinical latency (inactivity or dormancy): This period is sometimes called asymptomatic HIV infection or chronic HIV infection. During this phase, HIV is still active, but reproduces at very low levels. Patients may not have any symptoms or get sick during this time.

AIDS (acquired immunodeficiency syndrome): This is the stage of infection that occurs when the immune system is badly damaged and patients become vulnerable to infections and infection-related cancers called opportunistic infections and illnesses.

3.4. What is ART?

Antiretroviral therapy (ART) is the use of HIV medicines to treat HIV infection. It is a life-long treatment. Although a cure for HIV does not yet exist, ART helps people with HIV live longer, healthier lives.

Standard antiretroviral therapy (ART) consists of the combination of antiretroviral (ARV) drugs to maximally suppress the HIV virus and stop the progression of HIV disease. ART also prevents onward transmission of HIV.

Classification and dosages of Antiretroviral Drugs

Generic name	Dose
Nucleoside reverse-transcriptase inhibitors (NRTIs)	
Abacavir (ABC)	300 mg twice daily or 600 mg once daily
Emtricitabine (FTC)	200 mg once daily
Lamivudine (3TC)	150 mg twice daily or 300 mg once daily
Zidovudine (AZT)	250-300 mg twice daily
Nucleotide reverse-transcriptase inhibitors (NtRTIs)	
Tenofovir (TDF)	300 mg once daily
Non-nucleoside reverse-transcriptase inhibitors (NNRTIs)	
Efavirenz (EFV)	400-600 mg once daily
Etravirine (ETV)	200 mg twice daily
Nevirapine (NVP)	200 mg once daily for 14 days, followed by 200 mg twice daily
Proteases inhibitors (PIs)	
Atazanavir + ritonavir (ATV/r)	300 mg + 100 mg daily
Darunavir + ritonavir (DRV/r)	800 mg + 100 mg daily [a] or
	600 mg + 100 mg twice daily [b]
Lopinavir + ritonavir (LPV/r)	400 mg/100 mg twice daily

	Consideration for individuals receiving TB therapy In the presence of rifabutin, no dose adjustment required. In the presence of rifampicin, adjusted dose of LPV/r: (LPV 800 mg + RTV 200 mg twice daily or LPV 400 mg +RTV 400 mg twice daily)
Integrase strand transfer inhibitors (InSTIs)	
Dolutegravir (DTG)	50 mg once daily In the presence of rifampicin, adjust the dosage of DTG as 50 mg twice daily
Raltegravir (RAL)	400 mg twice daily

[a] For individuals with no previous use of protease inhibitors.

[b] For individuals with previous use of protease inhibitors.

3.5 What is CD4?

CD4 cell is a type of white blood cell that plays a vital role as coordinators of the body's immune response. These CD4 cells help the body's immune system fight off infections. Untreated, HIV reduces the number of CD4 cells in the body. Over time, HIV can destroy so many of these cells that the body can't fight off infections and disease. Opportunistic infections or cancers take advantage of a very weak immune system and signal that the person has AIDS.

CD4 can also be used to monitor the response ART or to identify immunology failure of ART especially in the context where Viral Load cannot be measured easily.

3.6 What is Viral Load?

Viral load refers to the amount of HIV particles in a sample of the blood. When viral load is high, more HIV particles in the body, and that means the immune system is not fighting HIV well which could result in the easier transmission of the virus to the other person.

Plasma HIV viral load is measured using PCR (polymerase chain reaction) technology. The result is expressed as copies/ml. In HIV symptomatic or in late cases VL may be as high as 100,000- 1,000,000 copies/ml or more. The lowest level of detection is < 50 copies/ml or 400-500 copies/ml depending on the sensitivity of the test. Plasma viral load can be used to monitor therapeutic success of ART. It is the most important indicator of response to ART.

3.7 Major Opportunistic Infections (OIs)

While many opportunistic infections may occur, the following are the major opportunistic infections seen in this country. Clinicians treating HIV patients should be familiar with the diagnosis and treatment of these conditions since they can be associated with significant morbidity and mortality.

1. Mycobacterium tuberculosis
2. *Pneumocystis jirovecii* pneumonia
3. Toxoplasmosis
4. Cryptococcosis
5. Penicilliosis
6. Histoplasmosis

Note: Please refer to 8.2.1 for detailed management of Opportunistic Infections.

Chapter 4: Provision of HIV Prevention, Care and Treatment Services for Key Populations

Key populations continue to be disproportionately affected by HIV in all countries, including Myanmar. In Myanmar's HIV response, key affected populations are people who inject drugs (PWID), men who have sex with men (MSM) and female sex workers (FSW), as well as young people from each of those key affected populations. As their risks and vulnerabilities are very different from other populations and their perceptions, behaviour and practices can also be different, and thus their health needs are also different. In addition, people from key populations are more likely to delay linking to HIV services than the general populations because of multiple barriers including inadequate awareness of HIV and STI, fear of stigma and discrimination, fear of harassment and arbitrary arrest for possession of condoms or needles and syringes, not meeting unique needs (related to drug use for instance) by services, etc. Therefore, it is now important to prioritize and focus on tailored HIV services approaches to better serve key populations in Myanmar.

4.1 Providing key populations friendly services

Providing competent and friendly services for key populations is needed because key populations are disproportionately affected by HIV/AIDS and other infections like TB, STIs, Hepatitis and having barriers to access to services they needed. It will also have an impact on the broader community, not just on key populations. In addition, it addresses sensitive issues that are common among key populations including mental health problem and drug abuse.

4.1.1 Reducing stigma and discrimination

Given their front-line role in the HIV response, stigma and discrimination toward key populations by health care workers can undermine the overall effectiveness of HIV prevention, care and treatment efforts. In order for conditions to improve HIV services, stigma and discrimination must be addressed in health care facilities. Reducing stigma and discrimination can lead to greater availability of services, better access to services, improve service uptake and higher levels of retention.

4.1.2 Sensitization among health care workers

Sensitization training should be given to all health care workers providing HIV related services in the health facilities. The objective of this training is to sensitize health care workers to provide HIV testing, counselling, care and treatment services and other HIV-related services to all clients, but particularly to key populations (KPs), in a non-stigmatizing and competent manner, and therefore to provide key population friendly services.

4.2 Packages of services for key populations

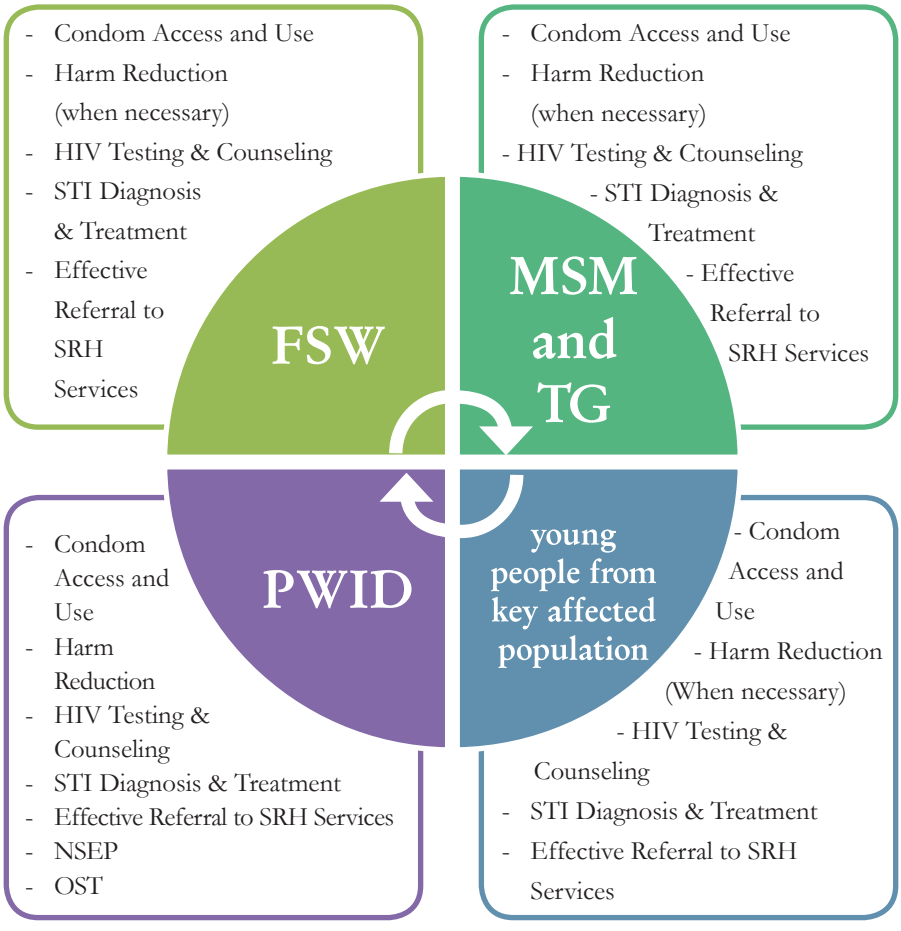
No single intervention will prevent or reverse HIV epidemics. The World Health Organization, UNAIDS and Ministries of Health around the world promote the following set of services to respond to HIV among key populations:

- Peer education and outreach
- Sexual and drug use assessment and risk reduction
- Condoms and condom-compatible lubricants
- HIV Testing Services
- ART for all KP living with HIV
- Post Exposure Prophylaxis (PEP)
- Prevention and management of co-morbidities including STIs, TB, Hepatitis B & C, and mental health disorders
- Pre Exposure Prophylaxis (PrEP) for MSM and uninfected partners in serodiscordant couples
- Harm reduction for People Who Inject Drugs (PWID): Needle and Syringe Programs (NSP), Opioid Substitution Therapy (OST) and Opioid overdose prevention and treatment
- Reproductive health services including PMTCT for women of child-bearing age and pregnant women

It is important to note that the integration of these services into a package makes them most effective although each service listed in the comprehensive package has demonstrated effectiveness in reducing HIV risk among key populations. Package can be adapted to meet specific needs of different population sub-groups.

Below figure shows an example of summary of HIV prevention interventions by target population developed by the National AIDS Programme in Myanmar.

Figure 6: Summary of HIV prevention interventions by target population



Note: For more details provision of HIV prevention, care and treatment services for Key Populations, please refer to "National guidelines: A Core Package for HIV Prevention amongst Key Populations in Myanmar. National AIDS Programme. December 2014."

Chapter 5:
HIV Prevention Information and Education

5.1 Preventive measures for general population

HIV is spread only in certain body fluids from a person infected with HIV. These fluids are blood, semen, pre-seminal fluids, rectal fluids, vaginal fluids, and breast milk.

HIV is spread mainly by having sex or sharing injection drug equipment, such as needles, with someone who has HIV. To reduce risk of HIV infection, practice

- Safer sex including Condom and lubricant availability and use
- ART as prevention
- Disposable needle and syringe
- Blood safety
- Prevention of Mother to Child Transmission (PMTCT)

5.2 Preventive measures for priority population groups

- Priority population groups (PWID, MSM, SW, prisoners and migrants) should have access to combination prevention services including behavioral and biomedical interventions.
- No single intervention will prevent or reverse HIV epidemics. The greatest impact on HIV prevention and treatment will be achieved if interventions are implemented together as a package.

Combination prevention interventions by priority population group

Behavioral intervention	People who inject drugs	MSM	Sex Workers	People living with HIV	Prison Communities	Migrants
Support positive health, dignity and prevention	✓	✓	✓	✓	✓	✓
Provide/link to mental health/psychosocial support	✓	✓	✓	✓	✓	
Strengthen demand creation and risk reduction	✓	✓	✓			✓
Strengthen addiction /substance abuse programs; link to alcohol/ substance abuse programs	✓	✓	✓			✓
Identify high risk MSM *(Apwint and Apone)* and SW		✓	✓			
Support safer injecting practices	✓					
Strengthen community peer-led outreach		✓	✓			
Introduce opinion leaders and new media approaches		✓	✓			
Support disclosure to partner				✓		
Introduce risk reduction					✓	
Introduce Evidence-informed behavioral interventions					✓	
Pre-departure and post-arrival Orientation						✓

Biomedical intervention	People who inject drugs	MSM	Sex Workers	People living with HIV	Prison Communities	Migrants
Increase condom (male and/or female) and lubricant distribution and use	✓	✓	✓	✓		✓
Promote and provide frequent and regular HTS; strengthening of HTS services as necessary	✓	✓	✓		✓	✓
Promote and provide couple HTS				✓		
Strengthen STI screening and treatment (including anal STIs and anal cancer for MSM and introduction of STI screening and treatment in prison communities)	✓	✓	✓	✓	✓	✓
Strengthen clinical health services (Family planning and sexual and reproductive health)			✓	✓		
Provide PMTCT	✓		✓	✓		
For PLHIV, Scale-up/ introduce ART (regardless of CD4 count) and Strengthen treatment adherence Scale-up viral load monitoring	✓	✓	✓	✓	✓	✓
Scale-up needle–syringe exchange programs	✓					
Scale-up opioid substitution therapy (including community-based and satellite services; take-home doses)	✓					
Provide vaccination for Hepatitis B	✓					
Introduce and scale-up overdose management (at DICs, DTCs and through trained PEs and outreach workers)	✓					
Increased wound care	✓					
Provide needle and syringes exchange						✓
Model Pre-exposure prophylaxis	✓	✓	✓			
Provide post-exposure prophylaxis	✓	✓	✓		✓	
Comprehensive referral systems particularly for ART patients						✓

5.3 Pre-Exposure Prophylaxis (PrEP)

- ARVs given to an HIV-negative person before possible exposure to HIV.
- Recommended use for people with "substantial risk" including MSM/TG population and serodiscordant couples
- PrEP is effective when taken correctly but condoms should be used for added protection
- Tenofovir plus Emtricitabine (TDF+FTC) 1 tablet PO Daily

5.4 Post-Exposure Prophylaxis (PEP)

- ARVs given to an HIV-negative person after potential exposure to HIV
- PEP should be provided for both occupational (e.g. within health sector), non-occupational (e.g. condom break or any other unsafe wex with high risk sexual partner) and for victims of sexual assault.
- Taken as soon as possible, ideally within 72 hours, after being exposed to HIV and must be taken for 28 days
- TDF+3TC (FTC)+LPV/r (or) ATV/r (or) EFV (or) DTG

Note: For more details, please refer to "The Guidelines for the clinical management of HIV infection in Myanmar. Fifth Edition. National AIDS Programme, Department of Public Health, Ministry of Health and Sports, Myanmar. 2017."

Chapter 6: HIV Testing Services

Scaling up both facility and community based HIV testing and improving access to HIV testing for priority populations particularly for PWID, FSW and MSM is a priority of the Myanmar HIV National Strategic Plan. Increasing access to early HIV testing is also an essential step toward 90-90-90-90-90 goals by 2020.

6.1 Guiding principles

All forms of HIV testing should adhere to the WHO "5 Cs": Consent, Confidentiality, Counselling, Correct test results and Connection (linkage to prevention, care and treatment services). Coerced testing is never appropriate, whether that coercion comes from a health-care provider, employer, authorities, such as immigration services, or from a partner or family member.

The 5 Cs are principles that apply to all HIV Testing Services and in all circumstances:

- **Consent:** People receiving HTS must give informed consent to be tested and counselled. (Verbal consent is sufficient; written consent is not required.)
- **Confidentiality:** HTS must be confidential, meaning that what the HTS provider and the client discuss will not be disclosed to anyone else without the expressed consent of the person being tested.
- **Counselling:** Pre-test information can be provided in a group setting if appropriate, but all persons should have the opportunity to ask questions in a private setting if they request. All HTS must be accompanied by appropriate and high-quality post-test counselling, based on HIV test results.
- **Correct:** Providers of HTS should strive to provide high-quality testing services, and QA mechanisms should ensure that people receive a correct diagnosis.
- **Connection:** Linkage to prevention, care and treatment services should include the provision of effective and appropriate follow-up as indicated, including long-term prevention and treatment support.

6.2 HIV testing service approaches

There are 3 approaches namely Facility-based HIV testing services, Community-based HIV testing services and Self-Testing.

6.2.1 Facility-based HIV testing services

"Facility-based HIV testing services" refers to HTS provided in a health facility or laboratory setting. In Facility-based HIV testing services, **Provider-initiated testing and counselling (PITC)** is routinely offered in a health facility or routinely offered by health care workers. In a generally low prevalence setting such as Myanmar, routine PITC will most likely not be cost-effective. However, HIV testing should still be made available for persons who request testing, those who exhibit clinical signs and symptoms indicative of HIV, or meet the categories below:

- **PITC offered routinely in ANC**
- **PITC offered routinely in TB clinics**
- **PITC offered in clinical settings** where higher rates of HIV-infection are often observed, including STI clinics and hepatitis clinics and services for key populations including harm reduction services for PWID.
- **PITC offered to people presenting in inpatient and outpatient hospital settings with symptoms and clinical conditions** indicative or related to HIV-infection such as TB, STIs, and viral hepatitis.
- **Pediatric testing:** Offering HIV testing to all children whose parents have HIV or to all children with conditions indicative of HIV and in malnutrition clinics may identify children with previously undiagnosed HIV infection.

6.2.2 Community-based HIV testing services

Community-based HIV testing and counselling has already introduced primarily for key populations. This is an important approach to reach first-time testers and people who encounter barriers to accessing clinical services due to stigma and discriminations, such as key populations. Linkage to prevention and treatment service is critical and should be emphasized and actively supported in association with in all community-based HTS.

Mobile/outreach HTS includes community-based HTS sites such as bars and clubs, cruising sites, mines and factories. Such services may be offered continuously, on a regular schedule or as a one-time or occasional promoted event.

6.2.3 HIV self-testing

In order to start HIV self-testing in Myanmar, NAP will take account of future updates and recommendations including emerging data and lessons learned from HIV self-testing studies and pilots as well as sensitivity and specificity of the test, in particular for hard to reach key populations.

6.3 HIV testing process

6.3.1 HIV information and counselling

6.3.1.1 Pre-test information

Individual risk assessment and individualized counselling is no longer recommended during the pre-test information session. Depending on local conditions and resources, facilities may provide pre-test information through individual or group information sessions, multimedia sources such as posters, brochures and short video clips shown in waiting rooms, among others.

The aim of offering or recommending HIV testing to a client or a group of clients is to provide clear and concise information that including

- the benefits of HIV testing
- the meaning of a first reactive rapid test and the importance of immediate referral for confirmatory testing where "Screening Testing" is implemented
- the meaning of a confirmed HIV-positive and an HIV-negative diagnosis
- the meaning of an inconclusive result and the importance of retesting after 14 days
- the services available in the case of an HIV-positive diagnosis, including where ART is provided
- a brief description of prevention options
- encouragement of partner testing in particular for all persons who test positive

6.3.1.2 Post-test counselling

All post-test counselling should be **"client-centred"**, which means avoiding formulaic messages that are the same for everyone regardless of their personal needs and circumstances. Counselling should **always be responsive** to and tailored to the unique situation of each individual or couple.

Services after testing for those who test HIV-negative

The following brief information should be provided for persons who test negative:

- an explanation of the test result
- for people with ongoing HIV risk should have education on methods to prevent HIV acquisition and promotion of condom use. Note that key population clients should be provided with male and female condoms, lubricant and guidance on their use where possible.
- emphasis on the importance of knowing the status of sexual partner(s) and information about the availability of partner and couples testing services
- referral and linkage to relevant HIV prevention services should be prioritised for people at ongoing HIV risk particularly people from key populations, including harm reduction and other interventions such as pre-exposure prophylaxis (PrEP). PrEP has been shown to be highly effective in preventing new HIV infections among persons at risk. The National AIDS Programme is assessing the potential of PrEP in Myanmar.
- **Note that for most people who test HIV-negative, additional retesting to rule out being in the window period is not necessary**. However a recommendation for retesting for HIV-negative persons, based on the client's risk of exposure should be made for the following two scenarios
  - a person with recent and specific risk that occurred in the last 6 weeks should return for re-testing in 4 to 6 weeks
  - an HIV-negative person with on-going risk of exposure such as key populations and persons in sero-discordant relationship(s) may benefit from testing every 6 months

Persons who do not report recent or on-going risk should be advised to return for testing only if their personal situation changes and if they are potentially exposed to HIV infection.

Services for those whose status is HIV-positive

Providing all of this information in one session may be very challenging, and a follow-up counselling session may be required. Indeed, the shock of learning of an HIV-positive diagnosis may make it difficult for a person to take in further information immediately.

- **Explain** the testing results and diagnosis (status).
- **Give the client time** to consider the results and help the client cope with emotions arising from the diagnosis of HIV-infection.
- Discuss **immediate concerns** and help the client decide who in her or his social network may be available to provide immediate support.
- Assess the risk of suicide, depression, and other **mental health** consequences of a diagnosis of HIV-infection.
- Provide clear **information on ART** and its benefits for maintaining health and reducing the risk of HIV transmission, as well as where and how to obtain ART.
- Explain that the Care and Treatment site will retest once more for **verification** prior to enrolment. Arrange a specific date and time for **active referral**.
- Provide information on how to **prevent transmission of HIV**, including information of the reduced transmission risks when virally suppressed on ART;
- Provide male or female condoms and lubricants and guidance on their use. Consistent use of condoms is particularly important for people with HIV infection to prevent HIV transmission to sexual partners until they are virally supressed on ART.
- Discuss possible disclosure of the result and the **risks and benefits of disclosure**, particularly among couples and partners.

- Encourage and offer HIV **testing for sexual partners, children and other family members** of the client.
- Provide **additional referrals for prevention, counselling, support and other services** as appropriate (for example, TB screening and treatment, prophylaxis for opportunistic infections).
- Encourage and provide time for the client to ask additional questions.

Services for those whose test results are inconclusive or not yet verified

Please see under HIV testing (6.3.2).

6.3.1.3 Partner notification and testing

Offering and supporting testing for sexual and drug injecting partners of PLHIV and the need to develop ways to increase the uptake of testing among partners is critically important. Options for partner notification include using passive or assisted approaches. Current practice in Myanmar is based on passive approach (or passive referral).

Passive HIV partner notification services (or passive referral)

- A trained counselor encourages the newly diagnosed person and those already in care to disclose their HIV status to their (sexual or drug injecting) partners.
- HIV-positive clients may notify their partner(s) and suggest HIV testing to them.
- When the partners present to the facility, they are offered HTS.
- Partner notification should always be voluntary.
- Monitoring of outcomes can be done by linking HIV-positive client record to partner notification attempts, partner HIV testing uptake, test result and linkage to care.

6.3.2 HIV testing

6.3.2.1 HIV testing strategies for diagnosis (18 months of age and older)

The diagnosis of HIV infection can be carried out by detecting any of the following:

1. Antibodies to HIV
2. HIV nucleic acid (RNA/DNA)

National AIDS Programme recommend for Antibodies testing for the age of 18 months and older.

Three-assay testing strategy is used for clinical diagnosis including PMTCT. A1, A2, A3 represent three different assays (see in Figure 8).

Recommended rapid test kits for three-assay HIV Testing Strategy are:

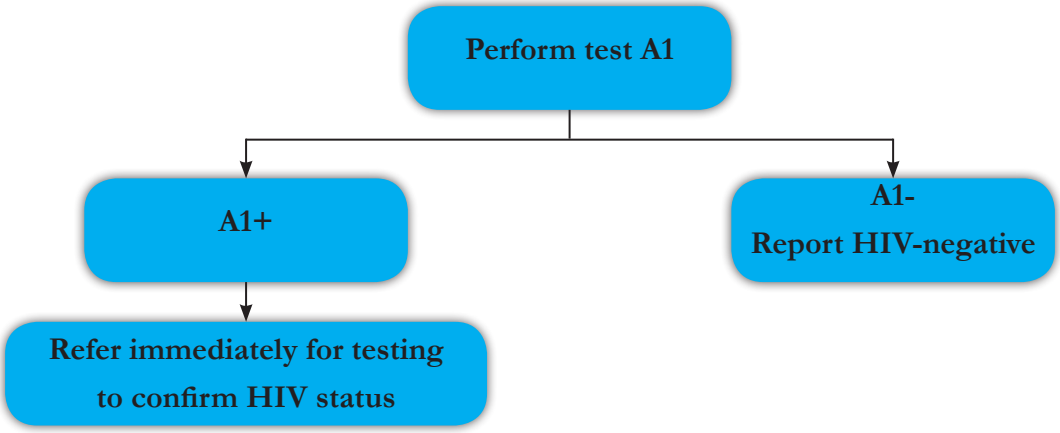
A1 = Alere Determine HIV-1/2 (manufactured by Alere Medical Co., Ltd., Japan) (D) ICT (sensitivity 100% and specificity 99.75%) If not available, WHO pre-qualified RDT with 100% sensitivity and specificity similar to Determine.
A2 = Uni-Gold HIV (manufactured by Trinity Biotech Manufacturing Ltd., Ireland) (UG) ICT (sensitivity 100% and specificity 100%)
A3 = HIV 1/2 STAT-PAK (manufactured by Chembio Diagnostic Systems Ltd., USA) (SP) ICT (sensitivity 99% and specificity 100%)

Screening testing

This strategy is recommended in settings where the provider and/or the site does not meet the minimum standards needed for confirmation testing (see at the end of this chapter) but has been certified to provide screening testing. In this strategy, a trained community worker or health care worker will conduct only a single RDT. Figure 7 below shows the testing algorithm for HIV screening.

The assay (labelled A1) must be an RDT that is **highly** sensitive. Individuals who test HIV reactive should be referred immediately to the nearest site approved for confirmatory testing to confirm their HIV status as per the national HIV testing algorithm. Approved sites for testing to confirm HIV status can be a community

Figure 7: Testing algorithm for HIV screening



site, or health facility, or a certified laboratory, or a health facility which provides ART. The provider who performed the first assay **must take an active role to ensure that all persons who screen reactive actually receive testing to confirm their HIV status.**

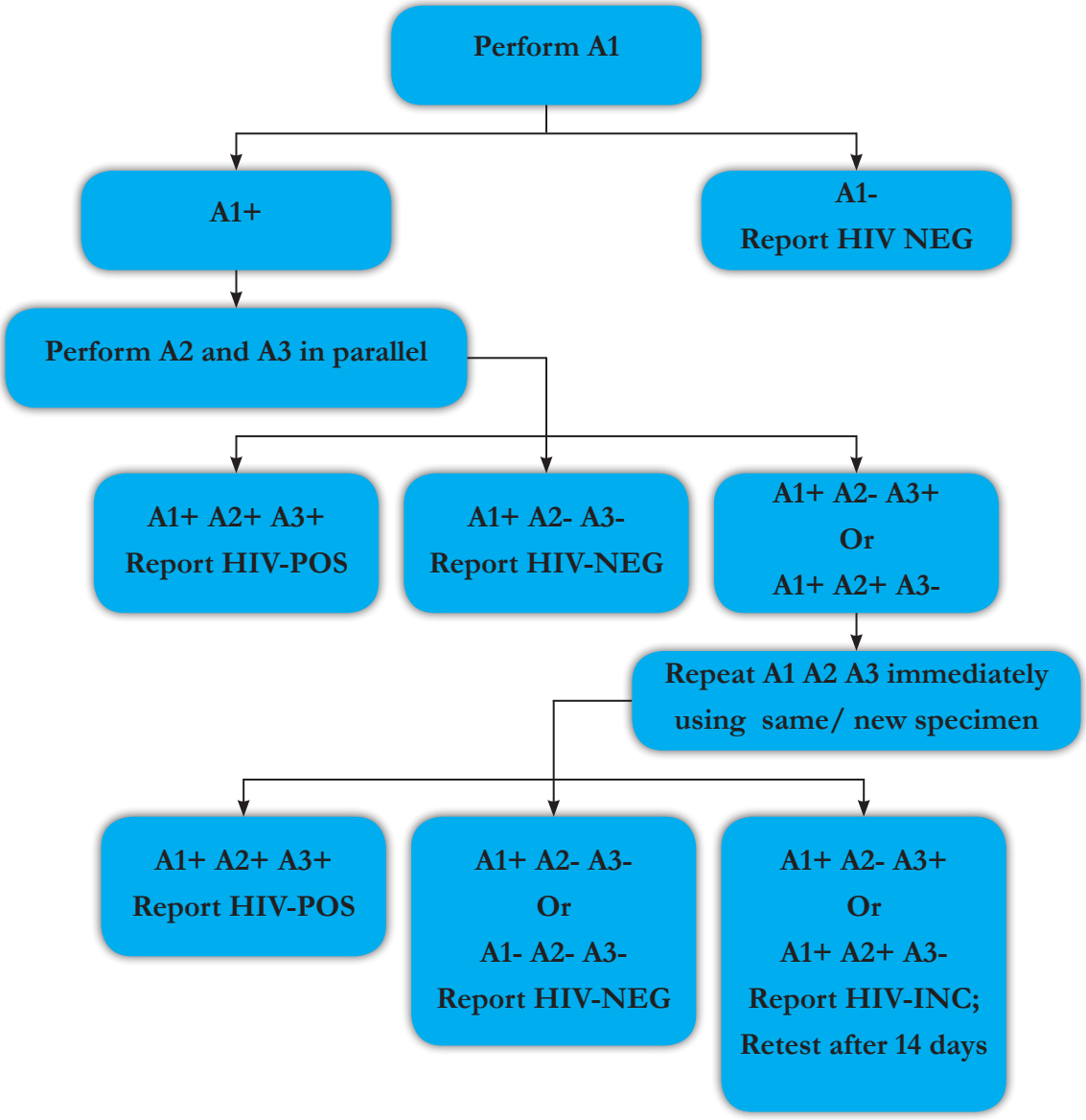
At sites that meet the minimum standards to perform testing to confirm HIV status, a 3-assay testing strategy will be used (see Figure 8 below).

All specimens are first tested with a highly sensitive assay (A1), and specimens that are non-reactive (A1−) are considered HIV-negative and reported as such. These RDTs are the most sensitive assays currently available in Myanmar and take into account diagnostic sensitivity, and seroconversion sensitivity.

Any person with a reactive result on the first-line assay (A1+) should be retested using a separate and distinct second and third assay (A2 and A3) comprised of a different antigen preparation to avoid false cross-reactivity with A1. A2 and A3 which are required for HIV positive diagnosis can be run in parallel. Assays A2 and A3 must have a higher specificity than A1.

For specimens that are reactive on the first, second and third assays **(A1+ A2+A3+)**, the diagnosis is reported as **confirmed HIV-positive** and the individual needs to be referred for prompt enrollment in ART. (Note: retesting to verify the HIV diagnosis should be performed prior to ART initiation.)

Figure 8: Testing algorithm for HIV confirmation



If the result of the second and third assays are non-reactive **(A1+ A2- A3−)**, the diagnosis is reported as **confirmed HIV-negative**. Brief information and prevention services for HIV-negative clients as described earlier. If the A1 assay is 4th generation, this should be considered HIV-inconclusive and the individual should be retested in 14 days as 4th generation serology assays incorporate detection of both HIV-1/2 antibodies and HIV p24 antigen. It should be noted that 4th generation assays are not currently used in program conditions in Myanmar.

For specimens that are reactive on the first-line assay but non-reactive on the second-line or third-line assay **(A1+ A2− A3+ or A1+A2+A3-)** testing should be repeated **using same/ new specimen** with the same three assays.

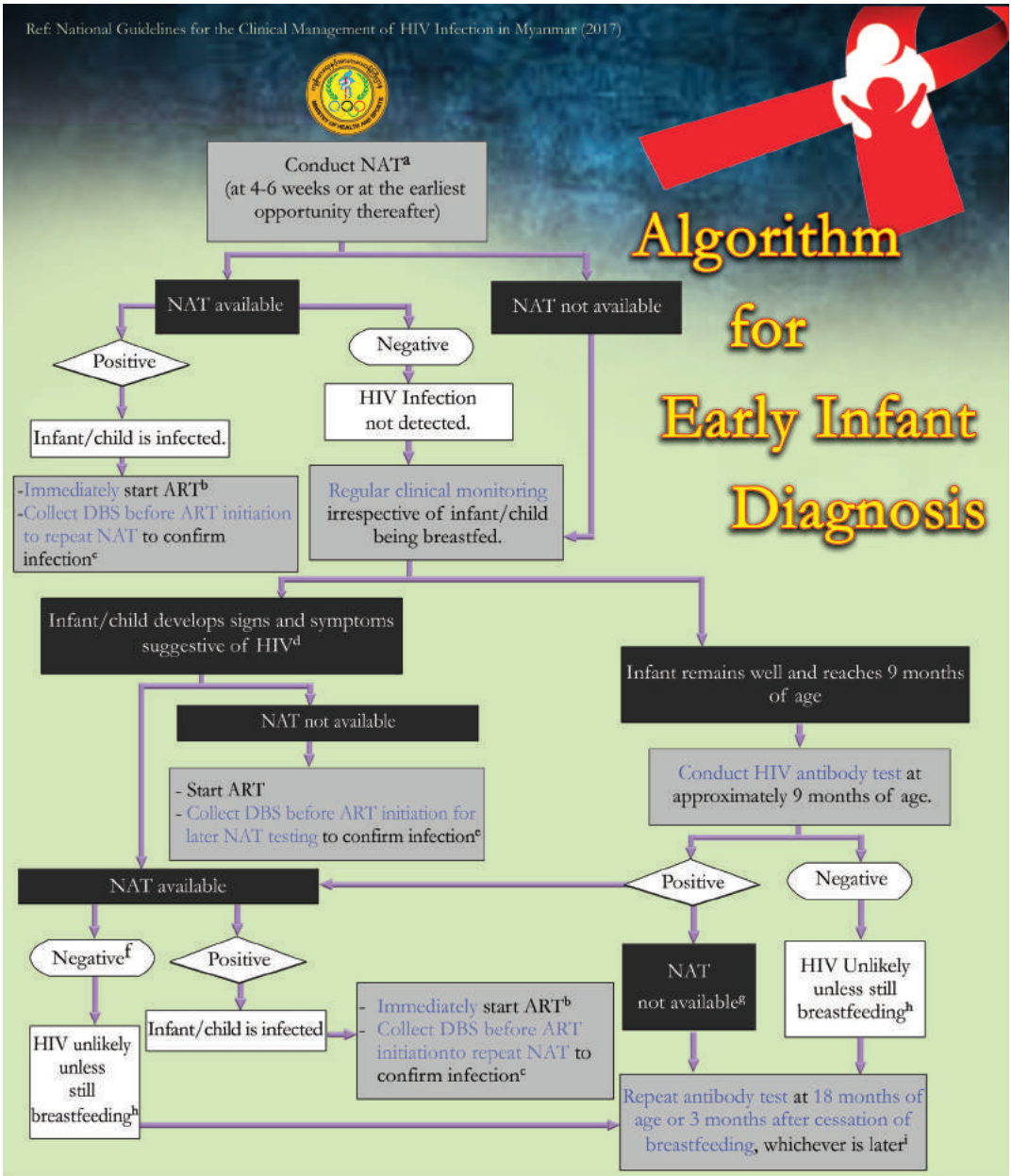
Any specimens that remain reactive on retesting with the first assay but are non-reactive on the second or third assay **(A1+ A2− A3+ or A1+A2+A3-) should be reported HIV-inconclusive and re-testing in 14 days be recommended**.

6.3.2.2 HIV testing for infants and children under 18 months

- HIV infection can be diagnosed only by virological testing because maternal HIV antibodies remain in the infants' bloodstream until 18 months of age, making test results from serological assays ambiguous.
- Virological testing should be conducted using dried blood spot (DBS) specimens collected at health facilities. These specimens should be sent to the NHL and PHL for testing.
- Regarding early infant diagnosis (EID), it is recommended that all HIV exposed infant should have HIV virological testing at 4-6 weeks of age or at the earliest opportunity thereafter.
- For more information about EID, please see Figure 9.

  (Note: In infants with an initial positive virological test result, ART should be started without delay and, at the same time, a second specimen is collected to confirm the initial positive virological test result. ART should not be delayed while waiting for the result of the confirmatory testing.
- Test results from virological testing in infants should be returned to the clinic as soon as possible, preferably within four weeks of specimen collection.)

Figure 9: Algorithm for Early Infant Diagnosis



[a] **if resources are available, NAT can be considered at birth to 2 days of age in HIV-exposed newborns.**

[b] Initiate ART, without delay. If ART initiation is not possible, refer the baby to the nearest ART initiation site.

[c] If the second test is negative, a third NAT should be done before interrupting ART.

[d] Signs and symptoms suggestive of HIV (oral thrush, recurrent or severe bacterial infections such as pneumonia or sepsis, Failure to thrive/ wasting or AIDS indicator conditions http://www.who.int/hiv/pub/paediatric/infants2010/en/

[e] If infant presents with signs and symptoms of HIV disease (see footnote d) but NAT is unavailable, consider starting ART, especially if an antibody test is conducted and result positive at at 9 months or later. a DBS specimen must be collected prior to starting treatment for later NAT testing to confirm HIV diagnosis.

[f] If infant presents with signs and symptoms of HIV disease (see footnote **d** above), consider starting ART while waiting for NAT result. A DBS specimen must be collected prior to ART initiation for later NAT testing to confirm HIV diagnosis.

[g] Regular and periodic monitoring should be ensured while waiting for NAT to be available or for antibody testing to be conducted at 18 months. If infant presents with signs and symptoms of HIV disease, consider starting ART. A DBS specimen must be collected prior to ART initiation for later NAT testing to confirm HIV diagnosis.

[h] The risk of HIV infection remains as long as breastfeeding continues. If the 9-month antibody testing is conducted earlier than 3 months after cessation of breastfeeding, infection acquired in the last days of breastfeeding may be missed so retesting at 18 months should be ensured for final assessment of HIV status.

[i] If breastfeeding beyond 18 months, antibody testing should be undertaken at least 3 months after cessation of breastfeeding (to allow for development of HIV antibodies). For infants <18 months, positive antibody testing requires NAT to confirm infection. If infant is >18 months, negative antibody testing confirms infant is uninfected, positive antibody testing confirms infant is infected.

6.3.2.3 Retesting

Retesting refers to using the same algorithm on a second specimen from the same individual. Retesting is recommended for:

- all individual with HIV inconclusive results
- all individual with a confirmed HIV positive status prior to ART initiation (Verification)
- HIV negative individual with ongoing risk (i.e. key populations and people in serodiscordant relationships)
- HIV negative individual who report a specific recent HIV exposure in the last 14 days, offering re-testing after 4-6 weeks.

Retest all clients diagnosed HIV-positive with a second specimen and preferably second operator using the same testing strategy and algorithm before enrolling in client in care and/or initiating ART.

Retesting people on ART is not recommended. ART may suppress antibody production and lead to "false-negative" results.

6.4 Staff providing HIV testing services

In general, health facilities can assign staff including Social Workers, Midwives, Nurses, Health Assistants, Laboratory Technicians and the Volunteers including community Health Workers and PLHIV Peers who have been trained to provide HTS services.

Note: Please refer to 'Myanmar Guidelines on HIV Testing Services' NAP/ MOHS 2017 for more details and additional guidance and information.

Procedures for differentiated referral of HIV reactive or confirmed cases before ART initiation

- Screening test reactive or confirmed cases after testing at HIV screening or HIV confirmation site without ART initiation should be immediately referred to ART initiation facilities.
- Differentiate cases for referral.

  Reactive or confirmed cases should be referred to adequate ART initiation facility, based on their clinical status and the age after conducting quick assessment.

- Below patients should enroll ART at specialist, general or district hospitals
  - Very sick (difficulty breathing, high fever, severe headache, altered consciousness, difficulty walking), or
  - At WHO clinical stage 3 or 4, with chronic liver disease, or with chronic renal disease excluding TB (when providers at sending sites are trained on WHO clinical staging)
  - All infants and children (<15 yrs old)
- All other patients can be referred to or initiated ART at any ART initiation facility convenient for the patient

(Remark: Please note that ART Decentralized Sites are allowed to initiate ART for HIV positive pregnant mothers and TB/ HIV co-infected patients who are presenting well without referring to other ART Centers. Some selected ART Decentralized Sites which are providing Methadone Maintenance Therapy are also allowed to initiate ART for HIV positive PWID).

Summary of Minimum Standards for HIV Testing Services

Minimum Standard	Screening HTS	Confirmation HTS
Human Resources		
Basic Health Service Staff who has completed nationally approved training and are certified to provide Screening HTS according to the National Guidelines on HIV Testing Services	✓	
Trained community worker who has completed nationally approved training and is certified to provide Screening HTS according to the National Guidelines on HIV Testing Services	✓	
Trained Nurse, Staff Nurse or Doctor who has completed nationally approved training is certified to provide Confirmation HTS according to the National Guidelines on HIV Testing Services		✓
Laboratory Technician who has completed nationally approved training and is certified to provide Confirmation HTS according to the National Guidelines on HIV Testing Services		✓
Operational Requirements		
Comply with HTS guidelines	✓	✓
Standard Operating Procedures	✓	✓
Implement Standard Precautions	✓	✓
Procedures for post-exposure prophylaxis	✓	✓
Availability of IEC materials	✓	✓
Practice the 5 Cs of Consent, Confidentiality, Counseling, Correct test results and Connection	✓	✓
Use standard national reporting tools for HTS	✓	✓
Provide referral pathways to Confirmation Testing	✓	
Provide referral pathways to ART services or Onsite ART services		✓
Facilities and equipment		
Testing location maintains client confidentiality	✓	✓
A bench or clean surface that can be decontaminated, with sufficient space for sample collection or preparation and testing procedures	✓	✓
Sufficient light to conduct and read test	✓	✓
Correct disposal of hazardous waste including sharps waste and infectious waste	✓	✓
Access to clean water and soap	✓	✓

Safe storage facilities for RDTs and supplies	✓	✓
Temperature monitoring of RDT storage	✓	✓
System to ensure uninterrupted supply of tests and consumables	✓	✓
Approved RDT kit for Screening HTS including consumables, PPE, sample collection tools, reporting tools and timing device	✓	
Approved RDT kits (3) required for confirmation HTS including consumables, PPE, sample collection tools, reporting tools and timing device		✓
Quality Management		
Maintenance and regular review of HTS records	✓	✓
Regular supervision of HTS sites	✓	✓
Maintain certification and complete regular refresher trainings for Screening HTS (every 2 years)	✓	
Maintain certification and complete regular refresher trainings for Confirmation HTS (every 2 years)		✓
Participation in external quality assurance assessment program		✓

Chapter 7: Prevention of mother-to-child transmission of HIV (PMTCT)

Mother to child transmission of HIV can occur during pregnancy, at the time of delivery or during breastfeeding. Without any PMTCT interventions it is estimated that 15 to 45% of children born to HIV-infected mothers will acquire HIV infection. However, this can be reduced to fewer than 5% through PMTCT interventions.

PMTCT programme must incorporate a spectrum of activities, including HIV prevention for HIV negative women, access to family planning to prevent unintended pregnancy, widespread testing of pregnant women early in antenatal care and support to women living with HIV to remain adherent to ART and retained in the care throughout pregnancy and breastfeeding and for life.

In addition to receiving ART, pregnant women living with HIV should be offered the recommended package of pregnancy care, and other interventions such as screening for STIs, nutritional support, infant feeding counselling and family planning guidance.

New born prophylaxis remains an important aspect of PMTCT.

Even though there is a comprehensive approach, this manual emphasizes mainly on the following PMTCT activities:

- Providing HIV Testing Services
- Providing antiretroviral treatment
- Promoting safer delivery practices
- Educating and supporting in safer infant-feeding practices.

7.1 Providing HIV testing and counseling

Note: Please refer to Chapter 6 HIV Testing Services.

Note: It is also important to encourage and offer HIV **testing for sexual partners, children and other family members** of the HIV positive pregnant women or clients.

7.2 Providing antiretroviral treatment

7.2.1 Starting ART in pregnant women

Initiate ART in all pregnant and breastfeeding women living with HIV regardless of WHO clinical stage and at any CD4 cell count and continued lifelong.

Note: In settings where ART initiation site is NOT easily accessible from antenatal care

- As first step, provide ARV drugs to prevent mother-to-child transmission of HIV to pregnant women within one week of HIV diagnosis
- Throughout the antenatal care and post natal care follow-up, provide the mother with counselling, support and education on ART to ensure client's readiness to receive long ART
- At the same time link/refer to ART facilities for life-long ART as soon as feasible in consultation with the mother
- In case mother decides not to continue ARV for life long, make sure to continue ARV at least to one week after cessation of breast feeding
- These activities will ensure life-long ART for all HIV(+) pregnant woman and mother, mother-baby follow-up, infant prophylaxis and EID, and enrolment in pediatric ART

7.2.2 First-line ART for pregnant and breastfeeding women

TDF + 3TC (or FTC) + EFV

7.2.3 Infant prophylaxis

AZT (twice daily) and NVP (once daily) for 6 weeks regardless of breast-fed or formula-fed.

Simplified infant prophylaxis dosing

Birth to 6 weeks	Dosing of NVP	Dosing of AZT
Birth weight 2000-2499 g	10 mg once daily (1 ml of syrup once daily)	10 mg twice daily (1 ml of syrup twice daily)
Birth weight ≥ 2500 g	15 mg once daily (1.5 ml of syrup once daily)	15 mg twice daily (1.5 ml of syrup twice daily)

For infants weighing <2000 g and older than 35 weeks of gestational age, the suggested doses are: NVP 2 mg/kg per dose once daily and AZT 4 mg/kg per dose twice daily. Premature infants younger than 35 weeks of gestational age should be dosed using expert guidance.

7.3 Promoting safer delivery practices

There are 2 options of mode of delivery;

1. Vaginal delivery

   To reduce the risk of HIV transmission, avoid unnecessary invasive procedures such as episiotomy, forceps and vacuum extraction. Prolonged/premature rupture of membranes (more than 4 hours before delivery) can increase the risk of vertical transmission. Therefore, do not rupture the membrane if possible. Use clean delivery kit and other protective methods to protect mother, child and also for the healthcare worker.

2. Elective Caesarean Section

   Delivery by Caesarean section reduces MTCT by about 50%, only if done electively before labor starts. However, with effective ARV, Caesarean section is not justified as a routine practice of PMTCT. There is no evidence that emergency Caesarean section reduces HIV transmission. Emergency Caesarean section is strictly limited only for obstetric indications.

7.4 Educating and supporting in safer infant feeding practices

Infant feeding recommended for HIV-infected women is to choose between formula feeding or exclusive breastfeeding.

Breastfeeding is a preferred option: exclusive breastfeeding for first 6 months, introducing complementary food thereafter, and continuing breastfeeding for 12 months, weaning gradually within 1 month.

Formula feeding without any breastfeeding can be chosen **only if all** the following conditions are met:

a. Safe water and sanitation are assured at the household level and in the community: **and**

b. The mother or other caregiver can reliably provide sufficient formula milk to support normal growth and development of the infant; **and**

c. The mother or caregiver can prepare it cleanly and frequently enough so that it is safe and carries a low risk of diarrhoea and malnutrition; **and**

d. The mother or caregiver can, in the first six months, exclusively give infant formula milk; **and**

e. The family is supportive of this practice; **and**

f. The mother or caregiver can access health care that offers comprehensive child health services.

7.5 Recommended follow up visits for infants of HIV-positive mothers

Newborn

- Give BCG to all babies (except for the premature and low birth weight babies) and Hepatitis B vaccine at birth. If BCG immunization is not given at birth, give it at the earliest opportunity as possible.
- Start Nevirapine and Zidovudine Syrup for all HIV-exposed children.

4 - 6 weeks (Visit 1)

- Measure and chart the infant's weight and length.
- Start Cotrimoxazole prophylaxis for all HIV-exposed children. (See Figure 10 for dosing according to body weight)
- Collect blood specimen of HIV-exposed children for HIV DNA-PCR.

2 months (Visit 2)

- Measure and chart the infant's weight and length.
- Immunize (OPV, Pentavalent and PCV).
- Continue Cotrimoxazole prophylaxis

- Counsel patient for DNA-PCR result
  - Refer HIV infected children to ART centre
  - If DNA-PCR result is negative, counsel patient to conduct HIV antibody testing at 9 months and 18 months of age or 3 months after cessation of breastfeeding (whenever is later)
- Collect blood specimen for DNA-PCR if it was not done yet

4 months (Visit 3)

- Measure and chart the infant's weight and length.
- Immunize (Pentavalent and PCV, OPV and IPV).
- Continue Cotrimoxazole prophylaxis
- Counsel patient for DNA-PCR result (if it was not done yet)
  - Refer HIV infected children to ART centre
  - If DNA-PCR result is negative, counsel patient to conduct HIV antibody testing at 9 months and 18 months of age or 3 months after cessation of breastfeeding (whenever is later)

6 months to 12 months (Visit 4 and Visit 5)

- Measure and chart the infant's weight and length on the growth chart.
- Immunize (Pentavalent, PCV and OPV). Give measles vaccine to HIV exposed or infected infants (except for HIV symptomatic clinically ill infants) at 6 month and 9 month. Make sure that any missed Pentavalent, PCV and OPV vaccines are given to ensure that each infant receives all doses of each vaccine.
- Continue Cotrimoxazole prophylaxis until HIV Infection is excluded
- Conduct HIV antibody testing at 9 months of age
  - If the result (HIV Confirmation Test) shows positive, refer for virological testing
  - If it is non-reactive or negative, repeat antibody testing at 18 months of age or 3 months after cessation of breastfeeding (whenever is later)
  - For infants with non-reactive HIV antibody testing at 9 month and who are asymptomatic and not breastfed, Cotrimoxazole prophylaxis can be stopped.

15 months+ (Visit 6 and above)

- Measure and chart the infant's weight and length on the growth chart.
- Give measles vaccine to HIV exposed or infected infants at 18 month (except for HIV symptomatic clinically ill infants).
- Repeat HIV antibody test at 18 months or 3 months after cessation of breastfeeding (whenever is later)
  - If the result shows positive, refer to ART centre
  - If it is non-reactive or negative this time, the child can be considered as HIV-negative and stop Cotrimoxazole prophylaxis.

7.6 Promoting linkages to comprehensive care

Promote linkages to comprehensive care by referring to ART Center or ART DC Site for further HIV management for the pregnant woman, breastfeeding mother, baby and the family whenever necessary.

People in sero-discordant relationship may benefit from HIV testing every six months.

Please see below algorithm for overall management of PMTCT including further management for infant.

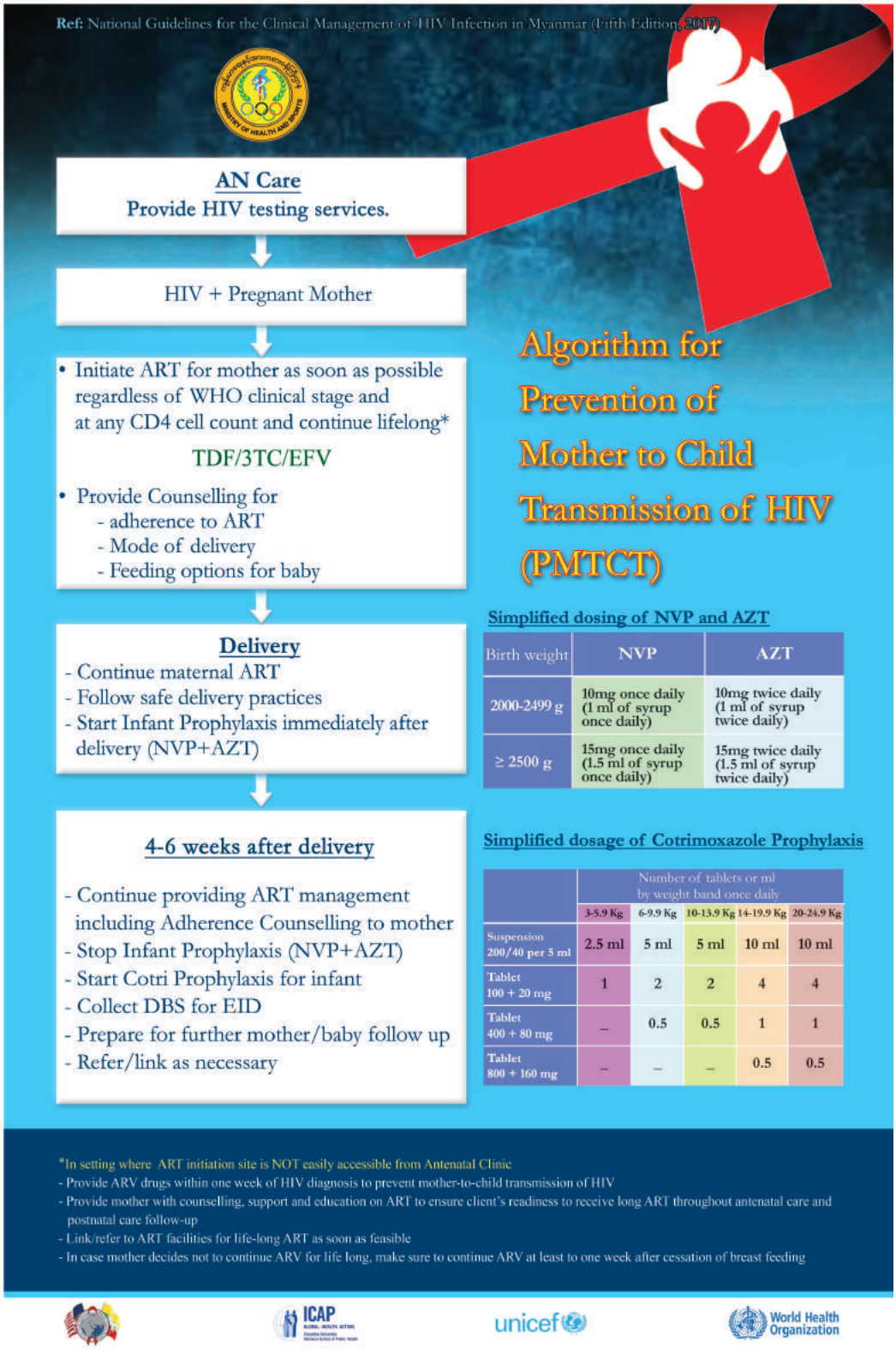
7.7 Recording and reporting

HTS register, PMTCT activity record book (positive mothers record book) and ANC register to be used for recording HIV related activities in PMTCT.

Reporting includes monthly PMTCT activity report and HTS report.

Monthly reports are compiled and analysed at NAP using the DHIS2.
(Please see monthly PMTCT activity report in Annex 3.)

Figure 10: Algorithm for management of HIV (+) pregnant mothers for PMTCT



Chapter 8: HIV Care and Treatment

8.1 Patient flow and management

8.1.1 For newly confirmed HIV positive patients

<table>
<tr><th colspan="3">1st Visit</th></tr>
<tr><th>ART Centre</th><th>DC ART sites</th><th>Satellite ART Sites</th></tr>
<tr><td colspan="3">• Enrollment in HIV care (Registration, recording and reporting)
• Medical history
• Physical examination
• Assess and screen for Opportunistic Infections including TB (if facilities and capacity allow in DC sites/satellite ART sites)
• Assess and screen for other co-morbidities such as STI, HBV, HCV, Chronic diseases (diabetes, hypertension, epilepsy etc.) (if facilities and capacity allow in DC sites/satellite ART sites)
• Decide on clinical staging (WHO stage) (if feasible in DC sites/satellite ART sites)
• Provide prophylaxis according to clinical guidelines
• Plan further follow up visits and explain the procedure to the patient. Refer to the Counsellor for further post-test or adherence/ART preparation counselling</td></tr>
<tr><td>Note: ART should be started promptly after criteria are met.
• HIV Testing for verification (if applicable)
• Check baseline investigations (if feasible)</td><td>Check CD4 and other baseline investigations if feasible.
Note: Patients can be transferred to ART Centres even on the first visit if there are indications.</td><td>Check CD4 and other baseline investigations if feasible.
Refer for ART initiation if applicable.
Note: Patients can be transferred to ART Centres even on the first visit if there are indications.</td></tr>
</table>

<table>
<tr><th colspan="3">Follow-up visits</th></tr>
<tr><th>ART Centre</th><th>DC ART sites</th><th>Satellite ART Sites</th></tr>
<tr><td colspan="3">• Medical history (new symptoms) including TB screening at every visit
• Physical examination
• Screening and management of OIs (including TB) and co-morbidities if there is any
• Provide prophylaxis according to Clinical Guidelines including Cotrimoxazole, Isoniazid Prophylaxis Therapy and other prophylaxis (if feasible in DC sites/satellite ART sites)</td></tr>
<tr><td>• ART management (Rapid ART initiation within 1-2 weeks after the HIV diagnosis for clinically well patients without severe OI or without risk of sub-optimal adherence)
• Plan follow up visits
• Address adherence
• Plan for decentralization if criteria are met. (see the criteria below)</td><td rowspan="2">• Initiate* ART for HIV/TB co-infected patients and HIV positive pregnant women
• For other patients, refer to an ART Center for ART initiation
• HIV Testing for verification prior to ART initiation</td><td rowspan="2">• Refer to NAP for ART initiation
• Provide ART maintenance, care and support services according to the specific collaborative agreement between NAP and the satellite ART site</td></tr>
<tr><td>Criteria for decentralization
The main ART Centers shall refer the patients on ART to Decentralized ART Sites when ALL of the following criteria are fulfilled:
1. On ART for at least 3 months (optimal 6 months)
2. No sign and symptoms of WHO clinical stage 2, 3 or 4
3. If CD4 is available, CD4 is higher than baseline level and higher than 200
4. The DC site is closer to residence and/or convenient for the patient
5. The patient is well informed and agrees to receive ART at a DC site/satellite ART site.</td></tr>
</table>

**Please note that some selected ART DC sites are allowed to initiate ART for HIV positive PWID.*

8.1.2 On arrival of transferred-in patients who are already stable on ART

- Register the patients and inform the arrival of patients to the centers where they are referred from
- Clinical Evaluation and monitoring(TB Screening on every visits)
- Dispense the prescribed ARV
- Treat minor OI if there any and prescribe OI prophylaxis as necessary
- Provide counselling on adherence and support adherence
- Plan and monitor follow up laboratory investigations according to the guidelines
- Timely referral to main center whenever necessary
- Establish linkages for following services- for examples, TB evaluation, PMTCT services and intervention, etc.

Note: If Basic Health Staff are seeing the stable patients, use Basic Health Staff Consultation Checklist in 'Job aids for clinical management of HIV infection, 2019'.

8.1.3 Recommended Service Delivery Model for ARV prescription

Based on the growing evidence that reduced frequency of clinical visits among stable individuals was associated wirh significantly better retention, with no difference in mortality outcomes, the following service delivery models should be implemented in ART facilities to alleviate the burden on health systems and on people taking ART.

Reducing the frequency of clinic visits and drug pick-up

- Stable patients who are on ART for at least 6-12 months can be seen less frequently at ART facilities.
- After thorough discussion with the patient clinic visits and ART refill visits can be scheduled every 3-6 months and annually for viral load testing (if routine VL testing is available).
- It is important to reclassify patients after each viral load and/or clinical assessment and address how frequently the patients should be visited.

Proposed differentiated service delivery model of ART provision according to categories of patients

Patient Category	Definition	Seen by	Frequency of appointment	ART supply
Red	• Patient in the first 6 months of ART **AND/OR** • Unstable patients due to ▪ Clinical problem ▪ Adherence problem ▪ Other reasons identified by the care providers • Patients changing ART regimen	MO/ Physician	As needed	As needed
Yellow	• Patients on current ART regimen for 6-12 months **AND** • Stable patients without having any clinical and adherence problem	MO/ Nurse	3-6 monthly	3-6 months' supply
Green	• Patients on current ART regimen 12 months and above **AND** • Stable patients without having any clinical and adherence problem • Virologically suppressed (≤1000 copies/ml)	Nurse (MO if needed)	6 monthly	6 months' supply and *Fast-track ART refill** on every alternate visit (up to 3 months' supply in some exceptional cases)

Note: The category of patient must be reassessed and reclassified at every visit.

*Fast-track ART Refill

- Patient under "Green" category can be put on "Fast-Track ART Refill" by accessing the pharmacy directly for refills when they come to the clinic.
- Once registration is completed, the receptionist/ registrar directs the client to the pharmacy or designated dispensing point for drug pick up.
- At the time of drug pick up, a pharmacist or healthcare worker administers a quick TB symptom screening and performs adherence check.
- Clients should be given the option to see a clinician if there is any concern noted after the check is completed.

8.2 Technical information: "Management of HIV in adults and adolescents"

8.2.1 Management of OI and Comorbidities

8.2.1.1 Prophylaxis

Cotrimoxazole prophylaxis

Cotrimoxazole is potentially useful for the prevention and treatment of a wide range of infections in HIV positive patients including PCP and toxoplasmosis and other serious bacterial infections.

Cotrimoxazole 1 tablet per day (Double-strength - Sulfamethaxazole 800 mg/ Trimethoprim 160 mg = 960 mg) (or) 2 tablets per day (Single-strength 400mg/80mg = 480 mg).

Criteria for initiating, discontinuing and monitoring Cotrimoxazole Preventive Therapy

Age	Criteria for initiation	Criteria for discontinuation [a]
HIV exposed infant	Give to all exposed infants, starting at 4–6 weeks after birth	Until the risk of HIV transmission ends or HIV infection is excluded
Children and adolescents with HIV	Initiate all regardless of WHO clinical stage or CD4 count. **As a priority, initiate in:** all less than 5 years of age; all older than 5 years of age with severe HIV disease (Stage 3 or 4) or CD4 count <350cells/mm^3	May be discontinued in 5 years of age and older who are clinically stable, with evidence of immune recovery [b] and/or viral suppression on ART.
Adults (including pregnant women)	Any WHO stage and CD4 count <350 cells/mm^3 or WHO 3 or 4 irrespective of CD4	May be discontinued in those who are clinically stable [c], with evidence of immune recovery and/or viral suppression on ART [d].

[a] Discontinue if the person has Stevens-Johnson syndrome, severe liver disease, severe anaemia, severe pancytopenia or negative HIV status.

[b] Parameter for immune recovery in children when >5 years old: CD4 cell count >350 cells/mm^3, with viral load suppression.

[c] Clinically stable adults are defined as those individuals on ART for at least one year without any new WHO clinical stage 2, 3 or 4 events.

[d] CD4 count >350 cells/mm^3, with viral load suppression, is considered indicative of immune recovery.

When to discontinue prophylactic drugs for some major OIs

OIs	When to stop
Toxoplasmosis	After 6 weeks of standard treatment for toxoplasmosis, Cotrimoxazole can be given as secondary prophylaxis. Criteria for discontinuation is the same as CPT.
Cryptococcosis	Secondary prophylaxis with fluconazole 200 mg OD can be stopped when patients - are stable and adherent to ART - have been on the maintenance therapy for at least 1 year, AND - have a CD4 cell count of greater than or equal to 200 cells/ mm^3 (two measurements 6 months apart).
Penicilliosis	Secondary prophylaxis with Itraconazole 100 mg OD can be stopped - when CD4 count increases to >100/mm^3 with ART

Treatment of latent TB infection

Provision of Isoniazid prophylactic Therapy (IPT) for latent TB infection is effective in reducing the overall risk of developing TB in HIV positive persons by 33% up to 64%. Adults and adolescents with HIV who do not have any one of the symptoms of current cough, fever, weight loss, night sweats or lymph node enlargement have a very low probability of active TB and should be offered IPT.

IPT should be given to such individuals regardless of the degree of immunosuppression, ART status, pregnancy and prior TB treatment history. For patients with prior IPT history more than two years ago, IPT can be considered again if the patient has risk of developing TB, for example, close contact with TB cases.

Children living with HIV older than 12 months of age who do not have poor weight gain, fever or current cough and have no contact with a TB case are unlikely to have active TB disease and should receive IPT for 6 months at the dosage of 10mg/kg/day.

In children with HIV who are less than 12 months of age, only those who have contact with a TB case and who are evaluated for TB using investigations such as chest X-ray should receive 6 months of IPT if the evaluation shows no TB disease.

The recommended duration of IPT in Myanmar is 6 months for all.

Isoniazid dosage according to body weight

Weight range (kg)	Number of 100mg tablets of INH to be administered per dose (total dose 10mg/kg/day)	Dose given (mg)
<5	½ tablet	50
5- 9.9	1 tablet	100
10 – 13.9	1 ½ tablet	150
14-19.9	2 tablets	200
20-24.9	2 ½ tablets	250
≥25	3 tablets	300

8.2.1.2 Management of common OIs

HIV-TB coinfection

Coinfection of HIV and TB was responsible for around 4,900 deaths in Myanmar in 2017 out of an estimated 31,900 deaths for all TB forms. Myanmar ranks as 'high-burden' for TB/HIV and there is a high rate of HIV and TB coinfections. According to the recent Global TB Report 2018, the proportion of TB patients with known HIV status reached about 90% in 2017 with about 9% being HIV positive. Overall, an estimated 17,000 people living with HIV developed tuberculosis in Myanmar in 2017, and about 60% of them were detected and notified in that year.

The national programmes plan to implement the following collaborative HIV and TB activities.

1. Intensify TB case finding in HIV positive patients
    a. Every patients must be screened for TB at every visit using 5 questionnaire for screening of TB (Cough, Fever, Weight Loss, Night Sweat and Lymph Node Enlargement) and must be documented
    b. Diagnosis of TB will depend on the clinical symptoms. If suspected sputum smears for AFB should always be performed. However, many a time in very ill cases diagnosis will have to depend mainly on clinical features and treatment may have to be started on after excluding other differential diagnosis

c. Xpert MTB/RIF is recommended as the primary TB diagnostic test among people living with HIV in order to speed up TB diagnosis and to recognize MDR-TB..

2. Provide IPT for PLHIV after exclusion of active TB.
3. Offer HTS for presumptive and diagnosed TB cases.
4. Provide Cotrimoxazole prophylaxis to HIV positive TB cases.
5. Initiate ART for HIV positive presumptive and diagnosed TB cases if ART initiation service is available in TB diagnosis facilities on site or refer to ART initiation sites. Strengthen tracking of HIV positive cases to ART. Upon receiving the referred patients, receiving centre should provide feedback to the centre referred from.
6. Strengthen adherence and patient follow-up for HIV positive TB cases on ART and HIV positive cases on IPT.
7. Ensure adequate TB infection control.

TB Regimens

Treatment Regimen		Combined drug
1. New cases		2 (H R Z E) / 4 (H R)
2. Retreatment cases (All retreatment cases must be tested with GeneXpert.)	If MTB (+)/ RR (-),	2 (H R Z E) / 4 (H R)
	If MTB (+)/ RR (+),	MDR-TB Regimen
	If GeneXpert testing is not possible and there is a need to re-start treatment, as an exception,	3 (H R Z E) / 5 (H R E)

Note: For more details on TB regimens, please refer to "TB Control Manual for Basic Health Staff, NTP, DOH, MOH, July 2014".

ART recommendations for HIV/TB co-infection

- Start ART in HIV infected individuals with active TB irrespective of CD4 counts.
- Start TB treatment first followed by ART as early as possible (within the first 2 to 8 weeks of Anti-TB Treatment).
- HIV positive TB patients with profound immunosuppression (e.g. CD4

count less than 50 ells/mm^3) should receive ART within the first 2 weeks of initiating TB treatment.

Note: For more details on this important topic of TB/HIV, please refer to 'Guidelines for the Programmatic Management of TB/HIV in Myanmar, NTP, NAP, July 2017.

Note: For details management of OIs, refer to the The Guidelines for the clinical management of HIV infection in Myanmar. Fifth Edition. National AIDS Programme, Department of Public Health, Ministry of Health and Sports, Myanmar. 2017.

8.2.2 ART eligibility and provision

Recommendations on when to start ART in adults (pregnant women) and adolescents

To initiate ART regardless of WHO clinical stage and at any CD4 cell count.

As a priority, initiate those:

- severe HIV clinical disease (WHO clinical stage 3 or 4)
- CD4 count ≤ 350mm^3

ART regimens for adults, adolescents, pregnant and breastfeeding women [a]

First-line ART	Preferred first-line regimens	Alternative first-line regimens
Adults and adolescents	TDF + 3TC (or FTC) + EFV [b]	AZT + 3TC + EFV TDF + 3TC (or FTC) + DTG [c] ABC + 3TC + EFV [d]
Pregnant or breastfeeding women	TDF + 3TC (or FTC) + EFV	AZT + 3TC + EFV TDF + 3TC (or FTC) + NVP ABC + 3TC + EFV [d]

[a] ART regimens for HIV+ TB cases are same as the regimens for HIV+ cases without TB

[b] TDF should be avoided for HIV+ MDR-TB cases who receive standard MDR-TB regimen including Amikacin.

[c] Safety and efficacy data on the use of DTG in pregnant women, people living with HIV/TB coinfection and adolescents younger than 12 years of age are not yet available.

[d] ABC based regimen may be considered for pregnant women under special circumstances which may include situations where preferred or alternative or alternative regimens may not be available or suitable because of significant toxicities, anticipated drug-drug interactions, drug procurement and supply management issues, or for other reasons.

8.2.3 Follow-up monitoring (clinical and laboratory)

8.2.3.1 Clinical monitoring of ART

On every follow up visit, check

- side effects of ART
- progress of the patients (clinical, immunological, virological if available)
- address adherence
- suspected failure of ART

8.2.3.2 Laboratory monitoring of ART

Phase of HIV management	Recommended	Desirable
HIV diagnosis	HIV testing (serology for adults and children 18 months or older; EID for children younger than 18 months) CD4 cell count [a] TB symptom screening	HBV (HBsAg)[b] and HCV serology Cryptococcus antigen if CD4 cell count ≤100 cells/mm3[c] Screening for STIs Pregnancy test to assess if ART initiation should be prioritized to prevent HIV transmission to the child Assessment for major non-communicable chronic diseases and co-morbidities [d]
Follow-up before ART	CD4 cell count (every 6–12 months in circumstances where ART initiation is delayed)	
ART initiation		Haemoglobin test for starting AZT [e*] Serum creatinine and estimated glomerular filtration rate (eGFR) or starting TDF [f*] Alanine aminotransferase for NVP [g*] Pregnancy test Blood pressure measurement Baseline CD4 cell count
Receiving ART	HIV viral load (at 6 months and 12 months after initiating ART and every 12 months thereafter). If routine viral load is not available, targeted viral load testing is recommended. CD4 cell count every 6 months until patients are stable on ART	Serum creatinine and eGFR for TDF [f] Pregnancy test, especially for women of childbearing age not receiving family planning and on treatment with DTG or low-dose EFV
Suspected treatment failure	Serum creatinine and eGFR for TDF [f] pregnancy test, especially for women of childbearing age not receiving family planning and on treatment with DTG or low-dose EFV	HBV (HBsAg) serology [a,h] (before switching ART regimen if this testing was not done or if the result was negative at baseline and the patient was not vaccinated thereafter)

[a] CD4 count is recommended for OI management but not necessarily for ART eligibility.

[b] If feasible, HBsAg testing should be performed at baseline to identify people with HIV and HBV coinfection and who should therefore initiate TDF-containing ART.

[c] Can be considered in settings with a high prevalence of cryptococcal antigenaemia (>3%).

[d] Consider assessing for the presence of chronic conditions that can influence ART management, such as hypertension and other cardiovascular diseases, diabetes and TB according to the WHO Package of Essential NCD interventions (PEN), mental health Gap Action Programme (mhGAP) or national standard protocols (see section 5.3 "Prevention, screening and management of other comorbidities and chronic care for people living with HIV"). Monitoring may include a range of tests, including serum creatinine and estimated glomerular filtration rate (eGFR), serum phosphate and urine dipsticks for proteinuria and glycosuria. See formula for eGFR in the footnote to section 4.6.3.

[e] Among children and adults with a high risk of adverse events associated with AZT (low CD4 or low BMI).

[f] Among people with a high risk of adverse events associated with TDF: underlying renal disease, older age group, low body mass index (BMI), diabetes, hypertension and concomitant use of a boosted PI or potential nephrotoxic drugs.

[g] Among people with a high risk of adverse events associated with NVP, such as being ART-naive, women with HIV with a CD4 count >250 cells/mm3 and hepatitis C virus (HCV) coinfection. However, liver enzymes have low predictive value for monitoring NVP toxicity.

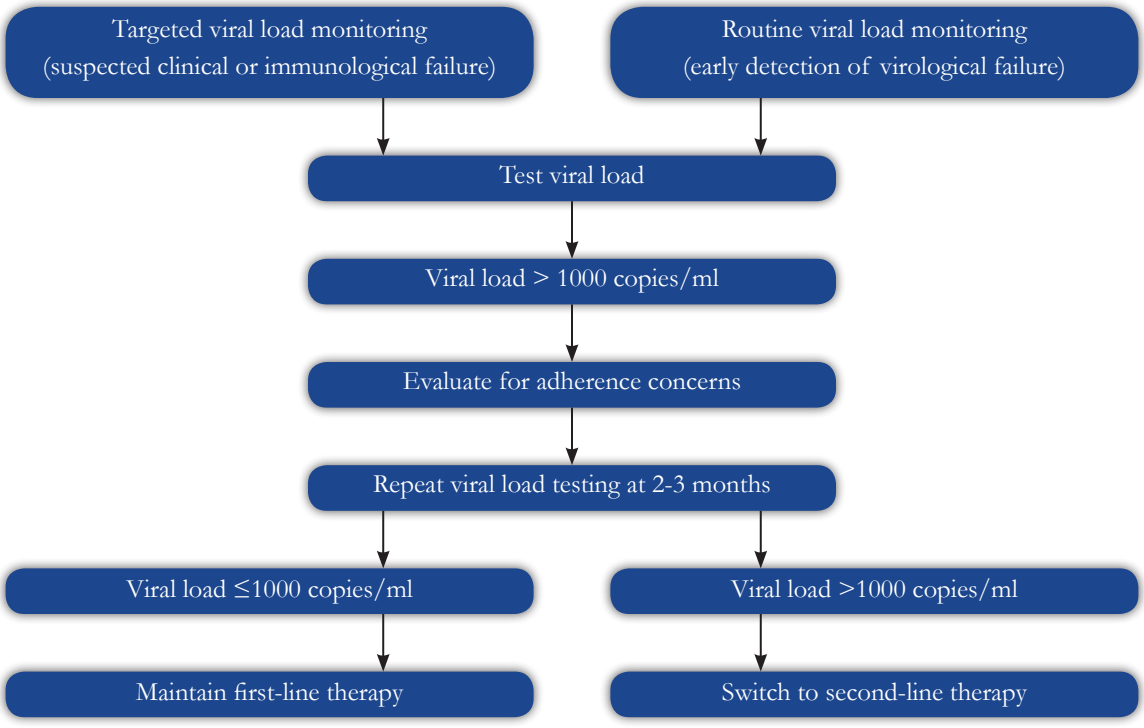
[h] For HIV/HBV coinfected individuals who are already using TDF-containing regimens and develop ART failure, this NRTI should be maintained regardless of the selected second-line regimen.

[*] Haemoglobin, serum creatinine and estimated glomerular filtration rate (eGFR), ALT, AST, Cryptococcus antigen and pregnancy test should be prioritized as baseline assessment for ART initiation when these laboratory services are available.

Viral Load

Viral load is recommended as the preferred monitoring approach to diagnose and confirm treatment failure. Measuring viral load can help to discriminate between treatment failure and non-adherence. Viral load should be monitored routinely at 6 months, at 12 months, and then every 12 months thereafter if the patient is stable on ART to detect treatment failure earlier and more accurately. Please see the following algorithm for defining failure to treatment using Viral Load Testing.

Figure 11: Algorithm for defining failure to treatment using Viral Load Testing



Note: For more information on major toxicities of the commonly used drugs, risk factors for these toxicities and suggested management, please refer to 'The Guidelines for the Clinical Management of HIV Infection in Myanmar, Fifth Edition. National AIDS Programme, Department of Public Health, Ministry of Health and Sports, Myanmar, 2017'.

8.3 Technical information: "Management of pediatric HIV cases"

8.3.1 Recommendations on when to start ART in children and infants

To initiate ART regardless of WHO clinical stage or at any CD4 cell count.

As a priority, initiate those:

- All children under 2 years of age
- Children younger than 5 years of age with WHO clinical stage 3 or 4 or CD4 count ≤ 750 mm^3 or CD4 percentage <25%.
- Children 5 years of age and older with WHO clinical stage 3 or 4 or CD4 count ≤350 mm^3.

8.3.2 ART regimens for children

First-line ART regimens for children 3-10 years of age

Preferred	ABC + 3TC + EFV
Alternative	ABC + 3TC + NVP AZT + 3TC + EFV AZT + 3TC + NVP TDF + 3TC (or FTC) + EFV TDF + 3TC (or FTC) + NVP

First line ART regimen for children younger than 3 years

Preferred regimens	ABC[a] or AZT + 3TC + LPV/r
Alternative regimens	ABC or AZT + 3TC + NVP
Special circumstances [b]	ABC or AZT + 3TC + RAL[c]

[a] Based on the general principle of using non-thymidine analogues in the first-line regimens and thymidine analogues in the second-line regimens, ABC should be considered as the preferred NRTI whenever possible.

[b] Special circumstances may include situations where preferred or alternative regimens may not be available or suitable because of significant toxicities, anticipated drug to drug interactions, drug procurement and supply management issues for other reasons.

[c] RAL is approved for use in infants and children from the age of 4 weeks, but there is very limited evidence to inform the use of raltegravir (RAL) as a first-line drug in infants and young children.

8.3.3 Pediatric doses

In Pediatric management of ART, it is important to monitor the progress of the weight of childern and adapt the dosages accordingly.

For detailed information regarding Pediatric Does, refer to Guidelines for the clinical management of HIV infection in Myanmar, fifth edition, NAP, 2017.

8.4 Retention in care

8.4.1 Supporting adherence

Patients to be initiated on ART should receive counselling sessions to promote increased adherence and retention prior to ART initiation. Initial patient education should cover basic information about HIV, the ARV drugs, expected adverse effects, preparing for treatment and adherence to ART. However, adherence preparation should not delay treatment initiation.

In addition, adherence to treatment counselling is conducted at every visit.

Each facility visit brings opportunity for assessing and supporting treatment adherence. At every visit, check

- Number of doses missed in last 3 days
- Number of doses missed since last visit
- whether doses taken at correct time
- whether dose is correct
- Reason for failure of adherence
- Reinforce adherence including peer counselling, use of mobile phone text messages, use of reminder devices

8.4.2 Tracking patients

Tracking patients by making phone calls/sending SMS or home visit should be done to

- referred patients from ART Centre to ART DC Site for the first time treatment at decentralized site
- patients for their follow up visits
- patients who become lost to follow up
- patients who need earlier follow-up visit according to the investigation result

HIV Focal person/assigned data staff should generate a list of patients for identified visit dates. The focal person and peer supporter should review patient files to confirm and obtain contact details. The patients can be reminded through phone calls/SMS by HIV Focal person or by patient volunteer before their appointment.

If the patients missed their appointment, they need to be tracked via phone calls or home visit till the definitive response or outcome is received. Therefore, it is important to record detailed information of the patients including address and phone number (if the patients have phone) on White Cards to be able to track more effectively in case of missed appointment. However, in area where mobile network or landlines are not available, patients tracking can be done by linking with peer network or Community Based Organizations (e.g. a group leader or a representative is assigned to do tracking for a particular village track or area).

Assigned data staff/ HIV Focal person updates the patient outcomes in ART register (dead, lost to follow up, stopped treatment for medical/social reasons).

Chapter 9: Laboratory Services

9.1 HIV related laboratory services

The facilities providing HIV related services at the township level should have the following laboratory services.

- HIV Rapid Diagnostic Testing (Screening and Confirmatory)
- Early Infant Diagnosis (EID) – DBS collection
- Hemoglobin
- CD4 Count Testing
- Sputum for AFB

For the facilities that do not have those services and/or in need of advanced laboratory services such as Viral Load Testing, ALT/AST, Creatinine, GeneXpert MTB/RIF etc., patients or specimens should be sent to other referral facilities. Unless the result return in a timely manner, careful follow-up should be conducted.

9.2 Specimen collection

The following table provides a quick guidance for collection of specimen to be sent to laboratory.

Name of test	Type of sample				Sample amount	Type of container	Send to laboratory	
	Blood			Other			At temperature	Within[a]
	Whole Blood	Serum	Plasma					
HIV rapid diagnostic test[b]	Take finger prick.							
	✓				2-3 ml	Vacutainer Plain tube (Red Top)	RT[c]	24 hours
		✓			1 ml	Vacutainer Plain tube (Red Top)	2-8°C	7 days
Haemoglobin	Take finger prick.							
	✓				2-3 ml	Vacutainer EDTA tube (Purple Top)	RT[c]	Few hours
							2-8°C	7 days

Name of test	Type of sample				Sample amount	Type of container	Send to laboratory	
	Blood			Other			At temperature	Within[a]
	Whole Blood	Serum	Plasma					
CD4, CD4%	✓				3-5 ml[d]	Vacutainer EDTA tube (Purple Top)	RT[e]	4 hours
							2-8°C	24 hours
HIV viral load (Abbott Real-time PCR)	✓				5 ml	Vacutainer EDTA tube (Purple Top)	RT[e]	6 hours
							2-8°C	24 hours
			✓		2 ml	Vacutainer Plain tube (Red Top) or Cryo Tube	RT[e]	24 hours
							2-8°C	5 days
							-20°C	6 weeks
HIV viral load (Xpert HIV-1 VL)	✓				5 ml	Vacutainer EDTA tube (Purple Top)	RT[e]	6 hours
							2-8°C	72 hours
			✓		2.5 ml	Vacutainer Plain tube (Red Top) or Cryo Tube	RT[e]	24 hours
							2-8°C	3-5 days
							-20°C	6 weeks
HIV DNA test for Early Infant Diagnosis	DBS (Dried Blood Spot)				5 circles (at least 3 complete circles)	Packed with glassine paper, desiccant packs and humidity indicator card in a Zip lock bag.	RT[e]	Up to 1 month
SGPT, Cholesterol, Creatinine	✓				3 ml	Vacutainer plain tube (Red Top)	RT[e]	Same day
Na, K, Cl		✓			2ml		2-8°C	36 hours 24 hours (for electrolytes)
HBs Antigen for serological diagnosis of HBV		✓			1 ml	Vacutainer plain tube (Red Top)	RT[e]	Same day
							2-8°C	7 days
							-20°C	Long term
Anti-HCV antibody for serological diagnosis		✓			1 ml	Vacutainer plain tube (Red Top)	RT[e]	Same day
							2-8°C	7 days
							-20°C	Long term
Sputum for AFB microscopy and GeneXpert				Sputum		Leak-proof wide mouth sputum container with screw on lid.	RT[e]	2 hours
							4°C	Store until delivery is possible.
Cryptococcal antigen test		✓			1-2 ml	Vacutainer Plain tube (Red Top)	RT[e]	2 hours
							2-8°C	24 hours
				CSF	1 ml	Sterile wide-mouth screw cap bottle	RT[e]	2 hours
							2-8°C	24 hours

Name of test	Type of sample				Sample amount	Type of container	Send to laboratory	
	Blood			Other			At temperature	Within[a]
	Whole Blood	Serum	Plasma					
CSF (routine) WBC, Gram stain for organisms				CSF	2 ml	Sterile wide-mouth screw cap bottle	RT[c]	Immediately
CSF (AFB microscopy/ Cryptococci)				CSF	2 ml	Sterile wide-mouth screw cap bottle	RT[c]	2 hours
Skin Scrape/ snip for Cryptococcus, Penicillium, fungal elements				Skin scraping		Sterile petridishes or between two clean microscope slides	RT[c]	24 hours

[a] *Specimens should be sent to the laboratory as early as possible. If not, specimens should be sent to laboratory within the time period mentioned in the table.*

[b] *HIV rapid diagnostic testing algorithm can be also seen in chapter 5.*

[c] *RT = room temperature (between 15ºC and 30ºC)*

[d] *After collection, please shake slowly 8-10 times.*

Reminder: Always follow Standard Precautions for any type of testing. (see Annex 4)

9.3 Commodities supplies and use

- Laboratory supplies such as Test Kits for HIV and other testing, reagents for CD4 cell machine, consumables, other biochemical analyses and devices must be made available at all time and no stock out.
- Commodities needs and forecasting should be performed using the forms and tools provided by the NAP.
- The machines must be maintained and cleaned regularly according to the manufacturers instructions.
- Laboratory Technician is responsible for forecasting and ordering of laboratory related supplies and commodities. He/she is also responsible for proper storage of laboratory reagents and commodities and proper maintenance of laboratory equipment.

9.4 Quality assurance

External quality assessment (for example NEQAS) and participation in on-site evaluation and monitoring should be considered. Self-assessment should also be done for internal quality assurance by using standardized tool (for example SPI-RT Checklist for HTS).

Chapter 10: Supply Management

Ensuring un-interrupted supply of HIV commodities is crucial since the consequence of supply interruption can be dire, including anti-retroviral and antibiotic drug resistance, which could have a wider global impact on the availability of drugs for treatment.

It is therefore paramount that supply chain and systems are treated as an important and critical function in planning and provision of HIV services.

10.1 Requisition and procedures

Requisitions is an essential step to facilitate inventory control and provide a tracing mechanism for ensuring timely ordering of the right health commodities in the right time. Stock levels are routinely monitored and maintained within the minimum and maximum stock level to eliminate the risk of stock-out. ART facilities have to submit report and requisition form in advance to avoid shortage or stock out drugs at their sites.

The in charge of the store or his/her designated person estimates the stock needs according to past consumption data, minimum and maximum stock level including safety stock (Buffer stock), current stock levels and its expiry date, stocks already under order or in process, lead time required for stock arrival and also according to the scale up plan of ART.

The store in charge or designated person completes the requisition/indent form and forwards it to Regional Officer/Township Medical Officer for approval.

For each indent form enter

- stock in hand with expiry date and
- item requested.

Regional Officer/Township Medical Officer returns the signed report and indent form to the store in charge, who submits the indent form for fulfilment.

The store in charge then submit the requisition to higher store. Each requisition must include 3 documents: completely filled indent form, official covered letter and the respective report (e.g. ART report, HTS report).

- Original copy of indent form is forwarded to appropriate higher store
- One copy of indent form is retained by the requested store
- One copy is retained by person signing copy of report and indent form

The higher level store validates the requisition by providing approval/adjustment and record for every requisition approval date.

10.2 Receiving

Upon receiving the requested items, it is important to verify the goods received in store in terms of quantity, quality and specification and determine the need for remedial action when necessary.

If discrepancies are found, record discrepancy details including batch mismatch and variation in information for individual items on the delivery note/waybill and ask the transporter/deliveryman to sign and acknowledge, and also inform Upper Level Store for the corrective action.

If no discrepancies, the store in charge or his/her designated person signs on the delivery note/waybill and hand it to the transporter/deliveryman.

After goods are checked and approved by using unpacking and checking form, release stock and move them for storage in the appropriate place in the warehouse and creates/updates bin card/stock card per item wise.

10.3 Storage and handling

Storage and handling includes maintaining appropriate environmental conditions for stocks and maintaining proper cold chain conditions for cold chain items. Stock records must be accurate and must include detailed information such as batch number, expiry date, quantity issued and stock balance with signature. Detailed physical inventory should be conducted in order to get the accurate stock records and to be able to issue appropriate alerts in a timely manner.

Examine expiry dates of existing stock regularly and make sure that bin cards/stock cards are updated. Store the supply according to LMIS SOP and manufacturers' direction.

Cartons should not be stacked directly in contact with the floor or the wall. Condoms and other latex products should be stored away from electronic motors and fluorescent lights. Narcotics and other controlled substances must keep under adequate security. Inflammable products should also be stored separately using appropriate fire safety precautions. Damaged or expired products should be separated in an isolated area and disposed according to the instruction. Update stock record card correctly on a regular basic including stock in hand, loss and adjustment, expiry date, lot/batch number, etc. Cold storage should always be maintained properly at controlled temperature.

10.4 Recording and reporting

Recording and reporting is the procedure of collecting and processing the data to support decision making to ensure uninterrupted medical supply.

All the stock received must be documented in stock keeping records: Stock Card, and Store Book.

All issues of stocks, both to other stores and patients must be documented in transaction records regularly.

Supply documents such as Indent Form, Issue Voucher, Unpacking and Checking Form, Physical Inventory, etc. must be kept properly Also keep the consumption records from patient register, patient dispensing records.

At the end of the reporting period (monthly or quarterly), each facility should prepare a summary stock and consumption report by collecting essential data from stock keeping, transaction and consumption records before the reporting deadline.

10.5 Monitoring the stock level

Implementing the procedure of monitoring stock level is to prevent the risk of stock out and overstocking and take timely action to achieve efficient management of stock.

The in charge of the store or his/her designated person should fix stock level; minimum stock level (1 month stock of average monthly consumption at township level) and maximum stock level (3 months stock of average monthly consumption township level). The coverage months is calculated from the stock balance and average monthly consumption (AMC). (Number of months stock will cover = stock balance / AMC)

Check the shelf-life and remove the quantity which is going to be expired and damage ones from the balance stock.

Check the lead time of next supply and place emergency order if stock is not meeting minimum stock level (risk of stock out).

In case of over stock (stock level is more than the maximum level), report to upper level store for redistribution of the over stock drug/ commodities.

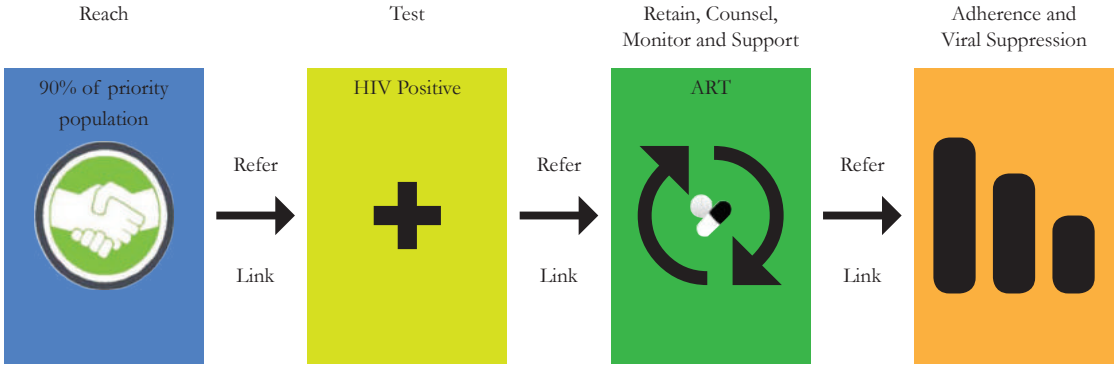
Note: For detailed information, please refer to Standard Operating Procedures (SOPs) for Logistics Management Information System (LMIS), MOHS/ UNOPS, November 2015.

Chapter 11: Referral and Linkages

The referral and linkages are essential along the HIV continuum of care (CoC), i.e., from initial diagnosis to achieving the viral suppression in order to achieve the goal and strategic milestones of Myanmar NSP on HIV and AIDS (2016-2020).

It is important to note that movement along the continuum of care is not always in one direction. For example a person who achieved viral suppression might fall back to an earlier step if they do not continue to receive adequate medical care.

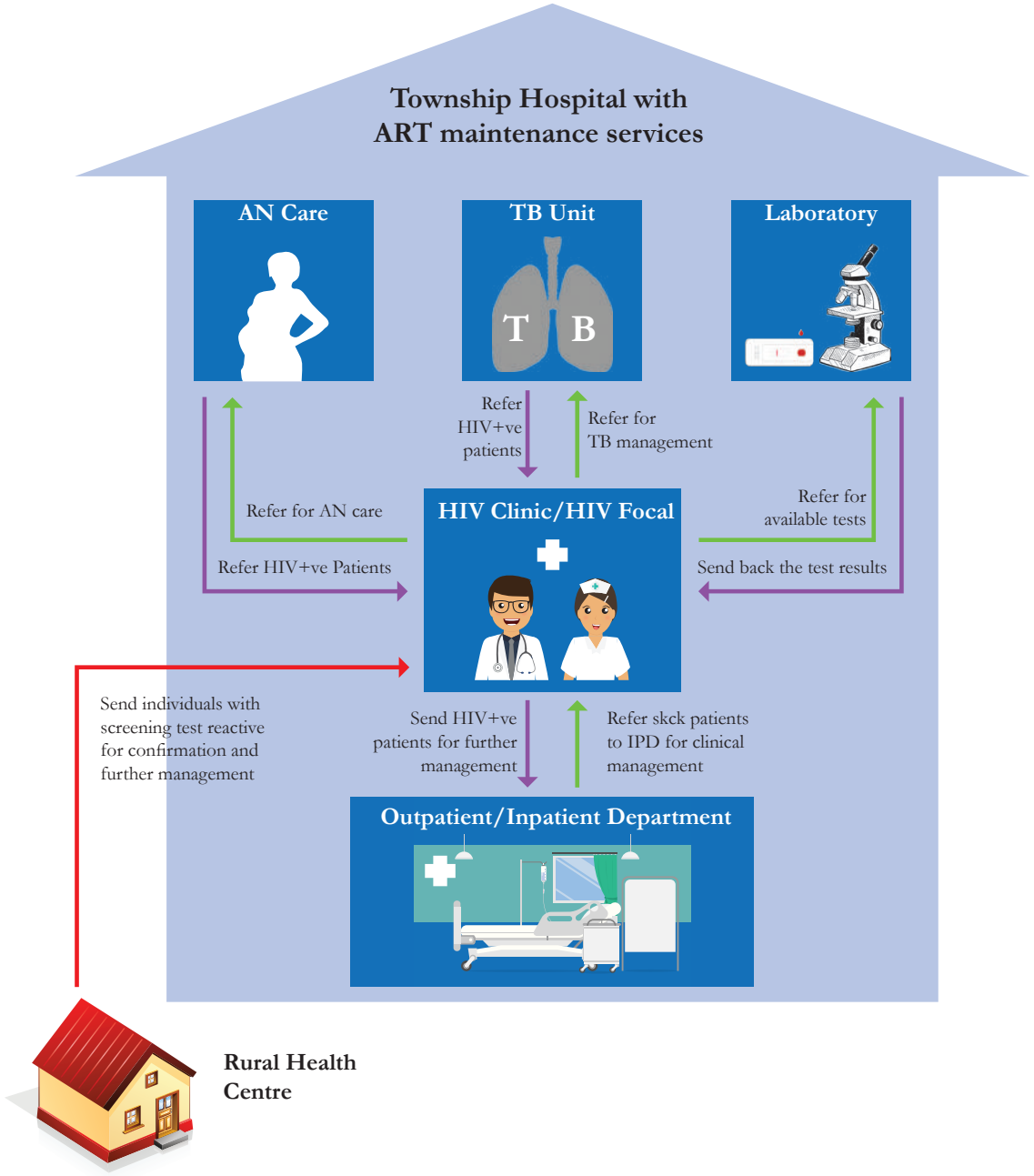
Figure 12: HIV Continuum of Care



Referral and linkages should be strengthened at different steps with different approaches. It could be within the same health facility, between different health facilities or service providers, or even laeral refferal. The standard refferal procedures should always be followed. And mapping of the different stakehoders providing different services within the area/region can maximize the effectiveness of refferal and linkages.

11.1 Referral and linkages within the same facility with ART maintenance services (DC ART site)

Figure 13: Referral and linkages within an ART DC site at a Township Hospital



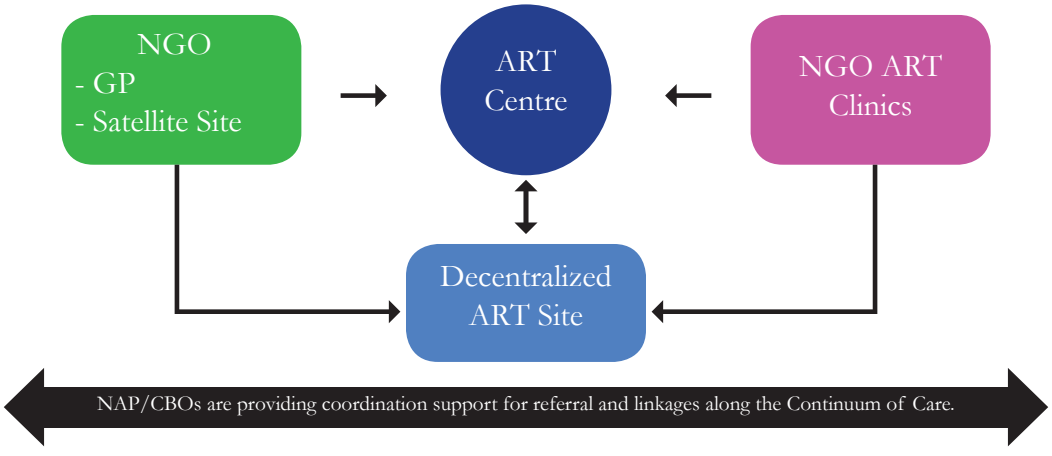
Above figure (Fig 13) is an example showing referral and linkages within a township hospital. Some departments for example TB Department, AN Care or Inpatient Department may provide HIV testing services on their own but they will later refer the patients tested positive to HIV clinic/ HIV Focal for further HIV management. HIV positive pregnant women and mothers from RHC are also referred to HIV Focal in a township hospital.

On the other hand, HIV Focal can refer the patients back to other service providers within the same facility. For example, every newly tested HIV positive patient will be sent to Laboratory for CD4 testing or patients diagnosed with Tuberculosis to TB Unit for Anti TB Treatment. Coordination by MDT (please refer to Chapter 2) is the key to ensure all these internal referral processes within the heath facility are smooth and in a timely manner in order to provide quality comprehensive care to PLHIV.

11.2 Referral and linkages between different facilities/service providers

It is also necessary for a health facility (e.g. Township Hospital) to link with and form relationships with different service providers /partners and community organization to ensure that different services are integrated into the existing infrastructure. These linkages and referrals are important for facilitating comprehensive care for patients as well as identifying resources that are available and cannot be provided by the program. For instance, community organizations can provide support and home based care for patients. They are also key partners and informants for the program on community issues and concerns.

Figure 14: Referral and linkages between different facilities/service providers



This is an example showing referral and linkages between different facilities/service providers.

As shown in the figure, one of the referral and linkages is between DC ART Site and ART Center. Newly diagnosed patients are referred from DC ART Site to ART Center where ART is initiated and patients are stabilized. When the criteria for decentralization are met, patients will be decentralized back to DC ART Site. The DC Site will provide ART maintenance services. However, the DC ART Site can refer the patient back to ART Center at any point patient becomes unstable.

The referral and linkages could also be between public and private. I/NGOs can refer patients to ART Center for initiation of ART or for the management of medically complicated cases and they refer stable patients to DC ART Site for decentralization.

NAP and CBOs will provide the coordination role throughout the process of referral and linkages among different service providers.

Note: For more details for referring back and forth between ART DC Site and ART Center, please refer to the Standard Operating Procedures (SOP) for the Decentralized Site for ART Services in Myanmar, NAP, April 2017.

11.3 Lateral referral

Linkage and referral could also be between 2 DC ART Sites or 2 ART Centers.

11.4 Referral procedures

Staff should have knowledge of the locally available resources and support so that they can make appropriate referral. They should also have access to "Service Directory" which can provide handy but essential contact information of the health facilities, healthcare providers and Networks involving HIV care and treatment and other related services in the area.

For effective referral mechanism, referral form (see Annex 1) and a copy of PATIENT HIV CARE and ANTIRETROVIRAL (ART) RECORD/ White Card (see Annex 2) should always be used. A completed referral form and a copy of White Card should be sent together with patient. Sending ART sites which do not use White Card (e.g. UNION supported sites) should prepare a White Card filled with past record of the patient before transfer. Provide 3 months' supply of ARVs to the patient.

All referral cases should be monitored and the receiving centre/department/organization

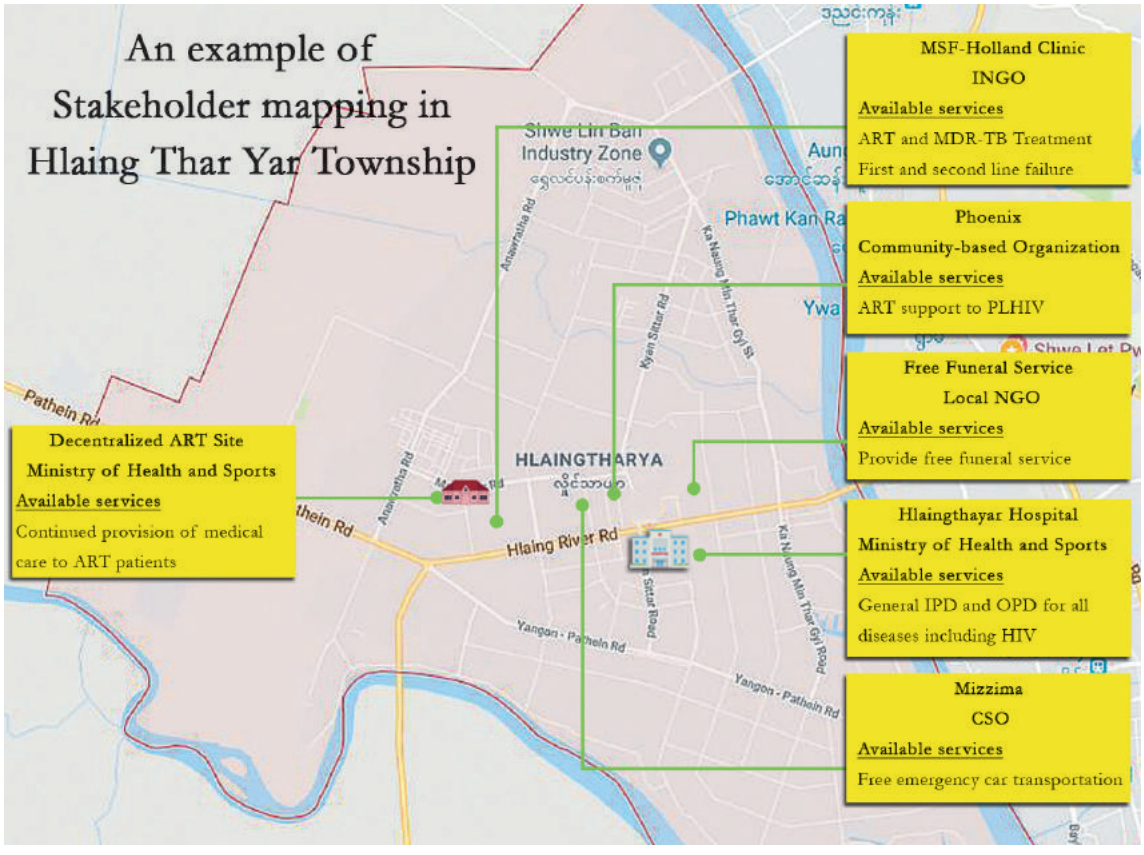
should provide feedback to the centre/department/ organization referred from upon receiving the referred patients. For key populations specifically, the PWID are mostly diagnosed for HIV at the outside of the mainstream health system, and therefore, alternative approach for the linkage to care cascade for them should be considered.

11.5 Stakeholder mapping

Mapping of the different stakeholders (who is doing what and how) at the respective geographic location at different levels (State/Regional and Township/Sub-township level) is also a very good exercise to carry out.

The following figure is an example of Stakeholder mapping in Hlaing Thar Yar Township.

Figure 15: An example of Stakeholder mapping in Hlaing Thar Yar Township



Chapter 12: Involvement of People Living with HIV/AIDS

The primary objective of this chapter is to increase awareness among health care workers regarding the importance of meaningful engagement and involvement of PLHIV. The PLHIV can contribute to the HIV program not only to be successful but also to be sustainable along the continuum of care. Their involvement will result in improving access to HIV services, uptake of services, retention in care and ultimately resulting in viral suppression among their peer. In addition their meaningful involvement can facilitate to enhance the quality of HIV care. Therefore, it is necessary to get the involvement of PLHIV as a part of Multi Disciplinary Team (MDT) in each facility.

12.1 Supporting access and uptake of services

12.1.1 Demand generation

Demand generation for the HIV testing and treatment either at the health facilities or in the community is the first step in the test-treat-retain cascade. PLHIV can serve as a liaison between the facility and community by participating in public awareness campaigns and events (e.g World AIDS Day) and regular peer group meetings. During those activities, they promote awareness about HIV/AIDS in the community and refer people from the community to health facilities for HIV services such as HTS, ART, PMTCT, etc.

12.1.2 Linkage to care and treatment

For those newly diagnosed with HIV/AIDS especially the key affected population, access to health care is arduous and it is very important for them to have linkage to care including ART. PLHIV can assist new patients by accompanying them during referrals between testing point and the facility that can provide further management for HIV.

12.2 Supporting retention in care

12.2.1 Improving HIV literacy among peers

Peer to peer information sharing is effective when the peer PLHIV have sufficient and correct information. As participants in care themselves, PLHIV have invaluable first-hand

knowledge of navigating health care systems, maintaining adherence (for themselves or for their children), and linking to community-based services.

12.2.2 Peer counselling and psycho social support

The PLHIV peer educators can provide counselling and psycho social support if they have interest and are well trained. They can counsel their peer not only related to ART adherence, but also other problems like side effects of ART and their other concerns. The PLHIV can share their experiences and ways to overcome difficulties. They are best placed to understand and respond to the psycho social needs of their peers.

This may result in patients having more acceptances in adherence counselling and support by the peer educators than counsellors those are HIV negative.

Moreover, peer educators can also provide referral and linkage with other social support services for shelter, education, income generation, home based care, etc.

12.2.3 Patients tracking by peers

Number of lost to follow up patients could be reduced if patients who miss their appointments are traced and redirected to the care.

Peer supporters/ PLHA support group can follow up missed appointment as well as lost to follow up patients easily as they were more accepted by their peers.

12.3 Facilitating in quality of care

12.3.1 Reducing workload and stress of the staff

Workload of the staff can be reduced by shifting some of the tasks including health education, counselling, tracing the patients who have missed their appointments or lost to follow up, etc., from healthcare workers to the peer supporter/ PLHIV support groups. In addition, improving the adherence and compliance of the PLHIV by those supporters and support groups can make the work of healthcare providers in long term management of HIV easier. It will also allow health care workers to give priority to those who need them the most.

12.3.2 Promoting mutual understanding

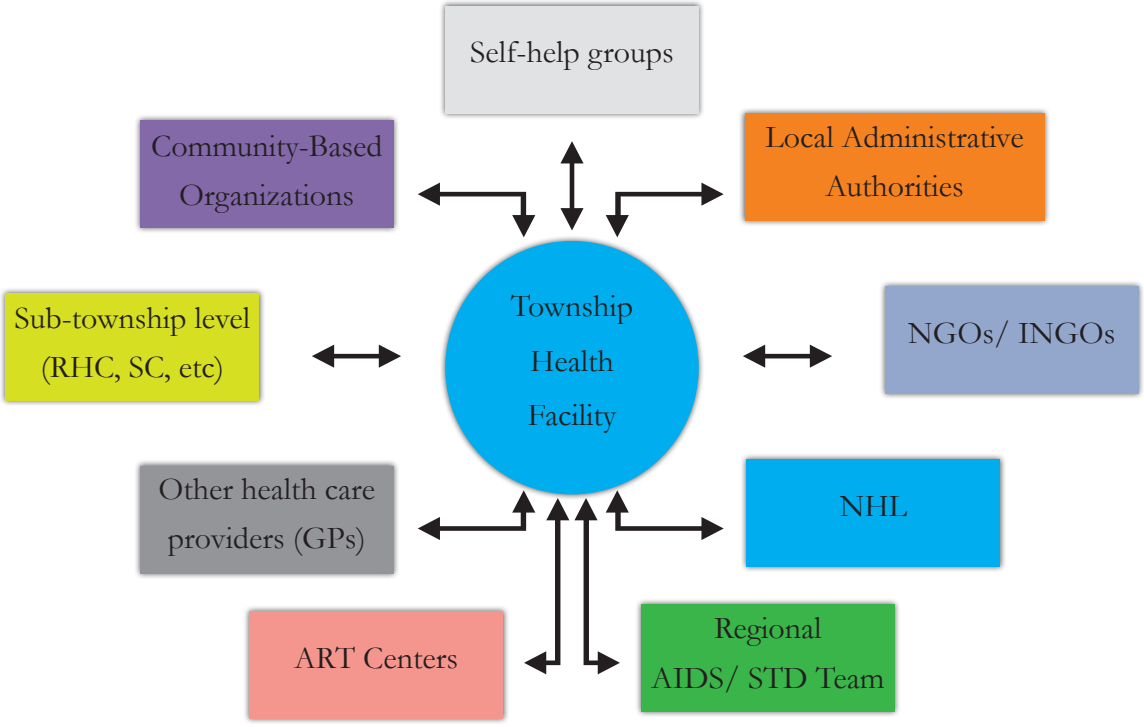
Peer supporters/ peer PLHIV can also act as a bridge between the health care providers and patients. Patients can share their opinions, perceptions and needs to their peers PLHIV more frequently and comfortably than to the health care providers. In such cases, peer PLHIV who are part of the MDT team can share the feedbacks with the service providers in order to address any issues that may affect the quality of services. Health care providers can also give their feedbacks and explanations through peer educators to promote mutual understanding.

Chapter 13: Coordination/Partnership

Since HIV is not just a health issue but a social and development issue, maximum coordination among key stakeholders and beneficiaries is critical for successful implementation of HIV services at different level. Effective coordination and partnership among different stakeholders with similar area of interest can minimize duplication and overlaps, inappropriate strategies and resource allocations. Hence, the collective national response to HIV/AIDS can be improved.

The following figure demonstrates an example of coordination network of a Township Hospital with different stakeholders.

Figure 16: Showing a network among different service providers and stakeholders at the township level for comprehensive package of HIV care and treatment.



Under the leadership of the State and Regional NAP, effective coordination and partnership is required among different stakeholders in ART scaling-up services and decentralization under the strategic directions of Myanmar NSP on HIV and AIDS (2016-2020). Coordination should be used as an opportunity for inclusive convening of all partners allowing for the participation of public facilities (e.g. township hospital), local organizations, international organizations, networks and self-help groups, as well as other health care providers such as general practitioners (GPs).

It is important for local AIDS/STD team to conduct regular coordination and supportive field visits to township/sub-townships health facilities for effective implementation of HIV program including ensuring the referral processes, uninterrupted medical supplies and commodities, etc.

Coordination meetings should also be held regularly and should open opportunities for experience exchange, review and planning, and discussion of how to overcome challenges for the effective implementation. Additionally, transparent mechanisms are required for partners to hold each other mutually accountable for the results. The process should include regular review and analysis of programmatic achievement, identifying challenges and addressing quality improvement measures in the fight against HIV/AIDS.

Chapter 14: Monitoring and Evaluation

With scaling up of HIV programme and increasing access to ART, a strong monitoring system is required at facility, district, provincial, national and international levels.

At facility level, the programme monitoring has the objectives:

- to support the patient management by the ongoing recording and storing of key individual information for prevention, lifelong care and follow-up,
- to serve the facility and drug supply management.

At all levels, monitoring will help to:

- Document the progress in equitable access to HIV care and ART programmes,
- Identify the successes and gaps over time and revise the programmes accordingly,
- Harmonize data collection and indicators across sites.

14.1 Recording and Registration

Ideally, a single patient should have only one indentification (ID) number - "Unique ID". And same ID for one particular patient should be used across all treatment services such as pre-ART, ART, lab services, and pharmacy etc.

Registration for new patients

All new patients should be registered using the national standard registration system as follow:

Clinic code/adult or child /serial number/enrolled year

- Starts with 3 digits standard ART Clinic/DC ART site code provided by NAP (E.g. Hlaing Thar Yar – 126)
- Put 01 for children and 02 for adult
- Followed by the 5 digits serial number for the patient (from 00001 to 99999) for a particular year.
- And the calendar year of first visit in your clinic (e.g. 17 for 2017)

For example, code number of the first adult patient enrolled in Hlaing Thar Yar ART facility in 2017 is 126/02/00001/17. Once the patient receives a registration number in line with the national system, the same number must be used at every clinic visit.

Registration for transfer-in patients

The facilities should also register the transferred-in patients. If the transferred-in patient is from another public sector ART facility or a private facility that has been using national registration system, use the same registration number from the original ART facility. If the patient is transferred-in from non-public/NGO or IHC, a new registration number should be given as follow

Clinic code/adult or child /serial number/ year of ART initation

Please note that year of starting ART must be used for Transfer-in patients and not the date of arriving at the facility. Continue counting from the latest serial number for that particular year.

For example, Hlaing Thar Yar ART facility is now receiving an adult patient transferred in from MSF in October 2018. He has been on ART since 2016. According to register, the latest ART number for 2016 in Hlaing Thar Yar is 126/02/00077/16. So the register number for this particular patient will be 126/02/00078/16 even though the facility is receiving him in 2018.

There may be a scenario in which the facility was not providing any ART service by the time the patients was initiated for ART. Then, the serial number can be started from 00001.

NAP is using the following Records and Registers relating to HIV treatment and HIV stock management:

- Patient HIV Care and ART Treatment Card (White Card)
- Pre-ART Screening Register (Black Book)
- ART Treatment Enrolment Register - Book 1 and 2 (Red Book)
- Drug Dispensing Register (Green Book) (Adult and Child)
- Drug Stock Register (Blue Book)

IPT Treatment Card, TB Screening and IPT Evaluation Register are used for HIV/ TB collaborative activities.

All the medical records and registers must be kept in a secured place but in a way that all required records will be readily available for next visit. Confidentiality must always be ensured.

Figure 17: Register Books

Pre-ART Enrollment Register (Black Book)

ART Treatment Enrollment Register - Book 1 and 2 (Red Book)

Drug Stock Register (Blue Book)

Drug Dispensing Register (Green Book) (Adult and Child)

14.1.1 Patient HIV Care and ART Treatment Card (White Card)

For the patient management and continuity of medical follow-up, individual information has to be recorded in White Card for each patient and at each visit. An example of White Card can be seen in Annex 2. This treatment card should be used for all patients enrolled in HIV care and not only for the patients who stated ART. It should be kept in the clinic in a locked space.

14.1.2 Pre-ART Enrollment Register (Black Book)

Pre-ART Enrollment Register is for registration of any newly diagnosed HIV cases from TB, PMTCT, in-patients departments, general OPD, Drug Treatment Center (MMT Center) and referral from other hospitals and also from Private facilities. Results of CD4, status of TB and patients outcomes (Lost to follow up, Transfer out, Death) during follow up must be recorded in this register until the ART treatment is initiated.

14.1.3 ART Treatment Enrollment Register - Book 1 and 2 (Red Book)

Using the information on the White Card and Referral Form, the ART Treatment Enrolment Register has to be completed for all patients starting on ART, during all monthly follow-up visits since the date of starting up to the end of follow-up on ART.

ART register has to be completed for new patients started on ART in a period with their baseline information and all active patients' treatment details including investigation records during their follow up visits. This register supports to calculate outcomes of the cohort patients who have been initiated on ART (stop, lost to follow up, transferred out, dead).

By the end of every month, leave the remaining lines of the current working registration page (if there any) blank and start a new registration page to start recording for the following month. ART facilities with big number of transfer in cases should use a separate set of register for transfer in cases.

14.1.4 Drug Dispensing Register (Green Book) (Adult and Child)

The number of tablets dispensed must be recorded under corresponding column and patient is asked to sign. For each day, maintain a separate page. At the end of the day, add up the number of tablets for each drug. This represents the daily consumption of each drug and this information can be used to complete the Drug Stock Register.

14.1.5 Drug Stock Register (Blue Book)

All drugs received and dispensed must be uniformly recorded using the unit, tablets rather than bottles or strips. Using the information from Blue Book and the number of ART patients, the estimated consumption must be forecasted regularly to avoid the shortage of ARV drugs. The monthly summary of the Drug Stock Register is used for preparing monthly ART Report.

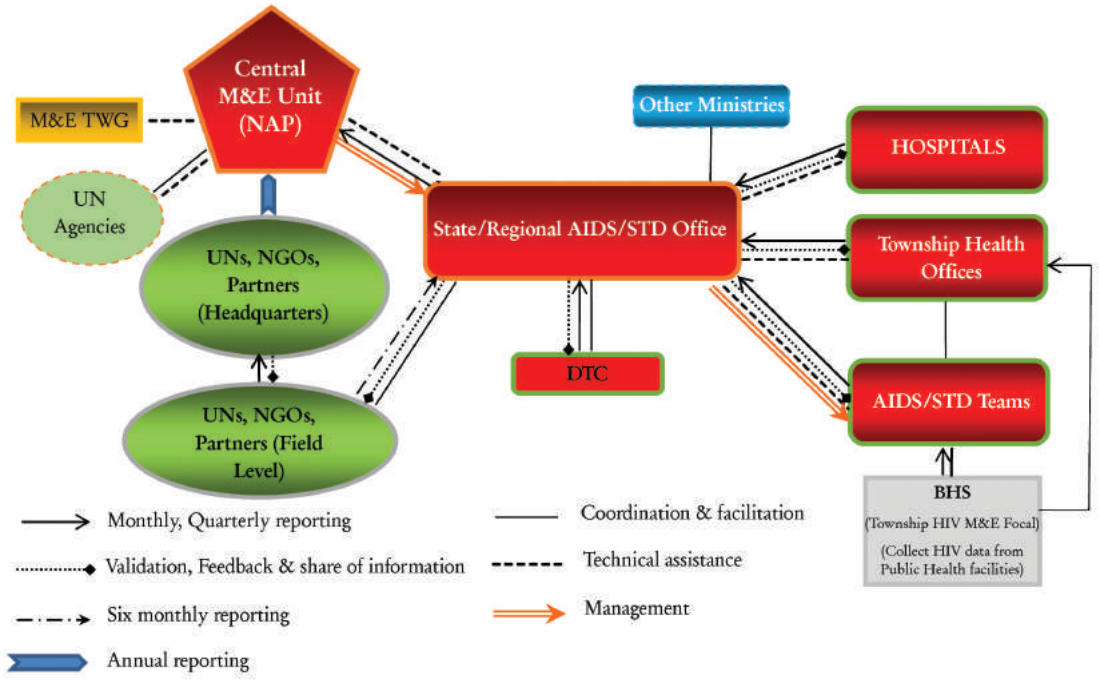
14.2 Reporting

All health facilities, at Township and Sub-Township level, are expected to report regularly on program indicators that are relevant to the type of activity they are undertaking. Routine reporting are

- Monthly ART Report
- Monthly PMTCT Activity Report
- Monthly HTS Report
- Monthly CCP Report
- Monthly CHBC Report
- Quarterly TB/HIV Report

Please see below figure (Figure 18) showing reporting lines for M&E management including reporting, validation and feedback, technical assistance, coordination, etc.

Figure 18: Overview of Potential M&E Data Responses by HIV stakeholders



Note: If there is no Regional AIDS Officer in some Regions/States, technical assistance and management of M&E will be carried out by AIDS/STD Team based at the capital of that Region/State.

14.3 Data quality assurance

The data quality check enables to improve the accuracy and reliability of the data in the system at facility. This process involves not only data entry staff checking completed data but also through validation done by M&E focal and verification to produce quality data.

Regular monitoring and mentoring activities should be conducted by NAP central, regional and township to facilities to ensure Data Quality Assurance.

Staff member	Data Tools	QA checks	Action	Regularity
Head of facility (TMO)	Monthly/ quarterly aggregated reports	Consistency check Any gaps or missing information	Cross check with consolidated data Data triangulation (compare the same data or indicator from different sources) Review, analyze, certify and timely report to succeeding levels	Every first week of next month
Medical Officer	Registers, treatment records	Any gaps or missing information (including lab results) for each patient's clinic visit	Complete the information by interviewing the patient Cross-checking with relevant clinical forms (e.g. lab forms) linking with other relevant units	During each clinic visit
Focal person	Registers (primary data recording tools)	Any gaps or missing information for each patient recorded in all registers	Complete information by meeting the patient Review consolidated data submitted by lower levels (e.g. UHC, RHC, SC)	After every data entry
Dispensing nurse	Dispensing register and drug stock register	Any missing information in registers (patient ID and info, regimen, period and others)	Complete information based on treatment register Cross-checking with drug stock register	After every data entry
Data clerk	Registers and Database (if applicable)	Any gaps or missing information for each patient (Unique ID, date of enrolment, sex, age, referral source, drug regimen, lab results and other variables in ART register)	Cross-check with other register Error correct Inform the supervisor for the correction	After every data entry (manual and electronic – if applicable)

14.4 Supportive supervision and mentoring

Supervision and mentoring by different levels is necessary in each facility implementing HIV programme. This activity should be supportive, constructive and conducted periodically. During regular supportive supervision at the facility, checklists laid out by the NAP is used to see the quality of services at service delivery points, commodities status and reliability of reported and recorded data.

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Annexes

Annex 1: 3 Interlinked Patient Monitoring System, Department of Health, Referral Form

Name _____ Age _____ Sex _____

Referred from _____ to _____

Registration No _____(If depart / organization has registration No)

Referral No _____ Date of referral __/ ___/ _____

Background history (Any relevant Medical history + risk factor)

……

……

Reason for referral

1. HIV testing / HCT
2. CD4 testing
3. Viral Load testing
4. Laboratory investigations (other than CD4 & VL)
5. Counseling (psycho social support)
6. TB (diagnosis & treatment)
7. OI management
8. IPT
9. STI treatment
10. Antiretroviral therapy (ART)
11. PMCT
12. OVC
13. CPT
14. Transfer of PLHIV on treatment from one center to other.

(Please send old records. This referral should only be done after discussion and agreement from the center where patient is transferred to)

15. Others- please provide detail

.....

.....

Official seal

Signature ----------

Name ----------

Designation ----------

Department / organization----------

Action taken for referral (to be provided by place where referred)

Name of Department / Organization _____

Registration No (if any) _____(Referred center registration No)

Date of referral received __/ ___/ _____ Date of feedback: __/ ___/ _____

Action taken .....

……

Official seal

Signature ----------

Name ----------

Designation ----------

Department / organization----------

Referral form to be filled in duplicate (using carbon less copy). Record of in and out referrals should be maintained by both for proper follow up, while keeping it confidential.

Annex 2: PATIENT HIV CARE and ANTIRETROVIRAL TREATMENT (ART) RECORD/ White Card (front page)

National AIDS/ STD Control Programme

Status at enrollment: ☐ HIV exposed Infant ☐ TB Rx ☐ Pregnancy ☐ Postpartum ☐ Other

Patient HIV CARE and ANTIRETROVIRAL TREATMENT (ART) RECORD

(To be stored in a locked cabinet at the health centre and arranged serially by registration number)

Date: **1. Patient Identification Date (Write complete information)**

Registration Number : ☐☐☐\☐☐ / ☐☐☐☐☐ \☐☐

Clinic code (3#) / Adult / child code (2#) patient register (5#) \ yr(2#)

Name of patient: _____

Age: _____ **Date of birth:** ☐☐/☐☐/☐☐☐☐ **Sex** ☐ **Male** ☐ **Female**

Patient's phone number: _____

Address: _____

Village/City: _____ **Township:** _____ **State or Region:** _____

Treatment supporter's name (if applicable): _____

Treatment supporter's address: _____

Treatment supporter's phone number: _____

Date HIV + test: ☐☐/☐☐/☐☐ **Place:**

Entry Point (services referring the patient for HIV care) : ☐ 1-VCT ☐ 2-PMTCT ☐ 3-STI ☐ 4-TB ☐ 5–Outpatient ☐ 6-Inpatient ☐ 7-Private ☐ 8-NGO ☐ 9-Self referred ☐ 10-Drug treatment Unit ☐ 11-others _____

☐ Patient transferred in Pre ART care from another clinic

☐ Patient transferred in on ART from another HIV care/ART clinic

Name previous clinic: Date transferred in :

2. Personal History

Risk Factor For HIV
- ☐ 1. Heterosexual
- ☐ 2. Men sex with men (MSM)
- ☐ 3. Sex work (SW)
- ☐ 4. Injection drug use (IDU)
- ☐ 5. Blood transfusion
- ☐ 6. Mother to child
- ☐ 7. Unknown

For IDUs Substitution therapy ☐ Y ☐ N Start: Stop?
If yes, type:

Literate ☐ Yes ☐ No

Employed ☐ Yes ☐ No

Alcoholism ☐ Habitual ☐ Social ☐ Never

Estimated monthly Household income: Kyats

3. Family History

Marital status : ☐ single ☐ Married ☐ Widowed ☐ Divorce/Separate ☐ Not applicable

Name of spouse/children	Age Sex	HIV +/- un-known	ART Y/N

4. Antiretroviral treatment history

Was ART received before? ☐ Yes ☐ No

If yes ☐ PMTCT ☐ Earlier ART ☐ PEP Place: ☐ Public ☐ Private

Drugs and duration

Name of the treatment unit: _____

Township: _____

State/Region: _____

5. Exposed-infant follow-up

Exposed– Infant Name/No	DOB	Infant feeding practice	CPTstart-ed date	HIV Test type/ result/ date	Final status	(If cofirmed infected) Unique ID

6. Clinical and Laboratory

	Date (dd/ mm yy)	WHO Stage	Weight (kg)	Height (ft.)	Perfor-mance A/B/C*	CD4 count (or % In children)
At 1st Visit in clinic						
At ART medical eligibility				child		
At start of ART				child		
AT 6 months ART				child		
At 12 months ART				child		
At 24 months ART				child		

*Performance scale : A-Normal activity; B-bedridden <50% of the day during last month; C-bedridden >50% of the day during last month

7. Antiretroviral treatment

Treatment Started	SUBSTITUTION within 1st line, SWITCH to 2nd line, STOP, RESTART				
	Date	Substitution, switch or stop	Reason (code)	Date restart	New regimen
☐					
☐					
☐					
☐					
☐					
☐					

Reasons SUBSTITUTE/SWITCH : 1 toxicity, 2 Pregnancy, 3 new TB, 4 new drug, 5 out of stock, 6 others (specify)
Reasons for SWITCH only : failure to; treatment, 7 clinical, 8 immunology, 9 virology
Reasons STOP : 1 toxicity, 2 pregnancy, 3 failure, 4 poor adherence, 5 illness, 6 out of stock, 7 patient decision, 8 planned interruption, 9 others (specify)

8. Treatment for TB disease during HIV care

Disease Classification
- ☐ Pulmonary TB/ EP
- ☐ Bacteriologically Confirmed
- ☐ Clinically diagnosed-
- Drug Sensitivity
- ☐ Sensitive
- ☐ Drug resistant

TB Regimen
- ☐ Initial Regimen
- ☐ Retreatment
- ☐ Child hood
- ☐ SLD

Starting date ☐☐/☐☐/☐☐

TB registration

Township: _____

TB Clinic : _____

TB number : _____

Treatment outcome ☐ cure ☐ Rx completed ☐ Rx failure ☐ Died ☐ Loss to follow-up ☐ not evaluated

☐ Move to SLD Date ☐☐/☐☐/☐☐

9. End of Follow-up for Antiretroviral therapy

- ☐ Death — Date of death ☐☐/☐☐/☐☐
- ☐ Lost to follow-up (>3 months) — Date last visit : ☐☐/☐☐/☐☐
- ☐ Transferred out — Date : ☐☐/☐☐/☐☐ New clinic :

PATIENT HIV CARE and ANTIRETROVIRAL TREATMENT (ART) RECORD/ White Card (back page)

10 . Patient HIV care & Antiretroviral treatment Follow - up

Date of visit*	Date next visit	Weight (kg) and Height	WHO stage	Pregnancy (Y/N, EDD) or FP/BS method	Opportunistic infections-code* If child, nutritional problems	CPT	TB status	IPT	Anti-retroviral drugs and dose prescribed	Adherence to ART* >95%, 80-95% , <80%	ART side effects-code*	Lab results when available	Referred to CoC

*** Instructions and codes:**

Date: Write the date of actual visit starting rom the 1st visit for HIV care. ALL DATES ; DD/MM/YY

FP: Family planning : 1 condoms. 2 oral contraceptive pills, 3 injectable/implantable hormones, 4 diaphram/ cervical cap, 5 intrauterine device, 6 vasectomy/tubal ligation/hysterectomy

TB status: No signs = no signs or symptoms of TB

Presumptive TB = TB refer or sputums sent (Record sputum sent & results in lab column; record referral in Refer col)

Not done (ND) = not assessed for whatever reason

TB Rx = currently on TB treatment. Record month/year started and **TB reg No.** (Record INH in INH col. and TB treatment regimen in Other meds col)

Opportunistic infection: Enter one or more codes—Tuberculosis (TB); Candidiasis(C); Diarrhoea (D); Cryptococcal meningitis (M) ; Pneumocystis jerovici pneumonia (PCP) ; Cytomegalovirus disease (CMV) ; Penicilliosis (P) ; Herpes Zoster (Z) ; Genital herpes (H) ; Toxoplasmosis (T) ; Other—specify

Adherence: Check adherence by asking the patient if he/she has missed any doses. Also check the bottle/blister packet. Write the estimated level of adherence is (e.g. > 95% - <3% does missed in a period of 30 days; 80-95% - 3 to 12 doses missed in a period of 30 days; <80%=>12 doses missed in a period of 30 days for 60 tablets/ 30 days)

Side effects: Enter one or more codes—S=Skin rash; Nau=nausea; V=Vomiting; D= Diarrhea; N= Neuropathy; J=Jaundice; A=Anaemia; F=Fatigue; H=Headache; F=Fever; H/S=Hypersensitivity; Dep=Depression; P=Pancreatitis; L=Lipodystrophy; D/s=Drowsiness; O=Other-specify

Annex 3: Monthly PMTCT activity report

မိခင်မှကလေးသို့ အိပ်ချိန်အိုင်ဒီပိုးနှင့် ဆစ်ဖလစ်ပိုးကူးစက်မှုမှကာကွယ်ရေး (PMTCT) စီမံချက်

လုပ်ငန်းဆောင်ရွက်မှုအစီရင်ခံစာ

အစီရင်ခံသည့်ကာလ ---------- လ ---------- ခုနှစ်၊
အစီရင်ခံသည့်ကျန်းမာရေးဌာန ----------ဌာန၊---------- မြို့နယ်/ဆေးရုံ၊
---------- ပြည်နယ်/တိုင်းဒေသကြီး။
အစီရင်ခံစာပေးပို့သည့်ရက်စွဲ --------/--------/---------(ရက်၊ လ၊ ခုနှစ်)

(က) မိခင်မှကလေးသို့ အိပ်ချိန်အိုင်ဒီပိုးကူးစက်မှုမှ ကာကွယ်ရေး လုပ်ငန်းဆောင်ရွက်မှုအစီရင်ခံစာ

၁	မိခင်မှကလေးသို့အိပ်ချိန်အိုင်ဒီပိုးကူးစက်မှုကာကွယ်ရေးအကြောင်းပညာပေးမှုခံယူခဲ့သောကိုယ်ဝန်ဆောင်မိခင်သစ်ဦးရေ		
၂	အိပ်ချိန်အိုင်ဒီပဋိပစ္စည်း (**HIV Antibody**) ရှိ/မရှိ သွေးစစ်ဆေးမှုခံယူခဲ့သော ကိုယ်ဝန်ဆောင်မိခင်ဦးရေ	**ကိုယ်ဝန် ဆောင်စဉ်**	**မွေးဖွားစဉ်**
၃	အိပ်ချိန်အိုင်ဒီပဋိပစ္စည်း (**HIV Antibody**) တွေ့ရှိသော ကိုယ်ဝန်ဆောင်မိခင်ဦးရေ		
၄	သွေးစစ်ပြီးနောက် သွေးအဖြေလာရောက်ယူပြီး နှစ်သိမ့်ဆွေးနွေးပညာပေးမှု ခံယူသော ကိုယ်ဝန်ဆောင် မိခင်ဦးရေ		
၅	လက်ရှိကိုယ်ဝန်ဆောင်မီကပင် မိမိ၌ အိပ်ချိန်အိုင်ဒီပိုးရှိသည်ဟု သိထားသည့် ကိုယ်ဝန်ဆောင်ဦးရေ	**ART ရှိပြီး**	**ART မရှိသေး**
၆	ယခုလအတွင်း **Lifelong ART** ကို စတင်တိုက်ကျွေးသော ကိုယ်ဝန်ဆောင်ဦးရေ		
၇	ယခုလအတွင်း **ARV prophylaxis** ကိုစတင်တိုက်ကျွေးသောကိုယ်ဝန်ဆောင်ဦးရေ (ကလေးမီးဖွားချိန်မှသာစတင်တိုက်ကျွေးရသည့် မိခင် များလည်း ပါဝင်ပါသည်။)		
၈	ယခုလအတွင်းအိပ်ချိန်အိုင်ဒီပိုးရှိသောမိခင်မှမွေးဖွားသော မွေးကင်းစကလေးပေါင်း		
၉	ယခုလအတွင်း **pARV** (NVP & AZT syrup) စတင်တိုက်ကျွေးသောကလေးဦးရေ		
၁၀	ယခုလအတွင်း Cotrimoxazole Prophylaxis ဆေး စတင်တိုက်ကျွေးသောကလေးဦးရေ	**နှစ်လအောက်**	**နှစ်လနှင့်အထက်**
၁၁	ကိုယ်ဝန်ဆောင်မိခင်၏ ခင်ပွန်း နှင့် ကလေးများကို အိပ်ချိန်အိုင်ဒီ သွေးစစ်ဆေးခြင်း:	**စစ်ဆေးသောဦးရေ**	**ပိုးတွေ့ဦးရေ**
	(က) **HIV Positive** ကိုယ်ဝန်ဆောင်မိခင်များ၏ ခင်ပွန်းဦးရေ		
	(ခ) **HIV Negative** ကိုယ်ဝန်ဆောင်မိခင်များ၏ ခင်ပွန်းဦးရေ		
	(ဂ) အိပ်ချိန်အိုင်ဒီပဋိပစ္စည်း (**HIV Antibody**) ရှိ/မရှိ သွေးစစ်ဆေးသောကလေးဦးရေ		
	(ဃ) **DNA PCR** နည်းဖြင့် ပိုးရှိ/မရှိ သွေးစစ်ဆေးသော ကလေးဦးရေ **(အထူးကုဆေးရုံကြီးများနှင့် မြို့နယ်များသာဖြည့်ရန်ဖြစ်ပါသည်။)**	**နှစ်လအောက်ကလေးများ**	**နှစ်လနှင့်အထက်ကလေးများ**
		စစ်ဆေးသောဦးရေ / **ပိုးတွေ့ဦးရေ**	**စစ်ဆေးသောဦးရေ** / **ပိုးတွေ့ဦးရေ**
၁၂	ART ဆေးပေါင်းကုထုံးဖြင့် ဆေးကုသမှုခံယူရန် လွှဲပြောင်းပေးသော အိပ်ချိန်အိုင်ဒီပိုး/ပဋိပစ္စည်းတွေ့ ကလေးဦးရေ **(အထူးကုဆေးရုံကြီးများနှင့် မြို့နယ်များသာဖြည့်ရန်ဖြစ်ပါသည်။)**		

(ခ) မိခင်မှကလေးသို့ ဆစ်ဖလစ်ပိုး ကူးစက်မှု ကာကွယ်ရေးလုပ်ငန်းဆောင်ရွက်မှု အစီရင်ခံစာ

၁၃	ဆစ်ဖလစ်ပဋိပစ္စည်း:ရှိ/မရှိ သွေးစစ်ဆေးမှုခံယူခဲ့သည့်ကိုယ်ဝန်ဆောင်ဦးရေ	**သားဦးကိုယ်ဝန် ဆောင်သူ**	**တစ်ကြိမ်ထက်ပို၍ ကိုယ်ဝန်ဆောင်သူ မိခင်**
၁၄။	ဆစ်ဖလစ်ပဋိပစ္စည်း:တွေ့ရှိသော ကိုယ်ဝန်ဆောင်ဦးရေ		
၁၅	ဆစ်ဖလစ်ပဋိပစ္စည်း:ရှိ/မရှိ သွေးစစ်ဆေးမှုခံယူခဲ့သည့် ခင်ပွန်းဦးရေ	**စစ်ဆေးသောဦးရေ**	**ပဋိပစ္စည်းတွေ့ဦးရေ**
၁၆	ဆစ်ဖလစ်ပဋိပစ္စည်း:တွေ့ရှိသော မိခင်မှမွေးဖွားသော မွေးကင်းစကလေးပေါင်း		
၁၇	ဆေးကုသမှုပေးခဲ့သည့် ဆစ်ဖလစ်ပဋိပစ္စည်း:တွေ့ရှိသော ကိုယ်ဝန်ဆောင်ဦးရေ **(အထူးကုဆေးရုံကြီးများနှင့် မြို့နယ်များသာဖြည့်ရန်ဖြစ်ပါသည်။)**		
၁၈	ဆေးကုသမှုပေးခဲ့သည့် ဆစ်ဖလစ်ပဋိပစ္စည်း: တွေ့ရှိသော ခင်ပွန်းဦးရေ **(အထူးကုဆေးရုံကြီးများနှင့်မြို့နယ်များသာဖြည့်ရန်ဖြစ်ပါသည်။)**		
၁၉	ဆစ်ဖလစ်ပဋိပစ္စည်း:တွေ့ရှိသော မိခင်မှမွေးဖွားပြီး ဆေးကုသမှုပေးခဲ့သည့် မွေးကင်းစကလေးဦးရေ **(အထူးကုဆေးရုံကြီးများနှင့် မြို့နယ်များသာဖြည့်ရန်ဖြစ်ပါသည်။)**		

အခြားမှတ်ချက်များ ----------

လက်မှတ် ----------
အမည် ----------
ရာထူး/ဌာန ----------

Annex 4: Health-care facility recommendations for standard precautions

1. **Hand Hygiene** [1]

   Summary technique:

   - Hand washing (40–60 sec): wet hands and apply soap; rub all surfaces; rinse hands and dry thoroughly with a single use towel; use towel to turn off faucet.
   - Hand rubbing (20–30 sec): apply enough product to cover all areas of the hands; rub hands until dry.

   Summary indications:

   - Before and after any direct patient contact and between patients, whether or not gloves are worn.
   - Immediately after gloves are removed.
   - Before handling an invasive device.
   - After touching blood, body fluids, secretions, excretions, non-intact skin, and contaminated items, even if gloves are worn.
   - During patient care, when moving from a contaminated to a clean body site of the patient.
   - After contact with inanimate objects in the immediate vicinity of the patient.

2. **Gloves**
   - Wear when touching blood, body fluids, secretions, excretions, mucous membranes, non-intact skin.
   - Change between tasks and procedures on the same patient after contact with potentially infectious material.
   - Remove after use, before touching non-contaminated items and surfaces, and before going to another patient. Perform hand hygiene immediately after removal.

3. **Facial Protection (eyes, nose, and mouth)**
   - Wear (1) a surgical or procedure mask and eye protection (eye visor, goggles) or (2) a face shield to protect mucous membranes of the eyes, nose, and mouth during activities that are likely to generate splashes or sprays of blood, body fluids, secretions, and excretions.

4. **Gown**
   - Wear to protect skin and prevent soiling of clothing during activities that are likely to generate splashes or sprays of blood, body fluids, secretions, or excretions.
   - Remove soiled gown as soon as possible, and perform hand hygiene.

5. **Prevention of needle stick and injuries from other sharp instruments** [2]

   Use care when:

   - Handling needles, scalpels, and other sharp instruments or devices.
   - Cleaning used instruments.
   - Disposing of used needles and other sharp instruments.

6. **Respiratory hygiene and cough etiquette**

   Persons with respiratory symptoms should apply source control measures:

   - Cover their nose and mouth when coughing/sneezing with tissue or mask, dispose of used tissues and masks, and perform hand hygiene after contact with respiratory secretions.

   Health-care facilities should:

   - Place acute febrile respiratory symptomatic patients at least 1 metre (3 feet) away from others in common waiting areas, if possible.
   - Post visual alerts at the entrance to health-care facilities instructing persons with respiratory symptoms to practise respiratory hygiene/cough etiquette.
   - Consider making hand hygiene resources, tissues and masks available in common areas and areas used for the evaluation of patients with respiratory illnesses.

7. **Environmental cleaning**

   - Use adequate procedures for the routine cleaning and disinfection of environmental and other frequently touched surfaces.

8. **Linens**

   Handle, transport, and process used linen in a manner which:

   - Prevents skin and mucous membrane exposures and contamination of clothing.
   - Avoids transfer of pathogens to other patients and or the environment.

9. **Waste disposal**

   - Ensure safe waste management.
   - Treat waste contaminated with blood, body fluids, secretions and excretions as clinical waste, in accordance with local regulations.
   - Human tissues and laboratory waste that is directly associated with specimen processing should also be treated as clinical waste.
   - Discard single use items properly.

10. **Patient care equipment**

    - Handle equipment soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures, contamination of clothing, and transfer of pathogens to other patients or the environment.

- Clean, disinfect, and reprocess reusable equipment appropriately before use with another patient.

[1] *For more details, see: WHO Guidelines on Hand Hygiene in Health Care (Advanced draft), at: http://www.who.int/patientsafety/information_centre/ghhad_download/en/index.html.*

[2] *The SIGN Alliance at: http://www.who.int/injection_safety/sign/en/a*

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ICAP at Columbia University
Room 103, Shwe Than Lwin Condominium, Aye Yeik Thar (1st) Street, New University Avenue Road, Bahan Township, Yangon, Myanmar.
Phone : +95 (1) 544 862, Fax : +95 (1) 544 862
www.icap.columbia.edu