Kingdom of Cambodia
Nation Religion King

Ministry of Health

STRATEGIC PLAN FOR HIV AND STI PREVENTION AND CARE IN THE HEALTH SECTOR 2021-2025

March 2021

National Center for HIV/AIDS,
Dermatology and STD (NCHADS)

Strategic Plan for HIV and STI Prevention and Care in the Health Sector 2021-2025

Suggested citation. "NCHADS/MOH (2021). Strategic Plan for HIV and STI Prevention and Care in the Health Sector 2021-2025 in Cambodia. Phnom Penh, Cambodia, 2021."

This publication can also be found at https://www.nchads.org

TABLE OF **CONTENTS**

LIST OF **FIGURES**

LIST OF **ACRONYMS**

AMR	Antimicrobial Resistance
ANC	Antenatal Care
AOP	Annual Operational Plan
AOP	Annual Operational Plan
ART	Antiretroviral Therapy
ARV	Antiretroviral Drugs
B-IACM	Boosted-Integrated Active Case Management
CAA	Community Action Approach
CAAF	Community Action Approach Framework
CBTx	Community Based drug Treatment
CC	Commune Council
CENAT	National Center for Tuberculosis and Leprosy Control
CHAI	Clinton Health Access Initiative
CCC	Cooperation Committee for Cambodia
CMS	Central Medical Stores (MoH)
CPA	Complementary Package of Activities
DCDC	Department of Communicable Disease Control (MoH)
DDF	Department of Drug and Food
DHS	Department of Hospital Services (MoH)
DMHSA	Department of Mental Health and Substance Abuse (MoH)
DMU	Data Management Unit
DTG	Dolutegravir
EAC	Enhanced Adherence Counselling
EID	Early Infant Diagnosis
eMTCT	elimination of Mother to Child Transmission
FEW	Female Entertainment Worker (FSW – Female Sex Worker)
FHC	Family Health Clinic
FHI360	Family Health International
FTA	Functional Task Analysis
GASP	Gonococcal Antimicrobial Susceptibility Program
GBV	Gender Based Violence
GDP	Gross Domestic Product
GII	Gender Inequality Index
GNI	Gross National Income
HC	Health Center
HCV	Hepatitis C Virus
HDI	Human Development Index
HEF	Health Equity Fund
HIV	Human Immunodeficiency Virus
HIVST	HIV Self-Testing
HPITC	HIV Provider Initiated Testing and Counselling
HP+	Health Policy Plus
HTS	HIV Testing Services
IBBS	Integrated Biological and Behavioural Surveillance
ICT	Information Communication Technology
JPR	Joint Programme Review
KHANA	Khmer HIV/AIDS NGO Alliance
KI	Key Informant
LMIS	Logistics Management Information System
LMQS	laboratory quality management system
LMU	Logistics Management Unit
LSM	Logistics and Supply Management

LSWG	Logistic Supply Working Group
LTFU	Loss To Follow Up
MEF	Ministry of Economy and Finance
MDG	Millennium Development Goal
MI	Motivational Interviewing
MMD	Multi-Month Dispensing
MMT	Methadone Maintenance Therapy
MoH	Ministry of Health
MOI	Ministry of Interior
MPA	Minimum Package of Activities
MSM	Men who have Sex with Men
NAA	National AIDS Authority
NASA	National AIDS Spending Assessment
NCD	Non-Communicable Disease
NCHADS	National Center for HIV/AIDS, Dermatology and STD
NIPH	National Institute of Public Health
NMCHC	National Maternal and Child Health Center
NSP	Needle and Syringe Programming
NSSF	National Social Security Fund
NVP	Nevirapine
OD	Operational Districts
OI	Opportunistic Infection
PASP	Provincial AIDS and STI Program
PCR	Polymerase Chain Reaction
PDI+	Peer Driven Intervention Plus
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PHD	Provincial Health Department
PMTCT	Prevention of from Mother to Child Transmission of HIV
PNTT	Partner Notification Tracing and Testing
PrEP	Pre-Exposure Prophylaxis
PSF	Pharmacists Sans Frontier
PW	Pregnant Women
PWID	People Who Inject Drugs
PWUD	People Who Use Drugs
RHAC	Reproductive Health Association of Cambodia
RDT	Rapid Diagnostic Tests
RGC	Royal Government of Cambodia
RH	Referral Hospital
RTI	Reproductive Tract Infection
SI	Strategic Information
SOP	Standard Operating Procedure
SSS	Sentinel Surveillance Survey
STI	Sexually Transmitted Infection
TasP	Treatment as Prevention
TG	Transgender
TLE400	Tenofovir/Lamivudine/Efavirenz 400
TLE600	Tenofovir/Lamivudine/Efavirenz 600, Tenofovir/Lamivudine/ Efavirenz 600
TPT	Tuberculosis Prevention Therapy
TWG	Technical Working Group
UNAIDS	Joint United Nations program on AIDS/HIV
USAID	United States Agency for International Development
US-CDC	United States Centers for Disease Control and Prevention
UUIC	Universal Unique Identifier Code
VCCT	Voluntary Confidential Counseling and Testing
VHSG	Village Health Support Groups
WHO	World Health Organization

PREFACE

The Strategic Plan for HIV/AIDS and STIs Prevention and Care in the Health Sector 2021- 2025 (SPHIV/STIs 2021-2025) is the core document guiding HIV and STI programming for the next five years as Cambodia strives to achieve the goal of virtual elimination of new HIV infections by 2025 .

This Strategic Plan builds on the major advances Cambodia and its development partners have made in the HIV/AIDS response through successful HIV prevention and the scale up of treatment, significantly reducing deaths and disability associated with the virus. The SPHIV/STIs 2021-2025 represents a major achievement of the HIV/STI program and reflects the best practices identified by technical experts during the HIV Joint Program Review process undertaken in mid-2019.

The Ministry of Health approved and confirms the support for this Strategic Plan for HIV/AIDS and STI Prevention and Care 2021-2025 (SPHIV/STIs 2021-2025) and calls on all government institutions at all levels and development partners to collaborate in ensuring that this Strategic Plan is successfully implemented and monitored.

Phnom Penh, 12/May/ 2021

Ministry of Health

Prof. ENG HUOT
SECRETARY OF STATE

ACKNOWLEDGEMENTS

I would like to acknowledge the outstanding contribution of NCHADS technical units, stakeholders, and strategic partners to the successful development of this *Strategic Plan for HIV/AIDS and STIs Prevention and Care in the Health Sector 2021-2025 (SPHIV/STIs 2021-2025).*

In particular, I would like to thank the NCHADS technical units and staff for their successful coordination of this process and for ensuring the components of this plan meet the highest standards of technical quality . Their contribution has helped ensure that the components of this plan are evidence-based and build on the successful approaches that have made Cambodia a regional leader in the HIV response.

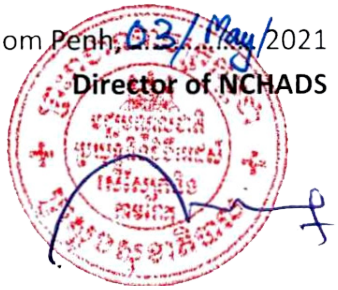
I would also like to acknowledge the extensive efforts of the members of the eight core component Working Groups to provide expert technical guidance and share practical implementation experience in the development of the key thematic areas essential to HIV strategic planning: (1) Prevention; (2) HIV Testing; (3) HIV Treatment and Care; (4) STI Prevention and Control; (5) Laboratory; (6) Logistics and Supply Management ; (7) Strategic Information; and, (8) Integration, Sustainability, and Costing. The individuals and organizations that comprised these groups worked diligently to ensure the success of the planning process and the quality of the final SPHIV/STIs.

In addition to the work of the technical Working Groups, I am grateful for the valuable input of other departments within the Ministry, government institutions, civil society, PLHIV-networks, and Key Populations advocacy groups.

I am also thankful for the support and leadership of the Ministry of Health which is the driving force to inspire NCHADS and development partners to achieve the successful implementation of this strategic plan.

Phnom Penh, 03 May 2021

Director of NCHADS



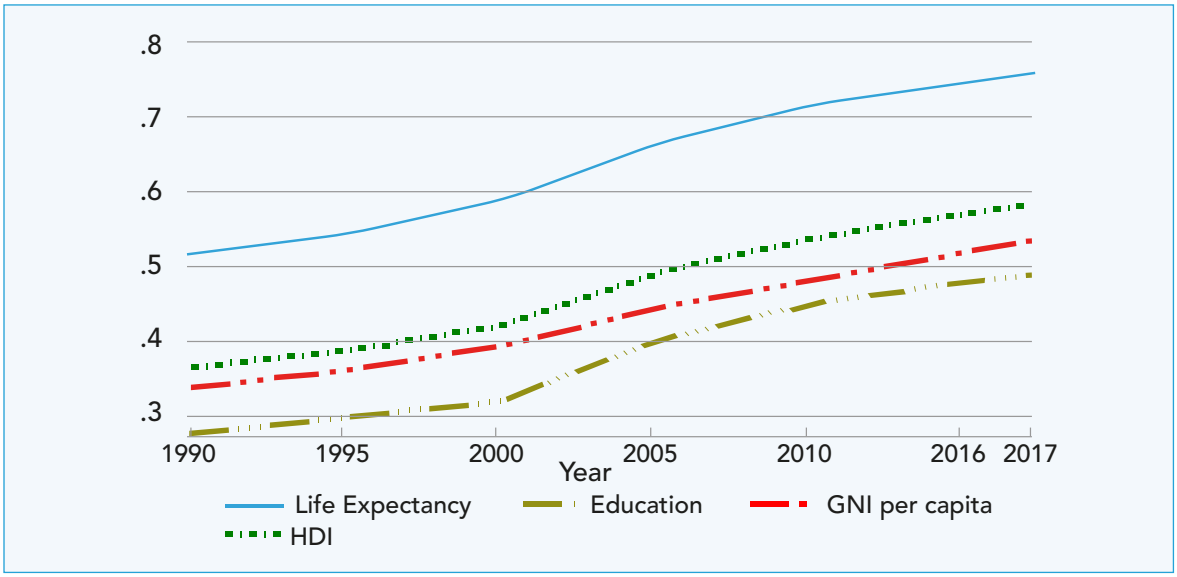
Dr. LY PENH SUN

A. INTRODUCTION

A.1. SOCIO-ECONOMIC OVERVIEW National development and government/ development partners engagement

Cambodia has one of the fastest growing economies in the world. Between 1995 and 2018, the economy grew at an annual average rate of 7.7%, and by 2018, per capita gross domestic product (GDP) stood at USD 1,380.[1] Cambodia's Gross National Income (GNI) per capita increased by about 265.8 percent between 1990 and 2017. In 2015, Cambodia became a lower middle-income country.

Figure 1: Trends in Cambodia's HDI Component Indices 1990 – 2017



Source: Human Development Indices and Indicators: 2018 Statistical Update Cambodia

The proportion of the population living in poverty decreased dramatically, from 47.8% in 2007 to 13.5% in 2014, according to official government statistics. Cambodia's Human Development Index (HDI) [2] value for 2017 is 0.582 — Cambodia is classified in the medium human development category — and ranks 146 out of 189 countries and territories. Between 1990 and 2017, Cambodia's HDI value increased from 0.364 to 0.582, an increase of 59.9%, life expectancy at birth rose by 15.7 years, mean years of schooling increased by 2.1 years and expected years of schooling increased by 5 years. The child mortality rate in Cambodia has declined from 114 deaths per 1,000 live births in 1999 to 28 deaths per 1,000 live births in 2018.[3]

1 Royal Government of Cambodia. *National Strategic Development Plan 2014-2018 for Growth, Employment, Equity and Efficiency to reach the Status of an Upper Middle-Income Country.* (2014).

2 Human Development Indices and Indicators: 2018 Statistical Update Cambodia, available at http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/KHM.pdf

3 https://data.unicef.org/country/khm/

Cambodia has a Gender Inequality Index (GII) value of 0.473, ranking it 116 out of 160 countries in the 2017 index, behind neighbours Lao PDR and Myanmar. This is primarily due to Cambodia's comparatively poor showing in female education: Just 15.1 percent of adult women have reached at least a secondary level of education compared to 28.1 percent of their male counterparts; for comparison, in Myanmar, 28.7% of women have reached this educational level, compared to 22.3% of men.

Cambodia has an annual population growth rate of 1.2%, reaching 15.3 million in 2019, and projected to reach 19 million by 2030. Seventy-eight percent of the population lives in rural areas, and urbanization is proceeding rapidly. The population is young– median age is 24.6 years old.[4]

Cambodia met most of its Millennium Development Goal (MDG) targets for infant and maternal mortality, malaria mortality, percentage of births attended by skilled birth attendants, water supply, and sanitation.[5] Nonetheless, the maternal mortality ratio was 161 deaths per 100,000 live birth in 2017, the adolescent birth rate is 50.2 births per 1,000 women of ages 15-19,[6] and the World Bank estimates that 4.5 million people in Cambodia are "near-poor" and vulnerable to falling into poverty if economic shocks occur.[7]

Cambodia has benefited from partnership with development partners, including in the area of HIV/AIDS. Indeed, over the past two decades, a wide range of multilateral and bilateral donor agencies and international and local NGOs have supported national HIV efforts while engaging proactively in the broader reconstruction and development of Cambodia through the implementation of numerous economic, infrastructural, and social programs. In particular, the Global Fund and PEPFAR have made significant contributions to the response and the UN System has provided critical technical assistance.[8] The HIV response has been largely financed externally – on average, 90 percent of funding in 2009-2015 came from external sources, 9 percent from the Royal Government of Cambodia, and 1 percent from private sources. Over this period, government financing has increased steadily, from 3% of total funding in 2009 to 17% in 2015 (and the share of external funding has declined correspondingly).[9]

A.2. Financing the HIV responses

In 2017, total spending on the HIV response in Cambodia amounted to USD 34.4 million,9 a decrease of 41% from the peak of USD 58.1 million in 2010 (Figure 2). Though the Royal Government of Cambodia (RGC) continues to rely heavily on external assistance to fund its HIV/AIDS response, its contribution increased to 24% of all spending in 2017 (USD 8.3 million), compared to 17% in 2014 (USD 6.4 million). The government continues to rely heavily on external assistance (USD 26.1 million or 76% in 2017). Some key components, such as prevention activities for KPs implemented by CSOs, are almost completely financed

---

4 National Institute of Statistics, Ministry of Planning. (2019). *Provisional report on the General Population Census of Cambodia, June 2019; World Health Organization (WHO). Country Cooperation Strategy for Cambodia, 2016-2020, WHO-Western Pacific Regional Office, 2016.*

5 Royal Government of Cambodia (RGC). *Rectangular Strategy for Growth, Employment, Equity and Efficiency: Building Foundation Towards Realizing Cambodia Vision 2050 (Phase IV).* Sixth Legislature of the National Assembly, Sept. 2018.

6 Human Development Indices and Indicators: 2018 Statistical Update Cambodia, available at http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/KHM.pdf

7 The World Bank (2017), "The World Bank in Cambodia: Overview"

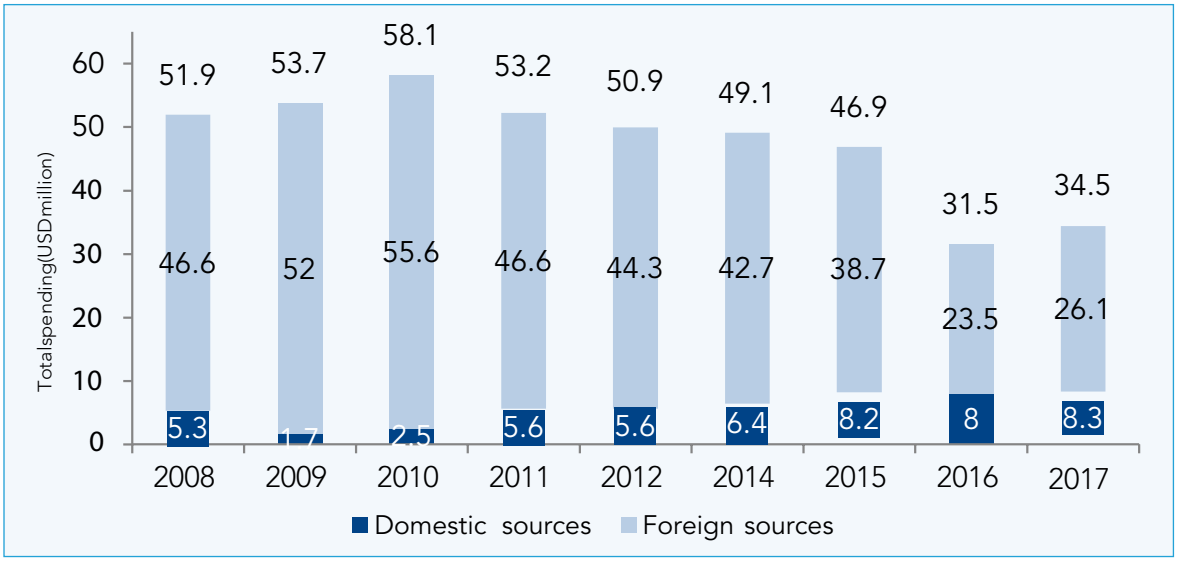
8 NAA and UNAIDS, Towards Ending AIDS in Cambodia: Transition Readiness Assessment 2018

9 National Aids Spending Assessment (NASA) data cited in NAA and UNAIDS, Towards Ending AIDS in Cambodia: Transition Readiness Assessment 2018, p. 62

by donors. More than 90% of viral load testing is financed externally. The Global Fund's contribution increased from 59% of all donor funding in 2014 to 70% in 2017. Bilateral donors (primarily the United States) accounted for 18% in 2017, down from 29% in 2014. External assistance to Cambodia is decreasing overall, not only in the health sector. Total external assistance has declined from around 3% of GDP in 2012-14 to 1.5% of GDP in 2017.

Salaries accounted for the largest share (21%) of the government's expenditure on HIV in 2017, followed by ARVs (19%). The government financed 47% of salaries and 13% of ARVs in 2017. Expenditure related to program management, administration, and technical assistance accounted for 17% of the RGC's HIV spending in 2017, more than double the proportion in 2014 (8%). With expected reductions in future donor financing, this proportion is likely to reduce as RGC contributes increasingly to commodities and service delivery activities. Only about 2% of the government's budget for HIV activities goes toward prevention activities. The country's Global Fund grant for 2018-2020 includes the following distribution of funding: ARVs 33.3%, opportunistic infections (OI) and patient care 12.4%, lab agents 13.1%, and planning and M&E 10.8%.

Figure 2: Spending on HIV by main financing source, 2008-2017 (USD million)



Source: National AIDS Spending Assessment 2017 (data for 2013 not available)

A.3. EPIDEMIOLOGY OF HIV: Trends, achievements, and gaps

Trends

HIV prevalence has declined significantly in Cambodia. In 2019, prevalence in adults aged 15 to 49 was 0.5%, down from 1.2% in 2000. There were an estimated 880 new infections in 2018, a 62% decline from the levels in 2010. By 2018, HIV-associated deaths had fallen by 80%, from their peak in 2003.

Figure 3: HIV estimates in Cambodia, 2010-2018

Indicator	2010	2015	2018
New HIV infections			
New HIV infections (all ages)	2,300	1,300	880
	(2,100-2,600)	(1,200-1,500)	(780-990)
New HIV infections (0-14)	<500	<200	<200
	(<500-<500)	(<200-<500)	(<100-<200)
New HIV infections (female, 15+)	1,100	550	<500
	(930-1,200)	(<500-610)	(<500-<500)
New HIV infections (male, 15+)	890	620	<500
	(780-990)	(550-680)	(<500-<500)
New incidences per 1000 pop.	0.16 (0.14-.18)	0.09 (0.08-0.009)	0.05 (0.05-0.06)
AIDS-related deaths			
AIDS-related deaths (all ages)	2,500	1,500	1,300
	(1,900-3,400)	(1,100-2,400)	(920-1,900)
AIDS-related deaths (0-14)	<500	<100	<100
	(<200-<500)	(<100-<200)	(<100-<100)
AIDS-related deaths (female, 15+)	1,100	670	<620
	(820-1,500)	(<500-1,100)	(<500-970)
AIDS-related deaths (male, 15+)	1200	770	<640
	(870-1,700)	(550-1,200)	(<500-<880)
People living with HIV			
People living with HIV (all ages)	79,000	76,000	73,000
	(68,000-93,000)	(66,000-88,000)	(64,000-84,000)
People living with HIV (0-14)	4,700	4,000	3,300
	(4,000-5,500)	(3,400-4,800)	(2,800-3,900)
People living with HIV (female, 15+)	39,000	38,000	37,000
	(3,400-4,500)	(3,300-4,300)	(3,200-4,200)
People living with HIV (male, 15+)	36,000	34,000	33,000
	(30,000-43,000)	(29,000-39,000)	(28,000-38,000)
HIV prevalence 15-49	0.8 (0.7-1)	0.6 (0.5-0.7)	0.5 (0.5-0.6)

Source: Cambodia Country factsheet 2018 https://www.unaids.org/en/regionscountries/countries/cambodia

Achievements

The reduction in new infections is testament to the effectiveness of Cambodia's prevention programming. Cambodia has also scaled up access to treatment. In addition, in 2017, Cambodia achieved the 2020 Fast-Track treatment targets of 90-90- 90, with 82% of PLHIV knowing their status, > 89% of those who know their status on treatment, and 79% of those on treatment being virally suppressed.[10]

[10] UNAIDS, Ending AIDS Progress towards the 90-90-90 targets. Global AIDS Update. 2017.

Figure 4: Number of PLHIV, PLHIV enrolled in HIV care, and on ART

Estimated number of PLHIV1	73,000
Total PLHIV actively enrolled in HIV treatment facilities2	60,219
PLHIV on ART (57,184 adults + 2800 children)	59,984
PLHIV not on ART (223 adults +12 children)	235
% of Cambodia's estimated PLHIV on ART	81%
Number, and % of Cambodia's estimated PLHIV not in care	12,781 (15%)

Data Sources: 1AIDS Data Hub Cambodia Country Data UNAIDS 2019, 2NCHADS 2019 Q1 report

In the area of mother-to-child transmission, HIV testing coverage among ANC attendee in 2018 was 88.4% and 85% of pregnant women (PW) living with HIV on ART.[11]

Key Gaps

While **prevention** efforts appropriately focus on the most affected key populations – HIV infection rates in certain sub-populations remain disproportionately high: These include transgender women; people who use, but do not inject, drugs; women who use and/or inject drugs; female entertainment workers (FEW) who freelance, MSM who sell sex and young MSM with overlapping risk behaviours such as drug use and unprotected sex, and the husbands/"sweethearts" of FEW.[12]

In the area of **treatment and care,** loss to follow up appears to be greatest at the juncture between confirmatory test at VCCT and initiation of ART. LTFU rates stand at 9.5% between confirmatory testing and enrolment at an HIV treatment facility,[13] and some sites report that LTFU between enrolment in care and initiation of ART is as high as 14%.[14]

Gaps also exist in access to **viral load** (VL) testing: Just 74% of VL testing needs were met in 2017, and at 10 ART sites, VL testing coverage did not meet the 50% mark.15 A quarter of PLHIV who had a VL test with undetectable result, had another test when it is not indicated – less than 4 months after a previous undetectable VL,[16] and in one study,[17] 72% of patients who had a detectable VL did not receive a repeat VL test within 6 months.

In **PMTCT,** there is noticeable difference in the rate of HIV reactivity between those women who tested at ANC (0.08%) and at delivery (0.27%),[18] suggesting that some PW who know that they are HIV positive may be avoiding ANC services.

---

11 NCHADS verified estimates published in the 2019 Global AIDS Update, estimate 730 (600 – 850), pregnant women to be living with HIV in 2018, of whom 85% received a regimen to prevent mother to child transmission. According to the Global AIDS Monitoring data reported by the National AIDS Authority, in 2018 326,620 PW were tested for HIV or already knew they were HIV positive which equates to testing coverage of 88.4%. Denominator = number of PW who delivered in the last 12 months.

12 IBBS, various years

13 The 2019 Q1 B-IACM report shows that among 591 confirmed HIV positive, 535 (90.5%) enrolled at an HIV treatment facility. This is a slight increase from 2018, when LTFU between confirmatory testing and enrolment at a treatment facility was 8%.

14 Joint Programme Review, 2019.

15 CHAI, Viral Load and Early Infant Diagnosis (EID) Scale-Up in Cambodia, 2017.

16 NCHADS ART Database

17 CHAI, Viral Load and Early Infant Diagnosis (EID) Scale-Up in Cambodia, 2017.

18 NMCHC PMTCT Linked Response Report, January to June 2019

A.4. SITUATION AND RESPONSE ANALYSIS: Overview of policies, strategies, key stakeholders, and organisations

Policies and Strategies

This Strategic Plan for HIV and STI Prevention and Care in the Health Sector feeds into the overall Health Sector Strategic Plan 2021-2025 (HSSP-IV) developed by the Ministry of Health and is also aligned with the Fifth National Strategic Plan for a Comprehensive Multi-Sectoral Response to HIV/AIDS 2019-2023, developed by the National AIDS Authority (NAA). The NAA National Strategic Plan covers the broader elements of the national response in Cambodia, such as cultural, legal and socio- economic issues.

National policies, guidelines and strategies guiding the health sector response to HIV include the following:

Community Based Prevention, Care & Support (CBPCS) Concept Note (Nov 2015).

Conceptual Framework for Elimination of New HIV infections in Cambodia by 2020, NCHADS-MOH (2012).

Guidance Note on Integrated Active Case Management (ICAM) and Partner Tracing and HIV Testing Partner Notification Testing & Treatment (PNTT) for Cambodia 3.0 Initiative, NCHADS-MOH (2013).

Guidance Note Figure 6: Management and coordination role of NCHADS and NMCHC (TasP), NCHADS-MOH (2012).

Guidelines for Diagnosis and Antiretroviral Treatment of HIV Infection in Infants, Children and Adolescents in Cambodia (2016).

Guidelines: Cambodian National HIV Clinical Management Guidelines for Adults and Adolescents (2016).

Guidelines: National Guideline for the Prevention of Mother-to-Child Transmission of HIV and Syphilis, NMCHC (2016).

SOP Boosted Continuum of Prevention, Care & Treatment (COPCT), NCHADS- MOH (2013).

SOP Boosted Continuum of Care (B-COC).

SOP Boosted Integrated Active Case Management (B-IACM-PNTT) incorporating IRIR, Rapid Monitoring and Analysis for Action (RMAA) and Payment for Results (P4R), draft (2016).

SOP Boosted Linked Response (B-LR), NCHADS-MOH (2013).

SOP NCHADS QC Sampling Plan (draft 2016).

SOP Procurement, based on MEF Procurement Guidelines (2012).

Stakeholders and Organisations

The major stakeholders for HIV/AIDS in Cambodia are the MOH, NCHADS, and NAA. Other ministries with important roles include the Ministry of Economy and Finance (MEF), Ministry of Interior (MOI), Ministry of Education Youth and Sports (MOEYS), Ministry of Social Affairs, Veterans and Youth Rehabilitation (MOSVY), Ministry of Women's Affairs (MOWA), Ministry of National Defense (MOND), Ministry of Labour and Vocational Training (MOLVT), Ministry of Information; Ministry of Tourism; and national authorities such as the National Authority for Combatting Drugs (NACD), Cambodian Human Rights Committee (CHRC), National Social Protection Council (NSPC), and the National Committee for Sub-National Democratic Development (NCDD). With the decentralization and de-concentration reforms and the resulting increased autonomy of local structures, provincial, commune and village level authorities, as well as the health system at the sub-national levels are also increasingly important to delivering the HIV response. CSOs have been indispensable partners at delivering HIV services across the cascade, and particularly for key populations. Other supporters of the response include development partners, bilateral donors such as PEPFAR, the GFATM, and the United Nations (UN) system.

A.5 KEY RECOMMENDATIONS AND CHALLENGES OF HIV JPR

The JPR focuses on four thematic areas: prevention, treatment and care, strategic information, and laboratory. It also covered a fifth cross-cutting area – integration.

Under **prevention,** the JPR noted that key populations remain disproportionately affected and that prevention efforts have therefore focused primarily on these populations, namely, people who inject/use drugs (PWID/PWUD), men who have sex with men (MSM), transgender people (TG), and female entertainment workers (FEW). Among these, the most affected population is PWID, with an HIV prevalence of 15.2%, followed by TG women with 5.9% prevalence.

While the decrease in the number of new HIV infections in Cambodia in recent years demonstrates the effectiveness of the national prevention program, the JPR also noted a number of challenges that are likely to impact the program going forward: With new infections declining, the focus of Cambodia's response has shifted to testing and treating and funding for primary prevention has fallen. The capacity of the prevention program to develop innovative approaches that can identify and target those most vulnerable to HIV, has fallen in tandem. The JPR noted, for example, that prevention messages themselves, the populations to whom those messages are targeted, and the method of delivering prevention messages, have largely not kept pace with changes in prevention needs in the country. For example, The JPR identified specific sub- populations at substantially greater risk of HIV infection, yet the prevention program has failed to develop targeted messages tailored to these groups, and indeed, the extent to which these groups are reached with prevention services, is unclear. Examples of such subpopulations include people who use (but do not inject) drugs; the JPR noted that HIV prevalence in this population has been increasing, yet the response to HIV among drug users remains focused on people who inject. Other subpopulations identified in the JPR were transgender women, MSM who sell sex (HIV prevalence of 17.2%), freelance sex workers, and the "sweethearts" of FEW.

No prevention interventions specifically target these populations. The JPR recommends collecting targeted information about vulnerable subpopulations on how and where to reach them and developing appropriate strategies specific to their needs.

In addition to key subpopulations, the prevention analysis draws attention to a growing knowledge gap about HIV among young people – particularly problematic among young MSM and TG – and draws attention to the need to develop targeted strategies that will increase HIV knowledge and forestall a resurgence of HIV among youth. The JPR also recommends expanding prevention messages beyond the traditional ("use a condom") to include critical messages about viral suppression, ("undetectable = untransmittable") and the role of PrEP and utilising up to date delivery methods such as dating apps and other social media. Finally, the JPR finds that outreach workers remain underpaid and over-worked, contributing to high-turnover rates, and recommends repositioning outreach workers as a professional cadre with the training, skills, commitment, and support to make a long-term contribution to the HIV response.

Under **treatment and care,** the JPR notes Cambodia's significant achievements, including progress towards the 90-90-90 targets, and identifies gaps and areas for growth: As Cambodia moves towards elimination, identifying new infections becomes increasingly challenging. The JPR found that HIV testing services, especially facility- based government VCCT services, lack the requisite human resources and capacity to accurately identify risk factors; indeed, more than three-quarters of those who screen HIV positive at VCCT have no identified risk factor. The JPR recommends improving the capacity of VCCT counsellors to elicit accurate information of risk factors.

Analysis of leakage across the cascade shows that loss to follow up (LTFU) takes place at all points, but appears to be greatest at the juncture between confirmatory testing at VCCT and initiation of ART. Some sites, such as Battambang, are experiencing an 18% LTFU between confirmatory testing and enrolment in care, and further leakage between enrolment and treatment initiation. The JPR identifies a number of factors driving LTFU including stigma and discrimination in both communities and health facilities which force PLHIV to attend services far from home, uneven quality of services across treatment sites, financial burden, gaps in treatment literacy, the physical distance between VCCT and ART services – often located in different compounds of the same Referral Hospital, and regulations that, while implemented to varying degrees, require two confirmatory tests and two counselling sessions, and tend to result in gaps of one to two weeks between the time a patient receives confirmation of their HIV status and the time the can start treatment.

Although data on key populations' access and adherence to treatment is limited, available data suggests that treatment outcomes in KPs are comparatively poor: FEWs have disproportionately high rates of LTFU and viral load failure, just 30.8% of HIV- positive PWID in Cambodia access ART, and LTFU among prisoner's post-release is reportedly high.[19]

To address LTFU, the JPR recommends commencing ART on the same day as confirmatory testing, integrating ART and testing services, expanding the options for accessing confirmatory testing services to NGOs and the private sector, improving the quality of care at poorly performing ART sites, working with clients and ART workers to reduce incidence

[19] AIDS Data Hub Country – Review: Cambodia Country Data UNAIDS 2019

of re-registration at ART sites (and thereby reduce double counting), proactively addressing vulnerabilities among adolescents living with HIV to improve retention in care and support transition to adult treatment facilities, and strengthening access to HIV prevention, testing and treatment services for people in closed settings, including appropriate referral to community and government services following release.

On viral load (VL) testing, the JPR analysis showed that, while VL suppression among those accessing VL services exceeded 90%, VL testing coverage was sub-optimal: Just 75% of VL testing needs were met in 2017, and at 10 ART sites, VL testing coverage did not meet the 50% mark. In addition, a quarter of PLHIV who had a VL test with undetectable result, had another test when it is not indicated – less than 4 months after a previous undetectable VL, and in one study, 72% of patients who had a detectable VL did not receive a repeat VL test within 6 months. The JPR noted in particular that poor access to enhanced adherence counselling contributed to persistent VL detection on repeat testing. The JPR recommends identifying the reasons for sub-optimal VL coverage at some sites and developing strategies to improve performance and strengthening systems for case management of PLHIV with VL failure to ensure timely enhanced adherence counselling (EAC), repeat VL testing, and action on the VL results, according to national guidelines.

In PMTCT, 85% of pregnant women (PW) living with HIV accessed ART for PMTCT in 2018. The JPR found that there was a large difference in the rate of HIV reactivity between women tested at ANC (0.08%) and at delivery (0.27%),[20] and key informant medical professional reported that noted that some PW were already known to have HIV and were retested at delivery; the JPR also noted KI and community reports that in some cases, PW who know they are HIV-positive were fearful of attending ANC clinic and would therefore appear for the first time at delivery. In terms of care for HIV exposed infants (HEI), the JPR found that 35% were LTFU in 2018 and that the PCR 1 test was uniformly late, and the PCR 2 test rarely documented. A dual HIV/syphilis rapid test was introduced for PW in 2017, and the JPR team found that between January and June 2019, the total number of PW reportedly screened for syphilis was about 18% less than those screened for HIV. The JPR recommends determining the reason for the large difference in the rate of HIV reactivity between ANC and delivery and building the capacity of ANC staff to remove facility-level barriers such as stigma and discrimination, initiating ART prophylaxis to potentially HEI in cases where the mother's HIV screening test is reactive but the confirmatory test has not yet been conducted, moving the follow-up of HEI into the HIV treatment clinic that the mother attends for her own care, rather than requiring the mother to take the infant to a separate service and following WHO guidelines (Strategy C) for pregnant women who test positive on syphilis screening.

On differentiated care, NCHADS has focused on differentiating care for PLHIV who are stable on ART with undetectable viral load, and who can safely be triaged for less intensive monitoring and that NCHADS had issued a letter inviting clinicians to prescribe up to 6 months of ART for stable patients. The JPR team noted that some doctors were reluctant to initiate multi-month scripting (MMS) and appointment spacing, and that some clinicians and pharmacists were concerned about patients' capacity to safety

20 NMCHC PMTCT Linked Response Report, January to June 2019

store their medication or feared that ART stock may not be adequate to support (MMS). The JPR recommended that doctors continue MMS and appointment spacing, and that NCHADS also consider interim ART collection at Health Center level, community ART delivery (CAD), and family/spouse pick up.

The JPR found that CD4 testing has been unevenly applied, in part due to a stock-out of CD4 reagents and emphasized the importance of resuming regular CD4 testing to inform clinical decision about opportunistic infections (OI), including ensuring that clinicians at HIV treatment facilities understand that CD4 testing is required for patient management.

The JPR identified a number of gaps in coordination between HIV services and other related infections, such as TB, HCV, and STIs. In TB, the JPR found that screening for TB at ART clinics was not consistently conducted according to guidelines, and that TPT coverage was suboptimal – just 41% of active ART patients received at least one prescription for INH in 2018. The JPR recommends reinforcing clinical guidelines on diagnosing TB and providing TPT where appropriate. In HCV, the JPR found that a "one- off" program ensures that PLHIV enrolled in HIV treatment are tested and treated for Hepatitis C virus. The JPR recommends developing a sustainable way to continue to provide testing and treatment for HCV for PLHIV, particularly those at especially high risk, such as PWID. On STI, the JPR found limited reach to key populations at high risk for STIs, such as FEWs, poor access to men with STI service needs, and weak referral linkages between STI and HIV services. The JPR recommends considering integrating FHC with other relevant services notably VCCT, developing a strategy to reach men with STI services such as partnering with the private facilities where men prefer to access STI services, and improve access to STI services for key populations, especially those at elevated risk such as FEW, MSM and transgender.

The JPR also comments on workforce turnover and opportunities for professional development and found that staff turnover was an issue in a number of areas, notably in data entry, that policies and guidelines tend to be unevenly understood among practitioners in the field, and that opportunities for professional development are declining as external funding withdraws. The JPR recommends that NCHADS collaborate with the MoH and with academic institutions to ensure new graduates are familiar with the pathophysiology, transmission, clinical syndromes, diagnosis, and basics of HIV management, that Sexual Orientation, Gender Identity and Expression (SOGIE) and HIV and SOGIE related stigma and discrimination should be part of the curriculum, that HIV clinical mentorship be decentralised, and that novel ways to engage with clinicians be explored.

Under **Strategic Information,** the JPR found that there are many databases containing information related to the HIV response, but certain proportion of the information contained in the databases was duplicative, and the databases were not interoperable.

Databases use different identifier codes and codes are not shared across databases. The JPR team analysed the following databases: prevention, BIACM, VCCT, ART, treatment, laboratory, and HIS. The analysis identified several issues: Lack of a common unique identifier across databases meant that it was not possible to trace individuals from screening through to VL suppression or death. The JPR also noted the lack of data on risk factors among a majority of those diagnosed with HIV at VCCT.

Data quality issues were also noted, including missing and incorrect data; non-optimal structure, design, and user friendliness of data collection forms, and absence of automatic validation mechanisms to identify errors. The JPR noted that staff shortages and high turnover mean that it is difficult for NCHADS to manage data quality.

The JPR documented positive examples of data analysis and use at the facility level, such as at the Chhuok Sar clinic, where data managers reported reviewing data on a daily basis for missed appointments, and immediately alerting counsellors to allow for follow-up. The JPR also found, however, that the data collected was not optimally used for program improvement.

The JPR recommends establish a unique identifier code to follow clients from testing through treatment, and giving consideration to utilising the existing unique patient codes such as ART number and Patient Medical Registration System (PMRS) numbers; optimize data collection on risk exposure, partner referral and sero-discordance in the ART database; reviewing and updating data collection and reporting protocols; manage and clean data to remove duplicates; and supporting greater use of data validation tools at the point of data entry.

Under **laboratory,** the JPR found that HIV and STI laboratory services, such as HIV rapid testing, syphilis testing, CD4 count, EID and viral load testing, are established and available within the health services. NCHADS provides HIV viral load (quantitative), EID (qualitative), CD4 count, HCV viral load test, and supervision of ART sites. HIV testing is available at all facilities (down to the health center level) and testing kits are also provided to NGOs that are working with high-risk populations. Syphilis testing is routinely provided to high-risk populations and at ANC, using dual test (HIV and Syphilis). There are 9 CD4 testing sites in the country (out of 69 treatment sites). OI testing can be performed at the OD level, for example for Cryptococcus neoformans and hepatitis-C. NCHADS is the only laboratory that performs early infant diagnosis, but collecting sites are available at all hospitals and ANC clinics. NCHADS has participated in EQA for viral load, EID and syphilis testing organized by US-CDC (twice a year) and HIV serology organized by NIPH.

Challenges encountered include that each system was installed on separate computers and there is no data back-up system; NCHADS and Siem Reap provincial hospital laboratories have experienced electricity interruptions and these have caused errors and delayed turn-around time (TAT) of test results and for viral load testing at the Siem Reap provincial hospital laboratory, samples are collected at a transfer hub and delivered to the provincial laboratory but training on biosafety for specimen was questionable. The JPR recommended simplifying the data management system and integrating the laboratory data system with the NCHADS patient monitoring database system; providing remote printers to all VCCTs and preparing for electricity outages; regular re-evaluation of laboratory systems; and considering systems that integrate other diseases, such as HBV, HCV, HPV, TB.

Under **integration,** in addition to the points discussed in previous sections above, the JPR found that HIV and reproductive health services were poorly integrated, notably for the population of FEWs, where the JPR found that 79% of those who have been pregnant since starting entertainment work reported having an abortion. The JPR also found good

examples of integration between HIV and NCD services and identified this as a potential growth area. The JPR recommends integrating reproductive health services and safe abortion with STI services, VCCT services, ART services outreach and peer education, and exploring opportunities for scaling up integration of HIV and NCD services.

As discussed under strategic information, databases were poorly integrated both among the HIV-related databases and with larger health systems databases.

In human resources, the JPR found that in government services delivery and in data entry positions, the majority of employees were contract staff funded by external sources, and that, as a result, high turnover and lack of long-term integration with government services undermined sustainability. The JPR also noted that the critical prevention services provided by NGOs and CBOs are externally funded and that mechanisms for national budgets to fund these activities are not in place. The JPR recommended continuing to work with the Ministry of Economy and Finance to secure adequate funding to support posts that are currently occupied by contract staff, and developing the mechanisms needed to ensure that national budgets will fund NGO and CBO prevention activities.

The JPR found that integration is making progress in health insurance and in integrating HIV services into the health system with inclusion of HTC screening in the Minimum Package of Activities (MPA) at Health Centre, and care for PLHIV into the Complementary Package of Activities (CPA) in referral hospitals; and the approval by the Ministry of Economy and Finance for health facilities to charge Health Equity Funds for services delivered to PLHIV who have Equity Card (ID poor). The JPR recommends continuing the work to integrate HIV services into the broader health system, including into the MPA, CPA, and HEF.

Finally, in the area of procurement and supply management, the JPR found that the supply chain for the national response to HIV remains weakly integrated, although some progress has been made: Non-ARV/VL drugs and reagents are now purchased with domestic funds, and most drugs including ARV are stored and distributed by Central Medical Stores (CMS). The JPR recommends that as the RGC moves to take over purchase of critical HIV drugs, such as ART, the required systems to integrate procurement and supply chain management into national government systems be developed.

A.6. GUIDING PRINCIPLES

The strategic planning process has been guided by a set of principles including engagement, leadership, and partnership.

Engagement: People living with HIV, key populations, and people affected by HIV are at the center of Cambodia's response and critical to the strategic planning process. Representatives of these groups and CSOs that work directly with these groups were directly involved in all aspects of the planning processes, from conception, to formulation, to writing and validation.

Leadership: The strategic planning process was led by NCHADS and country ownership is the guiding principle of the Strategic Plan.

Partnership: The partnership approach adopted by NCHADS enables the program to make the best use of a wide range of interests, capabilities, skills, and capacity. All aspects of the program, strategies, SOP, reviews, and implementation are undertaken with the full engagement of a variety of stakeholders. A Core Working Group (or Sub-Group) provides advice for each component of the program and was actively engaged in the development of this Strategic Plan.

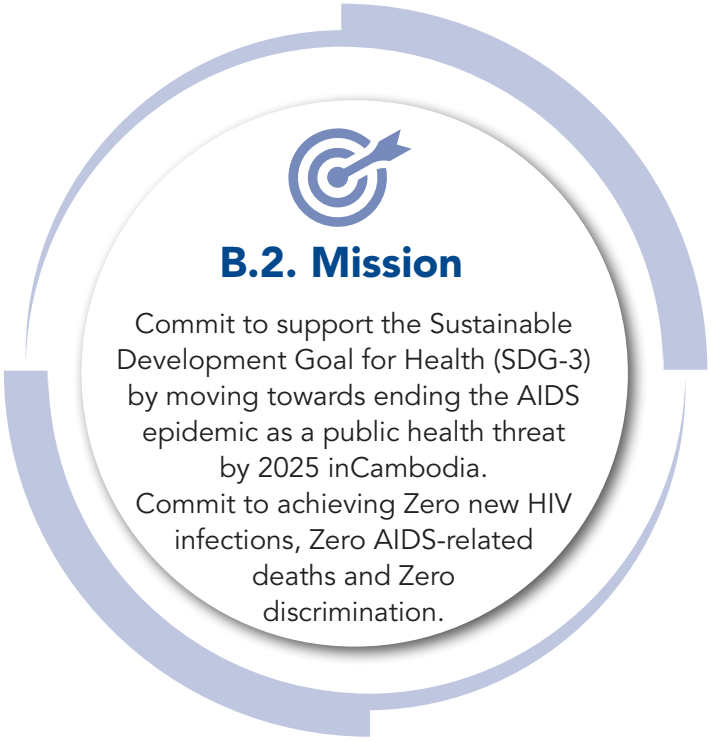
A.7. PROCESS OF DEVELOPMENT OF THE SPHIV/STIs 2021 – 2025

HSSP 2021-2025 development was led by NCHADS, in collaboration with key stakeholders, including civil society and international partners. For each component, and for integration and sustainability, working groups were formed to collaboratively develop the initial drafts, including identifying the objectives, strategies, activities, and key indicators. The working groups worked with a consultant, who pulled the full draft together. The draft was disseminated for comments and discussed in a large multi-stakeholder meeting, for validation.

B. RESULTS FRAMEWORK

B.1.Vision

AIDS free Generation, with longer, healthier, and better life for PLHIV in Cambodia.



B.2. Mission

Commit to support the Sustainable Development Goal for Health (SDG-3) by moving towards ending the AIDS epidemic as a public health threat by 2025 inCambodia.
Commit to achieving Zero new HIV infections, Zero AIDS-related deaths and Zero discrimination.

B.3. Goals

Ensure the highest quality of HIV and STI Prevention, Treatment and Care Services for HIV and STI within the health sector for all in need.

End AIDS as a public health threat by 2025.

Achieve virtual elimination of mother-to-child (eMTCT) transmission of HIV and syphilis by 2025.

B.4. Objectives

To achieve these goals, this Strategic Plan has six primary objectives:

1. To reduce new HIV infections from 2300 (Baseline: 2010) to less than 250 in 2025 (ending AIDS target of 90% reduction from baseline).
2. To increase coverage of the comprehensive package of HIV and STI prevention services for key populations and other vulnerable population.
3. To improve case detection and retention across the treatment cascade in order to achieve the 95-95-95 targets.
4. To strengthen laboratory services in order to provide timely, quality, accessible and equitable services to PLHIV and key population.
5. To strengthen HIV strategic information to effectively monitor the progress across the HIV prevention and treatment cascade.
6. To build sustainable and cost-effective systems for health through integration, and effective linkage of HIV/STI services with other related services, within health facilities and in the community.

C. STRATEGIC COMPONENTS

C.1. Conceptual Framework

The conceptual framework is comprised of eight core components:

1. HIV Prevention
2. HIV Testing Services
3. HIV Care and Treatment Services
4. STI Prevention and Control
5. Laboratory Services
6. Logistics and Supply Management
7. Strategic Information
8. Program Management

C.2 Core Components:

1. Core Component 1: HIV Prevention
2. Core Component 2: HIV Testing Services
3. Core Component 3: HIV Care and Treatment Services
4. Core Component 4: Elimination of Mother to Child Transmission (eMTCT)
5. Core Component 5: STI Prevention and Control
6. Core Component 6: Laboratory Services
7. Core Component 7: Logistics and Supply Management
8. Core Component 8: Strategic Information
9. Core Component 9: Program Management.

CORE COMPONENT 1: **HIV PREVENTION**

I. Rationale

Cambodia has a long history of providing differentiated prevention services for HIV, particularly for members of key populations. Drop-in centers and community outreach programs, including programs directly involving members of the affected populations, have been hallmarks of the Cambodia program and they are central to the generally accepted definition of differentiated prevention services.

HIV prevalence remains high among key populations: female entertainment workers (3.2%), men who have sex with men (2.3%), transgender women (5.9%) and people who inject drugs (15.2%); and approximately 40% of new infections occur in key populations. Prevention efforts in Cambodia have been largely focused on these key populations.

Overlapping risks among key populations, such sex work, drug use, chemsex, and changing contexts in finding partners and seeking/providing sexual services (freelancing, virtual communications on online platforms) are becoming a worrying concern.

Programmatic challenges include lack of information about freelance FEWs, evolving sexual behaviours of MSM and TG, and lack of robust outreach on online platforms, and these have also proven to make it difficult for outreach workers to connect with various sub-key populations. Plus, due to the demands of the work, combined with the low pay, it is difficult to recruit and retain qualified people to do outreach work. As a result, turnover of outreach workers is high.

Another challenge is the need for significantly greater differentiation in prevention services for a wide range of communities, populations and subpopulations affected by HIV in the country. Outreach workers providing prevention and testing services for key populations in Cambodia clearly recognize the divergent circumstances, age, education, knowledge, attitudes, and behaviours among the groups they reach. They readily acknowledge that different people need different prevention messages and services. However, the ability to "customize" messaging and service delivery is difficult because it is seen to be expensive and/or time-consuming. One of the most common ways of customizing services is for outreach workers to appropriately tailor the amount of time they spend with clients to the needs and the capacities of clients, in order to ensure that those clients who need more attention and support to understand, adopt and sustain protective behaviours, get the attention they need.

The highly standardized approach to prevention activities undermines its effectiveness, even more so in an era when social media has redefined how people access and absorb information. There is a similar shift in how people want to access services with a focus on services being user/client-driven, not provider-driven, including the hours and locations where services are available as well as types of services that are readily accessible.

In the area of HIV prevention, particularly in the Cambodian context with a declining number of new infections and widespread concerns about declining knowledge and awareness of HIV in particular among younger generation (JPR and CDHS-2015), it is essential to develop the range of differentiated prevention services and messages that will meet the needs of individuals at risk of infection.

Peer Driven Intervention Plus (PDI+) has been introduced since 2015 and has been an effective approach for new case detection among KP. This approach needs to be strengthened and scaled up.

Social media has been used to reach hidden MSM and hard to reach TG as well as high end EWs, so such efforts need to be further supported, expanded, and diversified, including self-assisted online services in accessing offline support.

HIVST study was started in Phnom Penh in December 2018 and its findings and lesson learned will be useful and be considered for scale up.

PrEP was started in Phnom Penh in July 2019 and is being scaled up to Siem Reap in 2019 and other provinces in coming months.

II. Objectives

To reduce new HIV infections among Key Populations and their partners (contributing to reduction of new HIV infection from 2300 (Baseline: 2010) to less than 250 in 2025 (ending AIDS target of 90% reduction from baseline).

To increase coverage of the comprehensive package of HIV and STI prevention services for key populations and their partners.[21]

III. Core strategies

Core strategies for all KPs:

1. Increase geographic coverage and expand the provision of the combination package for HIV and STI Prevention, including PrEP, self-testing, and other innovative approaches, especially tailored to respond to the needs and preferences of sub-key populations who are at higher risk (including freelance, high-class and non- Cambodian FEW, TG women, women who use/inject drugs, MSM who sell sex, and young KPs)
2. Improve the quality and friendliness of KP prevention services, including community outreach, and other prevention services e.g. PrEP.
3. Develop strategies to respond to emerging risk behaviours, such as chemsex in MSM communities.
4. Optimize the use of social media and other online platforms, such as dating / hook- up Apps, to reach higher-risk and hard-to-reach KPs with HIV prevention and linkages to testing, PrEP and other HIV services.

[21] Key Population's partners would not be reached by comprehensive package but would be only part of the package.

5. Optimize new case detection and linking to treatment, care and support.
6. Expand and strengthen the enabling environment for and coordination with community, entertainment establishment owners, local authorities, law enforcement officials, service providers and NGOs implementing partners, to ensure effective, smooth and client-centered implementation of the program, and explore engagement with new players, including private sector.
7. Address GBV and other associated social factors that contribute to KP vulnerability to HIV infection and that pose barriers to their access to services that respond to their needs.

Core Strategies for PWID/PWUD:

1. Improve coverage of HIV prevention, notably needle and syringe programming, for PWID.
2. Strengthen strategic behaviour change communication through outreach and drop- in-centers, including addressing overlapping risks, such as drug use and sex work.
3. Address the gender-specific vulnerabilities and barriers that have led to higher infection rates among women who use and/or inject drugs, than among their male counterparts.
4. Strengthen programme quality and improve uptake of methadone maintenance therapy (MMT).
5. Provide overdose prevention and management.
6. Link Community Based Drug Treatment (CBTx) to HIV prevention, testing and treatment and to SRH and other services at health facilities.

IV. Core Activities (Priority actions)

Core Activities for all KPs

1.1 Increase geographic coverage and expand the provision of the combination package for HIV and STI Prevention, including PrEP, self-testing and other innovative approaches, especially tailored to respond to the needs and preferences of sub-key populations (including freelance, high-class and non- Cambodian FEW, TG women, women who use/inject drugs, MSM who sell sex, and young KPs)

1.1.1. Strengthen and expand outreach education through relevant tools, messaging, and delivery channels to effectively respond to the needs of high-risk populations (including freelance FEWs and hard-to-reach sub-key populations)

1.1.2. Scale up combination prevention of HIV and STI to locations where there is increased key populations burden.

1.1.3. Professionalize and build capacity outreach workers with developed skills and flexible working hours.

1.1.4. Improve behaviour change communication and condom promotion: More focused and relevant content through outreach on HIV and STI awareness, positive behaviour change initiatives (including facilitated access to different services), increase access to condoms and promote consistent and correct condom use.

1.1.5. Expand access to PrEP for key populations at high risk.

1.1.6. Strengthen online and offline referral to STI screening and treatment.

1.2 Improve the quality and friendliness of KP prevention services, including community outreach, and other prevention services e.g. PrEP

1.2.1. Strengthen capacity and skills of outreach workers through training and refreshers, coaching and mentoring, and access to job aid and knowledge pool.

1.2.1 Strengthen incentive programs for outreach workers and provide proper training, including on counselling skills.

1.2.2 Create and adhere to a reasonable (in terms of hours) and flexible working hour system for facilities and outreach workers and ensure that burn-out prevention is integrated into programme management.

1.2.3 Pilot/roll out/expand the provision of one-stop service facilities (offering services related to sexual and reproductive health including safe abortion, contraception, for all KP, and hormone counselling and therapy for TG, preferably at the same facility).

1.2.4 Reduce/eliminate stigma and discrimination at community outreach and health care settings where prevention services are provided through training and sensitization activities.

1.3 Develop strategies to address emerging risk behaviours, such as chemsex in MSM communities.

1.3.1 Conduct operational research to determine the extent and trends of chemsex and other possible emerging risk behaviours in Cambodia.

1.3.2 Develop, pilot, and scale up innovative programming to respond to other possible emerging risk behaviours, and HIV vulnerabilities in chemsex, including PrEP and self-testing.

1.4 Optimize the use of social media and other online platforms, such as dating/ hook-up Apps, to reach higher-risk and hard-to-reach KPs with HIV prevention and linkages to testing, PrEP and other HIV-related services.

1.4.1 Diversify channels for outreach and referrals by streamlining the use of online mediums (social networks, dating apps, web portals, etc.) and linking them to offline support.

1.4.2 Improve contents and make strategic use of social media platforms, online portals and other ICT channels to deliver content and service information to KPs.

1.4.3 Explore ways to collaborate with popular dating apps to disseminate key HIV and STI awareness massages, deliver HIV prevention messages targeting condom use and offering up-to-date messaging such as U=U, promote and link to testing and PrEP.

1.4.4 Use virtual outreach workers and/online counsellors to reach key populations and link them to services offline.

1.4.5 Build and strengthen partnerships with online and offline collaborators (e.g. KP networks, social media influencers, online media institutions) to expand access to prevention HIV/STI information and services by KPs.

Note: *Although HIV and STI prevention materials disseminated through social media platforms are aimed at specific target audiences, it is expected that such contents will also have a spill-over effect on other groups of the populations, including the general population and young people. This is because these individuals (outside the program geographical and virtual coverage) also routinely access these platforms and information posted there, either directly or via their own peers. They, therefore, will be potentially exposed to the program content being shared as well.*

1.5 Optimize new case detection and linking to treatment, care and support.

1.5.1 Provide and expand on differentiated testing approaches: Community testing (including mobile testing using mobile van), facility-based testing, and HIVST.

1.5.2 Continue roll-out and expansion of PDI+

1.5.3 Boost the practice of Partner Notification Tracing and Testing (PNTT) including Index Testing, for KP living with HIV.

1.5.4 Strengthen referral mechanisms for confirmatory testing, and facilitate enrolment in treatment, care, and support, including same-day treatment initiation as much as possible.

1.6 Expand and strengthen the enabling environment.

1.6.1 Improve coordination among community, entertainment establishment owners, local authorities, law enforcement officials, service providers and NGO implementing partners, to ensure effective, smooth, and client- centered implementation of the program.

1.6.2 Engage with new players, including private sector in supporting and delivering HIV and STI prevention services.

1.7 Address GBV and other associated social factors that contribute to KP vulnerability to HIV infection and that pose barriers to their access to services that respond to their needs.

1.7.1 Include GBV messages in IEC to raise awareness and knowledge of where to seek help.

1.7.2 Ensure that NGO staff working in HIV prevention have the necessary skills and tools to identify GBV risks and survivors.

1.7.3 Strengthen referral linkages between HIV prevention services and services for GBV survivors.

1.8 Improve coverage of HIV prevention services, notably needle and syringe programming, for PWID.

1.8.1 Strengthen physical outreach, including quality of NSP services using outreach workers, peer networks, field staff with flexible working hours, including at night-time, and improve identification of new PWID/PWUD to be reached by the NSP services.

1.8.2 Make better use of drop-in centers to be safe spaces for providing friendly NSP services.

1.8.3 Expand NSP coverage through other channels e.g. street vendors, key community influencers, pharmacies, etc.

1.8.4 Ensure continued and sufficient supply of needles and syringes and other necessary commodities.

1.8.5 Consider integrating NSP within CBTx at health facilities.

1.9 Strengthen strategic behaviour change communication through outreach and drop-in-centers, including addressing overlapping risks, such as drug use and sex work.

1.9.1 Identify sub-groups that have overlapping risks (drug use/sex work, drug use/multiple partners) through collaboration between harm reduction NGOs and NGOs implementing other KP programme.

1.9.2 Identify and develop key messages/SBC materials in particular tailoring to above identified groups to address not only unsafe injection, but also risk sexual behaviour.

1.9.3 Build the capacity of outreach workers, peer support networks, field staff to effectively implement SBC communications.

1.10 Address the gender-specific vulnerabilities and barriers that have led to higher infection rates among women who use and/or inject drugs, than among their male counterparts.

1.10.1 Ensure adequate numbers of female outreach workers.

1.10.2 Establish working relations with NGOs that provide prevention services FEWs to reach women drug users who sell sex and FEW who use drugs.

1.10.3 Establish effective referral linkages to female-specific services such as maternity and reproductive health, assure access to MMT for pregnant women and women in maternity hospitals, address gender-specific stigma, gender-specific pressure to share needles and syringes, among others.

1.11 **Strengthen programme quality and improve uptake of methadone maintenance therapy.**

1.11.1 Improve strategies to identify PWID who are eligible for MMT and attract them to MMT services.

1.11.2 Strengthen awareness in the PWID community about the benefits of MMT.

1.11.3 Improve accessibility by offering flexible working hours that are convenient to clients.

1.11.4 Ensure adequate dosing at MMT sites.

1.11.5 Provide take-home doses.

1.11.6 Ensure that psycho-social support is available and accessible at MMT sites to reduce drop-out.

1.11.7 Strengthen linkages between MMT, VCCT and ART services.

1.12 **Provide overdose prevention and management.**

1.12.1 Improve awareness of risk of overdose among PWUD/PWID population, and provide training and skills about how to prevent it and how it can be managed i.e. raise awareness about the use of Naloxone.

1.12.2 Increase knowledge and skills on overdose management among staff and key health care providers engaged in delivering harm reduction services.

1.12.3 Ensure availability and accessibility of over-dose management drugs (Naloxone) for all harm reduction services providers and ensure that PWID/PWUD themselves have ready access to Naloxone through harm reduction services providers and/or at pharmacies.

1.13 **Link Community Based Drug Treatments (CBTx) to HIV prevention, testing and treatment and to SRH and other services at health facilities.**

1.13.1 Establish linkage mechanism for CBTx to HIV, SRH and other health related services.

1.13.2 Consider possible integration of CBTx and HIV at health facilities.

CORE COMPONENT 2: HIV TESTING SERVICES

I. Rationale

In Cambodia, the focus on achieving the first 95 of the 95-95-95 testing and treatment target has resulted in a profusion of testing approaches. These include testing during antenatal care and delivery, facility-based testing at HTS-ART (VCCT) services, testing of in-patients in referral hospitals, community-based testing by outreach workers, Risk Tracing Snowball (RTS), Peer-Driven Intervention Plus (PDI+), index testing, and self- testing. Maintaining a robust mix of provider-initiated and client-initiated testing approaches to improve coverage in unserved and underserved areas complemented by the saturation of index testing and HIV recency assessment will be priorities for NSP 2021-2025.

Clients access HIV testing in various facilities, but the diagnosis is only done at HTS-ART services. This leads to loss of some clients. Therefore, merging VCCT services into ART clinics will be a priority. Some modalities such as HPITC has not been fully expanded to all provinces. PDI+ and self- testing have not been fully scaled up. Counsellors will be required to undergo refresher training in risk elicitation and reporting. Data collection tools need to be updated to include risk factors with geographic information and to distinguish confirmatory tests for referred clients from first tests for walk-in clients. Similarly, strengthening of the supply chain management system is required to avoid service interruption. Although the integration of syphilis testing to HIV-HTS has been achieved, integration of additional diseases such as hepatitis are being considered.

Given the contribution of key populations to the HIV epidemic in Cambodia, index testing will be a significant component of HTS. The addition of HIV recency testing will help increase the number of contacts elicited (current average, 1.5). HIV recency testing, as a component of HTS and HIV case surveillance, will be scaled up nationwide in 2020 with intensive training of laboratorians, counsellors and data reporting personnel. HIV recency data will help identify geographic hotspots of recent infections where case finding can be intensified. Ultimate integration of recency testing to HIV case surveillance will provide close to real-time monitoring of new HIV infections. Phased expansion of quality assurance (QA) of HIV testing is a priority over the next 5- years. To date, 251 of the 1,206HCs, 30 community-based testing and 66 HTS-ART out of 69 sites have undergone IQC and EQA/PT. Given the resource constraints hub and spoke model of QA[22] will be applied to achieve full coverage of all health centres.

[22] a provincial lab conducts QA for a select number of health centers in their catchment area

II. Objective

To improve HIV case detection from current 82% to 95% by 2025 in Cambodia by optimizing approaches and services.

III. Core Strategies

3.1 Maintaining a robust mix of provider-initiated and client-initiated testing approaches to improve access and coverage.

3.2 Consolidating testing sequence and referral systems and avoid loss of diagnosis confirmation.

3.3 Identifying geographic and demographic hotspots of recent HIV infections by scaling up recency testing

3.4 Expanding case finding through index contact testing including by using information on recency of infection.

3.5 Enabling testing facilities and service providers to achieve optimum service delivery.

IV. Core Activities

4.1 Maintaining a robust mix of provider-initiated and client-initiated testing approaches to improve coverage.

4.1.1 Provide universal access to finger prick HTS in ANC, STI, TB, general population, In-patient-department through HPITC at health care facilities and outreach testing and self-testing through RTS, PDI+, other media for key population at communities.

4.1.2 Ensure that ANC HIV testing is conducted together with syphilis testing (using HIV/syphilis dual test) and with hepatitis B testing (wherever possible) as early as possible in pregnancy as part of eMTCT. Conduct labour testing for women who have not previously been tested or whose result is not available.

4.1.3 Scale-up the HPITC at all referral hospitals medicine, pulmonary, ICU, Paediatric wards and MMT for inpatient-departments, malnourished paediatric patients and people who use drugs.

4.1.4 Optimize HTS among key population and other targeted general populations with risk assessment/elicitation/screening as well as those at higher risk of being HIV-positive and improve index testing.

4.1.5 Coordinate and enhance HIV testing and reporting in private health care facilities.

4.2 Consolidating testing sequence and referral systems and avoid loss of diagnosis confirmation.

4.2.1 Strengthening of referral system to ensure that reactive clients receive confirmatory tests and that newly diagnosed patients are enrolled ART on the same day.

4.3 Identifying geographic and demographic hotspots of recent HIV infections by scaling up recency testing

4.3.1 Integrate recent infection rapid test into the national HIV testing algorithm.

4.3.2 Sensitize the recency assay implementation process with other related national and development partners, sub-national directors and managers.

4.3.3 Develop SOP for recency testing and build capacity of national officers to training of trainers on program implementation, monitoring, quality control and data management.

4.3.4 Build capacity of implementers including counsellors, laboratorians, data management officers and data clerks.

4.3.5 Timely report the yield of recent infection by age, sex, type of clients and geography.

4.4 Expanding case finding through index contact testing including by using information from recency of infection

4.4.1 Empower HTS-ART counsellors, CAA (CAW, CAC, FBW), and clinical staff on how to assess the risks of clients, particularly for newly identified HIV- positive.

4.4.2 Increase knowledge of HTS-ART counsellors, CAA, and clinical staff on how to assess index cases to track their partners, family members for HIV testing.

4.4.3 Strengthen the capacity of CMA/Data Entry to extract/capture the risk information and improve coordination between VCCT and HTS-ART.

4.4.4 Strengthen data capture and reporting to improve the focus of contact tracking including by stratifying analyses of data by risk factors, referral site walk-in vs. referral clients with clearly defined numerators and denominators.

4.5 Enabling testing facilities and service providers to achieve optimum service delivery.

4.5.1 Coordinate with national laboratory and Logistic management units to ensure sufficient testing supplies and appropriate forecasting.

4.5.2 Work with MOH/DPHI to improve the quality of data management reporting through HIS.

4.5.3 Assign point of contact (POC) at every HTS site to monitor the progress and track the quality of HTS service including data recording and reporting, testing supply, EQA program.

4.5.4 Provide training and capacity building focused on sensitization and stigma reduction for all relevant service providers.

CORE COMPONENT 3: HIV CARE AND TREATMENT SERVICES

I. Rationale

Access to HIV treatment is widely available in Cambodia. There are 69 HIV treatment sites across the 25 provinces, including 12 sites in Phnom Penh. The majority of HIV treatment sites are located at referral hospitals (RHs). Forty-three facilities provide ART to children. Cambodia reached the mid-term 90-90-90 targets in 2017. The country is quick to adopt WHO and other scientific evidence for HIV treatment, with consideration for local context. HIV treatment guidelines for children, adolescents and adults were updated in 2016. The Treat All strategy was approved by the MoH and launched in November 2016. Other approaches and SOPs, including the Community Action Approach (CAA) and Boosted-Integrated Active Case Management (B-IACM) support referral, enrolment, and retention of PLHIV in care and treatment.

These efforts have contributed to the improvement of care and treatment. However, gaps remain: Although 92% of patients who start ART are retained at the 6 month mark,[23] patients drop out at each step of the cascade: In 2019, the was 5% loss to follow up (LTFU) from reactive to confirmation,[24] and 9.5% LTFU from confirmation to enrolment.[25] A number of factors drive LTFU including stigma and discrimination in both communities and health facilities which force PLHIV to attend services far from home, uneven quality of services across treatment sites, financial burden, gaps in treatment literacy, the physical distance between VCCT and ART services – often located in different compounds of the same Referral Hospital. Regulations that, while implemented to varying degrees, require two confirmatory tests and two counselling sessions, and tend to result in gaps of one to two weeks between the time a patient receives confirmation of their HIV status and the time can start treatment are also a factor.

CAA staff face challenges with reaching the community to address LTFU. Due to case overload and limited support from local authorities and village health support groups (VHSGs), CAA staff are not able to fully implement EAC for detectable viral load patients, or consistently identify patients who are LTFU. In addition to their overloaded schedules, CAA staff skills require further development, through skills-building exercises and mentorship.

Tuberculosis remains one of the major causes of death in PLHIV, in fact 29% of deaths among PLHIV occurred in persons coinfected with TB in 2018 (380/1300). PLHIV are up to 50 times more likely to develop active TB in a given year than HIV-negative people. Initiating PLHIVs without evidence of active TB on preventive therapy is a crucial step to reducing the risk of developing active TB.

---

[23] NCHADS AIDS Care Unit reports that of the PLHIV who commenced ART from January to June 2018, 92% were retained at 6 months.

[24] B-IACM 2019 Q1 data from 39 sites.

[25] The 2019 Q1 B-IACM report shows that among 591 confirmed HIV positive, 535 (90.5%) enrolled at an HIV treatment facility. This is a slight increase from 2018, when LTFU between confirmatory testing and enrolment at a treatment facility was 8%.

Coinfection with hepatitis C virus (HCV) is a major cause of morbidity and mortality among PLHIV. One cohort study among largely Caucasians found liver-related death to be the most common non-HIV-related cause of death for PLHIV, and viral hepatitis was involved in the majority of the cases. HIV-HCV coinfection program has been successfully implemented and has screened around 80% of the ART population (DMU data), and the program needs to continue to capture remaining patients and new patients.

II. Objectives

To strengthen the quality and coverage of care including enrolment, treatment initiation, adherence, retention and virological suppression to achieve the 95-95-95 targets

To promote community involvement to provide quality treatment and care services.

To strengthen collaboration for implementation of eMTCT roadmap to achieve the elimination targets by 2025.

III. Core Strategies

3.1 Strengthen, expand and integrate VCCT and ART services within referral hospitals in Cambodia.

3.2 Explore private sector involvement in HIV testing and treatment services.

3.3 Optimize ARV treatment regimens and OI prophylaxis.

3.4 Strengthen systems for case management of PLHIV with unsuppressed Viral Load and strengthen management of PLHIV with advanced and complicated disease.

3.5 Strengthen HR capacity at the consolidated VCCT and ART services.

3.6 Integrate HIV/AIDS services into the service package for social health protection (HEF, NSSF, Private Health Insurance.

3.7 Improve and strengthen access to viral load testing and ensure timely reporting of results.

3.8 Address the needs of specific groups including adolescents, key populations, migrants including the implement the Patient Satisfaction Feedback to address Stigma & Discrimination at sites.

3.9 Strengthen, innovate and adopt a more comprehensive approach to differentiated care.

3.10 Improve access to STI, reproductive health, non-communicable diseases, cervical cancer, hepatitis, TB, gender-based violence, harm reduction and mental health services.

3.11 Strengthen training, monitoring and evaluation, and supply chain coordination to ensure appropriate and adequate TPT coverage for PLHIV.

3.12 Create a sustainable HBV and HCV care and treatment program for screening, diagnosing, providing treatment, and ensuring cure.

3.13 Build culture of data use to improve quality of care and treatment, CAA, B-IACM, PNTT.

3.14 Support affected community, civil society and local authority to engage in care and treatment services.

IV. Core Activities

4.1 Strengthen, expand and integrate/co-locate VCCT and ART services within referral hospitals in Cambodia.

4.1.1 Integrate VCCT lab into referral hospital lab and VCCT counsellors into ART services at sites where they are currently co-located at RH.

4.1.2 Assess and set up newly integrated VCCT into ART services in all existing RHs.

4.1.3 Promote same day treatment.

4.1.4 Ensure HIV services are included in Minimum Package of Activities (MPA) and Complementary Package of Activities (CPA) of Ministry of Health.

4.2 Explore private sector involvement for HIV testing and treatment.

4.2.1 Establish mechanism for and enable access to accreditation of private laboratories, clinics, and NGO clinics for VCCT services compliant with nationally recognised testing commodity and testing and treatment guidelines. This should include adapting existing guidance and training to the private sector and making both available to the private sector.

4.2.2 Establish mechanisms for data reporting from private sector facilities.

4.2.3 Engage and develop partnership/LoA with private sector for HIV testing and antiretroviral treatment services and reporting according to NCHADS guidelines.

4.2.4 Explore public private partnership, including for-profit and non-profit, to enable more options for care and treatment for PLHIV who are willing and able to pay for private services.

4.3 Optimize ARV treatment Regimens and OI prophylaxis.

4.3.1 Update and implement national OI/ART guidelines based on the latest WHO recommendations, other scientific evidence and in consideration of Cambodia context.

4.3.2 Improve coordination with logistic and supply chain management system to ensure no interruption of ARV drug and other commodities such as OI Prophylaxis drugs, CD4 tests, CRAG regent tests, etc.

4.3.3 Train and mentor clinicians on the newly updated treatment guidelines.

4.3.4 Improve coverage of tuberculosis preventive therapy (TPT) by training clinicians on the updated recommendation.

4.4 Strengthen systems for case management of PLHIV with viral load failure, those with other forms of advanced and complicated HIV disease, and retention issues

4.4.1 Develop tools to identify and track viral load failure patients and ensure timely report of VL failure from Lab for timely action based on national ART guidelines.

4.4.2 Optimise CD4 count testing at baseline.

4.4.3 Develop and implement tools and SOPs for tracing, preventing and re- engagement those who LTFU.

4.4.4 Revise CAA SOP to support implementation of tracing, preventing and re- engagement LTFU patients.

4.4.5 Strengthen Enhanced Adherence Counselling (EAC) including simplified user-friendly tools, processes, and timely implementation.

4.5 Strengthen human resource capacity at VCCT and ART services

4.5.1 Provide training and re-fresher training to health care providers, counsellors, CAA team on related updated tools and guidelines.

4.5.2 Implement clinical mentoring program for low performance sites.

4.5.3 Advocate for full time staff for HIV service at referral hospitals.

4.6 Integrate HIV/AIDS services into the service package for social health protection (HEF, NSSF, Health Insurance) and consider private sector involvement.

4.6.1 Update data and status of PLHIV access to health services using HEF, and NSSF.

4.6.2 Develop guidance and provide orientation to implementing partners on how and when to facilitate PLHIV to access to HEF and NSSF schemes.

4.6.3 Explore opportunities for health insurance to cover ART services for PLHIV in both private and public health facilities.

4.6.4 Facilitate and improve access to HEF and NSSF for PLHIV including for migrants and other vulnerable populations.

4.7 Improve and strengthen access to VL testing including improving and ensuring human resources capability.

4.7.1 Expand availability of VL Lab machines and ensure lab quality.

4.7.2 Implement CQI streamline approaches (routine quality review)

4.7.3 Improve specimen transport system.

4.7.4 Improve TAT (turnaround time of result) at all stages, at site level, within lab and return results to both health providers and patients.

4.7.5 Explore opportunity of using GeneXpert platform for HIV VL test.

4.7.6 Ensure sites strictly implement the most-up to date VL testing algorithm.

4.8 Address the needs of specific groups including adolescents, key populations, migrants including the implement the Patient Satisfaction Feedback to address Stigma & Discrimination at sites.

4.8.1 Update, implement and expand patient satisfaction feedback to address stigma & discrimination at sites.

4.8.2 Develop and implement SOP for the transition process to adult services for adolescents using evidence-based program design.

4.8.3 Develop and implement SOP for key population friendly services.

4.8.4 Implement innovative strategies adapted to the needs of adolescents in Cambodia.

4.9 Strengthen, innovate, and adapt the more comprehensive approach to differentiated care including: (i) Multi month scripts (ii) Repeat prescriptions; (iii) Interim ARV collection at Health Center level, (iv) Community ART delivery (CAD) (iv) Family / spouse pick up.

4.9.1 Continue and strengthen the implementation of appointment spacing for stable patients.

4.9.2 Develop SOP/guidelines, implement, assess, and scale up each approach based on types of population/patients/geography.

4.9.3 Provide capacity building to health care providers and related implementers on new approaches.

4.9.4 Strengthen the implementation, monitoring, and reporting mechanisms at the facility-based and sub-national levels.

4.9.5 Ensure sustained availability of drugs and other commodities at implementing sites, ensure proactive communication among ART sites, pharmacies, and procurement units and NCHADS procurement.

4.10 Strengthens Linkages and/or integrates HIV services with STI, RH (ANC and family planning), NCD (including mental health), Cervical cancer, Hepatitis, TB, harm reduction and GBV services.

4.10.1 Ensure availability of services for STI, GBV, RH, NCD, hepatitis, cervical cancer, TB available at RH for PLHIV and other affected population.

4.10.2 Continue and expand the implementation of HIV co-infection with HCV and HBV management with close collaboration with MoH CDC.

4.10.3 Build staff capacity to identify referral needs and meet them.

4.10.4 Improve connection/referral linkages for PLHIV with other related services, including STI, TB, GBV, RH, NCD, Hepatitis, harm reduction and PMTCT.

4.10.5 Explore opportunities to introduce HPV vaccination, routine HPV routine screening and cervical cancer care programs among female PLHIV.

4.10.6 Strengthen coordination of TB-HIV coinfection program to improve screening, treatment quality and coverage and data interoperability and sharing.

4.11 Strengthen training, monitoring and evaluation, and supply chain coordination to ensure appropriate and adequate TPT coverage for PLHIV.

4.11.1 Coordinate with CENAT to train ART physicians, lab staff, radiology staff, and pharmacist on the TB screening algorithm and recommended active TB and TPT regimens. In addition, the Electronic Health Records Management staff at the facility should be trained on entering TPT indicators for the different regimens.

4.11.2 Conduct quarterly review of ART patients at site and TPT uptake.

4.11.3 Coordinate with CENAT to review supply chain of active and latent TB diagnostic and treatment commodities (including diagnostics like GeneXpert and relevant numbers of patient courses for tuberculosis and preventive therapy). Assist CENAT in ensuring quantification of different TPT regimen requirements across all ART sites to inform the supply chain.

4.11.4 Conduct quarterly TB-HIV TWG meetings.

4.12 Create a sustainable HBV and HCV care and treatment program for screening, diagnosing, providing treatment, and ensuring cure.

4.12.1 Ensure procurement of the appropriate amounts of commodities for screening, confirmation of diagnosis, treatment, and test of cure for an HBV and HCV care and treatment program.

4.12.2 Make HBV vaccine available to all PLHIV.

4.12.3 Perform quarterly reviews of data to ensure HBV and HCV screening and treatment coverage of the ART population and address identified barriers.

4.12.4 Coordinate with key population outreach to develop and implement an HBV and HCV care and treatment package with monitoring and evaluation.

4.12.5 Coordinate with the PNTT program to integrate HCV care and treatment into the existing HIV testing services offered to partners.

4.13 Build culture of data use to improve quality of care (Care & Treatment, CAA, B- IACM, PNTT, EAC.

4.13.1 Strengthen and harmonize data collection tools and systematically implement their use.

4.13.2 Strengthen the consistency, timeliness, quality of data recording and reporting and ensure that data is shared to all related sites and implementers at all national and sub national levels.

4.13.3 Improve related staff capacity at all levels for data collection, data verification, data analysis and reporting, and use of data for decision making an ensure analyses of data are carried out at all related levels.

4.13.4 Develop an evidence-based action plan for data analysis.

4.14 **Supports affected community and civil society to engage in care and treatment services.**

4.14.1 Support and improves interventions of affected communities, CSO/Network / VHSG / Other Volunteer to implement CAA.

4.14.2 Support and improve intervention to affected people by cooperating with local authorities including commune council.

4.14.3 Ensure sufficient, active participation and adequately compensated CAA staff for community outreach, establish strong linkage of NGO working with KP to improve adherence of KP PLHIV and establish mechanism to successful follow up the LTFU cases with effective motivational counselling to retain in services.

4.14.4 Support and improve the implementation of CAA, PNTT by:

(i) Assessing CAA workers' knowledge, skills, and provide training, guidance with effective tools for reaching the most at risk clients in the most effective ways including implementation on motivational counselling for testing.

(ii) Simplifying reporting requirements and shortening the lengthy forms for EAC and PNTT.

(iii) Assigning clear role and responsibility, (presumably to the Community Action Counsellor), for the implementation and improvement of EAC for patients with detectable viral load, in close collaboration with clinicians.

(iv) Exploring the opportunity of the VSHG in to support HIV awareness raising in the community and effectively address gaps of CAA.

CORE COMPONENT 4: THE ELIMINATION OF MOTHER-TO CHILD RANSMISSION (eMTCT)

I. Rationale

Cambodia commits to achieve the elimination of mother to child Transmission of HIV and Congenital Syphilis by 2025 (eMTCT) with continuous and sustained efforts has been made to reach this ambitious goal. The linked response strategic intervention was initiated in 2008 to guide for a comprehensive and cooperative intervention of HIV and sexual reproductive health services, to reduce mother to child transmission of HIV and Syphilis. In 2013, the Boosted Linked Response (a simplified and more effective version) was introduced to support country commitment of Cambodia 3.0 in year 2011 towards reaching virtual elimination of new paediatric HV and Congenital syphilis.

The steady continual commitment of eMTCT in Cambodia was upheld in NCHADS-Strategic Plan for HIV/AIDS and STI Prevention and Control in the Health Sector 2016-2020 which provide strategic interventions to reach the set target of virtual elimination of new HIV and syphilis infections and in NMCHC- National Guidance of Prevention of Mother-To-Child Transmission of HIV and Syphilis in 2016. The guidance aims to improve pregnant women, partner and their infants access to full services package at each cascade of PMTCT including prevention, early case detection, early treatment, follow up and defined responsibilities, coordination mechanism between NCHADS and NMCHC at each national and sub national levels[26].

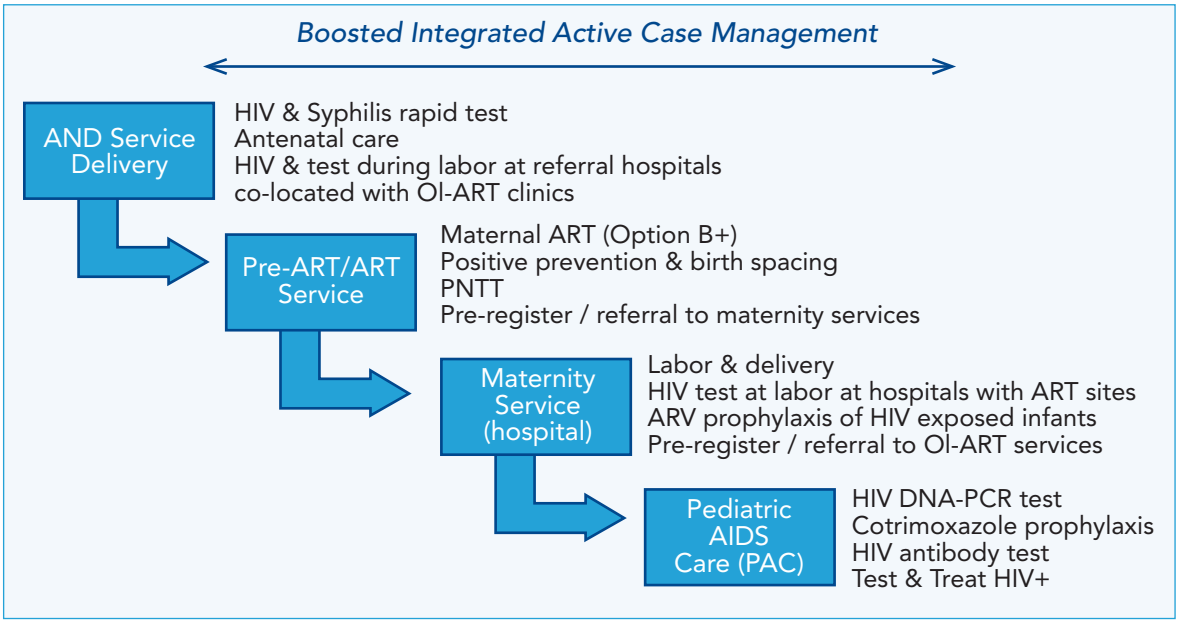
In addition, the road map for eMTCT was launched by both national programs[27] in 2018 which was built on the four key global required components including program, data, laboratory, and human right, gender equity and community participation for validating the eMTCT and provides strategic directions to address identified gaps of each components including towards achieving the elimination.

These strategies are supplemented cross-cutting by other SOPs and approaches, including the Boosted Integrated Active Case Management (B-IACM)/Partner Notification, Partner Tracing and HIV Testing (PNTT) approach, the Identify-Reach- Intensify-Retain (IRIR), Boosted Continuum of Prevention, Care & Treatment (COPCT) and Boosted Continuum of Care (B-COC).

[26] National Guideline For the Prevention of Mother-to-Child Transmission of HIV and Syphilis, March 2016, NMCHC.

[27] National Road Map for the elimination of Mother-to-Child Transmission of HIV and Congenital Syphilis (eMTCT) in Cambodia, July 2018, NCHADS & NMCHC.

Figure 5: PMTC Service Cascade



The eMTCT program is jointly implemented by NMCHC and NCHADS. NMCHC midwives counsel and offers rapid dual HIV and Syphilis screening pregnant women during ANC and, if necessary, at the point of labour or delivery, referring reactive cases for confirmatory testing at the nearest VCCT collocated with ART site, and confirmed cases will receive ART treatment at ART site. NMCHC provides HIV prophylaxis and support follow up of HIV exposed infant based on national PMTCT protocol. NCHADS develops and implements ART guidelines, SOP, performs confirmatory tests for pregnant woman and exposed infant diagnosis tests and provides ART to confirmed HIV+ cases (women and children) at ART ad Paediatric AIDS Care. Syphilis treatment for both pregnant women and exposed infant is managed at Family Health Clinic under the management of NCHADS.

The HIV Joint program review found that ANC HIV testing coverage in 2018 was 88.4% and 85% of pregnant women living with HIV received ART for PMTCT[28]. There was large difference in the rate of HIV reactivity between those women tested at ANC (0.08%) and at delivery (0.27%).

A significant minority (14% in 2014) of pregnant women (PW) choose to receive some or all of their pregnancy care in the private sector[29], from which no data is available In terms of care for HIV exposed infants, the JPR found that 35% were LTFU in 2018 and that the PCR 1 test was uniformly late, and the PCR 2 test rarely documented. A dual HIV/syphilis rapid test was introduced for PW in 2017, the total number of PW reportedly screened for syphilis was about 18% less than those screened for HIV. PW screened Rapid Diagnostic Test reactive was 0.12% and 59% had RPR confirmation[30].

---

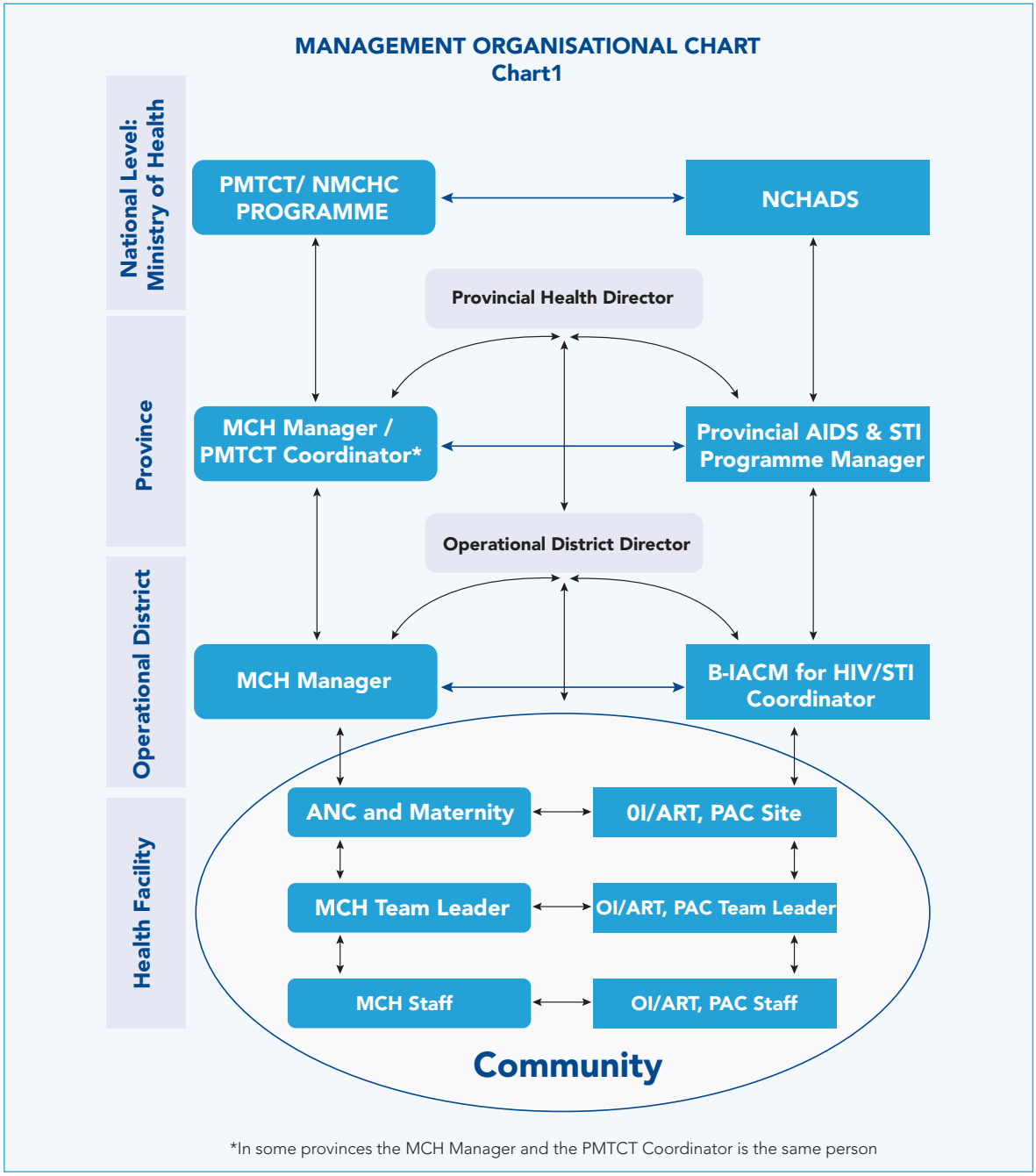
[28] NCHADS verified estimates published in the 2019 Global AIDS Update, estimate 730 (600 – 850), pregnant women to be living with HIV in 2018, of whom 85% received a regimen to prevent mother to child transmission. According to the Global AIDS Monitoring data reported by the National AIDS Authority, in 2018 326,620 PW were tested for HIV or already knew they were HIV positive which equates to testing coverage of 88.4%. Denominator = number of PW who delivered in the last 12 months

[29] From CDHC 2014 cited NCHADS and NMCHC. National Road Map for the elimination of Mother –to-Child Transmission of HIV and Congenital Syphilis (eMTCT) in Cambodia. July 2018.

[30] Data source: NMCHC PMTCT Linked Response Report, January to June 2019

The joint performance review (JPR) took place in mid-2019 highlighted some positive outcomes of PMTC efforts in Cambodia. Although there are plans, roadmap and mechanisms in place, the coordination and smooth implementation of PMTCT across multiple sites and programs are still in dire need of coordinated and synergized efforts at both national and sub-national levels to ensure that all four core elements of eMTCT are executing in line with global eMTCT validation standards and met the validation requirements by 2025. Recommendations highlighted by JPR include the need to 1.) strengthen the data management system and quality, 2.) enforce the strategic meetings at national, sub-national and facility-based levels to troubleshoot clinical management and coverage issues, and 3.) Improve the linkages across PMTCT cascade, especially improving the monitoring mechanism of the LTFU cases in testing and treatment of both HIV and syphilis in mothers and exposed infants.

Figure 6: Management and coordination role of NCHADS and NMCHC



*In some provinces the MCH Manager and the PMTCT Coordinator is the same person

II. Objectives

To strengthen eMTCT interventions in collaboration of NCHADS and NMCHC and relevant partners to achieve the eMTCT elimination targets by 2025.

To ensure that all four main areas of global criteria on eMTCT validation assessment - programme and service delivery, strategic information, laboratory service and human rights, gender equity and community participation, are robustly optimized and improved by 2025.

III. Core Strategies

3.1 Program and service delivery: Improve the overall leadership of the PMTCT program and the quality of services through provision of optimal, linked, and quality eMTCT services, expansion of the eMTCT TWG and active participation and engagement of broader group of stakeholders at all levels.

3.2 Data management/strategic information: Improve and harmonize PMTCT data management system and quality at national and sub-national levels.

3.3 Lab services: Improve quality of laboratory services relevant to PMTCT/eMTCT.

3.4 Human rights, gender equity and community participation: Enhance human rights, gender equity and community participation as cross-cutting within PMTCT/eMTCT nationwide.

3.5 Support NMCHC to explore the possibility of triple elimination for HIV, congenital syphilis and HBV.

IV. Core Activities (Priority Actions)

4.1 Program and service delivery: Improve the overall leadership of the PMTCT program and the quality of services through provision of optimal, linked, and quality eMTCT services, expansion of the eMTCT TWG and active participation and engagement of broader group of stakeholders at all levels.

4.1.1 Strengthen and improve high testing coverage in target populations (PW, mothers, EI and HIV/S+ partners) in public and private sectors for both HIV and Syphilis.

4.1.2 Optimized linkages and minimized waiting time to ensure that all pregnant women tested positive for HIV and or syphilis receive the confirmatory test and immediately on treatment.

4.1.3 Improve viral load monitoring mechanism for pregnant women to ensure that all women on treatment are virally suppressed before delivery.

4.1.4 Ensure HIV+ and Syphilis + PW and mothers and exposed infants receive the recommended prophylaxis and treatment HIV and Syphilis.

4.1.5 Strengthen the integration of family planning services within all ART clinics.

4.1.6 Ensure a robust mechanism to support PW and exposed infant to access the PMTCT cascade services.

4.1.7 Create a mechanism which allows national programs/MoH to obtain data from private ANC/maternity clinics.

4.1.8 Ensure efficient initial and refresher trainings at service provider levels, including screening and clinical management of HIV/syphilis/HBV, early infant diagnosis, family planning, KP friendly topics, and gender-based violence in any relevant trainings.

4.1.9 PHD to review and ensure BIACM membership and the scope (to include syphilis and HBV) includes all private and NGO relevant partners.

4.1.10 Strengthen the involvement and collaboration of private sector for standardized PMTCT services with national program (HIV testing, confirmation, treatment, prophylaxis, and EID and follow up).

4.1.11 Support PHD/PASP to strengthen and expansion of the BIACM implementation to non-BIACM sites.

4.1.12 PHD/PASP and national programs to review and optimize the eMTCT tools, checklists, and processes for PHD/PASP and OD site supervisory visits on PMTCT ensuring that PMTCT service is integrated into regular supervisory visits at these levels and monitored regularly.

4.1.13 Support PHD/PASP to advocate for inclusion of HIV, syphilis and HBV PMTCT activities in commune development and investment plans.

4.2 Data management/strategic information: Improve and harmonize PMTCT data management system and quality at national and sub-national levels.

4.2.1 Improved and streamlined data system for pregnant and breastfeeding women living with HIV and their babies (HIV and syphilis) (Refer to SI component for sub-activities).

4.2.2 Strengthen the role of data management sub-working group of the eMTCT at national and sub-national level (BIACM) in developing/updating protocols and implementation plans for on-site DQA[31]

4.2.3 Improve the availability and accessibility of data and provide guidance on processes for data collection, verification, quality assurance and management at all levels.

4.2.4 Support PHD/PASP & OD in data consistency (from HC1 and PMTCT monthly report to be checked by HC chief) and ensure mechanism for data verification and correction.

4.2.5 Facilitate to develop an SoP for DQA for PMTCT program, which specifically address issues of lateness, incompleteness, inaccuracy and missing to identify area of weakness for action taken accordingly.

4.2.6 eMTCT data management sub-TWG to review, and analyze eMTCT/PMTCT poor performing sites, troubleshoot all data related problems and lead the robust documentation process, including the eMTCT impact assessment and other operational studies.

4.2.7 Develop clear guidance on follow-up mechanisms of HIV/syphilis/HBV cases by PHD/PASP and relevant partners to follow-up.

4.2.8 Ensure staffing and training on data entry, site-level data analysis and data utilization.

31 Data Quality Assurance

4.2.9 Ensure WHO and UNAIDS lead discussion on how MTCT rate is defined and generate the agreed rate for Cambodia every year.

4.2.10 Conduct annual review of spectrum data inputs for eMTCT component with NCHADS and NMCHC as overall lead and UNAIDS as technical lead, to ensure that consistent reporting of key impact and process indictors for eMTCT across all platforms, reports and agencies.

4.2.11 Ensure PHD/PASP and OD perform eMTCT/PMTCT site-based analysis (dashboard) on a routine basis and take appropriate actions to improve performance.

4.2.12 Review or update monitoring indicators, capturing and following infant testing from birth till after cessation of breastfeeding.

4.2.13 Establish system, mechanism, and enforcement to ensure that PMTCT related data (for both HIV and syphilis) from the private sectors are collected national wide.

4.3 Lab services: Improve quality of laboratory services relevant to PMTCT/eMTCT.

4.3.1 Update logistics and supply chain SOPs in order to address and prevent stock-out problems and storage issues at health facilities.

4.3.2 Ensure a joint monitoring platform at the national level between NCHADS and MNCHC for all commodities projections, procurement and consumption.

4.3.3 Update national and site-level dashboards and train/coach relevant site staff on stock management tools and processes.

4.3.4 Address gaps in tests and sample transportation (long turnaround times) and quality laboratory data management by strengthening coordination/ communication and staff's responsibilities at national, provincial, district and service delivery levels.

4.3.5 Enhance internal and external quality assessment and evaluation for lab.

4.3.6 Rapid scale-up of EQA[32] program through training and mentorship at PMTCT/ ART sites.

4.3.7 Develop SoP for QA-HTS[33] implementation (emphasize the process and ToR of national, PHD, OD and site levels) and the correction action.

4.3.8 Develop a timeline plan to reach a national standard for provincial & referral hospital labs and ISO of HIV and syphilis for only main labs.

4.3.9 Introduce LQMS/QA-HTS to service delivery at site level, perform on-site mentoring in a systematic way to strengthen the LQMS34 /QA-HTS at main labs.

4.4 Human rights, gender equity and community participation: Enhance human rights, gender equity and community participation as cross-cutting within PMTCT/eMTCT nationwide.

4.4.1 Promote availability and accessibility of PMTCT services in special populations, especially for KPs, adolescents, persons with disabilities and indigenous groups through the revision of SoPs and rights-based service delivery.

32 External Quality Assessment Scheme

33 Quality Assurance – HIV Testing Services

4.4.2 Ensure that young and vulnerable populations such as adolescent and teenage pregnant mothers, and PW and mothers in special needs have access to ANC, HIV and syphilis testing services without any stigma and policy barriers.

4.4.3 Collaboration and advocacy with implementing agencies and organizations of key populations (EW and female who inject drugs) to ensure and improve access to continuum of services of both mother and baby throughout the pregnancy and breastfeeding period.

4.4.4 Ensure services are operated during working hours and flexible hours to promote service uptake in adolescent and KP groups.

4.4.5 Collaborate with NAA, NMCHC and UN agencies to review HIV/AIDS law and any other related regulations and policies to ensure provision of adolescents' access to HIV testing, PMTCT and other SRH services without parental consents.

4.4.6 Collaborate with NAA, NMCHC and UN agencies to improve case documentation and establish systematic monitoring, reporting, and resolving mechanism, which address discrimination at healthcare setting.

4.4.7 Support for reactivation of the WLHIV network or WLHIV unit with existing PLHIV network.

4.4.8 Promote accountability and community engagement and participation of PLHIV and KP in particular in PMTCT program via the community-based service delivery.

4.4.9 Engage PLHIV and KP as well as related CSO in development, implementation, and monitoring of policies, strategies and programs related to PMTCT.

4.5 Support NMCHC to explore the possibility of triple elimination for HIV, congenital syphilis and HBV.

4.5.1 Explore HBsAg routine screening among all pregnant women in ANC with linkages to prevention, care and treatment service package.

4.5.2 Collaborate with NMCHC and other partners to PMTCT determine additional steps and develop a plan to integrate hepatitis B into existing HIV and syphilis PMTCT structures.

4.5.3 Assess and map where and how interventions for triple elimination are currently being provided within reproductive, antenatal, childbirth, postnatal and childcare services, and identify gaps and opportunities for coordination and integration.

4.5.4 Collaborate with NMCHC to advocate for high-level political commitment to include hepatitis B into the current dual eMTCT roadmap to achieve the triple elimination of HIV, hepatitis B and syphilis by 2030.

4.5.5 Standardize and align on key indicators to be monitored based on global and regional recommendations and set national and subnational milestones and targets for triple elimination (eMTCT)35 by 2030.

34 Laboratory Quality Management System

CORE COMPONENT 5: STI PREVENTION AND CONTROL

I. Rationale

Female Entertainment Workers (FEW), Men who have Sex with Men (MSM), and Transgender (TG) people at high risk of acquiring and transmitting HIV and STIs due to a greater frequency of high-risk sexual behaviour that expose them to these infections. As a consequence, HIV and STI prevalence among these groups are generally higher compared to the general population (Table 2). However, STI among both key population and general population including adolescents as well as multiple partners cause not only an increased risk of HIV transmission, but also an increased risk of infertility, cervical cancer, and adverse neonatal outcomes.

Based on findings from the latest STI sentinel prevalence survey in 2011 (SSS-2011) 16.8% of FEWs who have more than seven partners per week were found to have gonorrhoea and 20.6% of them were found to have chlamydia. In2005, 1.8% of MSM were found to have rectal gonorrhoea and 3.9% of these men had chlamydia (SSS 2005).

Based on what is known about the transmission dynamics of STIs and risk behaviour of key populations in Cambodia, a STI prevention and control strategy needs to be implemented simultaneously with the HIV strategy at several levels. Firstly, the strategy should reduce transmission where STI incidence is highest, saturating coverage in key populations in order to have the greatest impact on transmission. Secondly, it should address the large burden of STI related morbidity and mortality in the wider population, by improving STI services where people seek care. Finally, reliable information is needed on STI trends and risk behaviours; better monitoring and surveillance help program managers to assess needs and program performance, and to allocate resources to strengthen control efforts.

II. Objectives

To contribute to decrease HIV infection through reduction of STI and reproductive tract infection (RTI) prevalence, and ensure that all cases receive treatment.

To contribute to elimination of Mother-To-Child Transmission of HIV and Syphilis.

III. Core strategies

3.1 Expand access to STI/RTI care and treatment for key populations.

3.2 Increase user-friendliness of STI services for key populations.

3.3 Improve HIV/STI screening, immediate diagnosis and clinical management of asymptomatic STI among key populations and general population and partners, and address emerging antimicrobial resistance (AMR).

3.4 Ensure appropriate supplies for appropriate diagnosis and treatment of STI are available at all facilities providing STI services.

3.5 Strengthen the reporting and reliability of STI data to guide the program.

IV. Core Activities (Priority actions)

4.1 Expand access to STI/RTI care and treatment for key populations

4.1.1 In collaboration with the Department of hospital services-MoH, jointly develop SOP for STI/RTI services for integration into current health system where applicable, including private clinics. Develop a task analysis for health care provider working at FHCs.

4.1.2 Expand coverage of Family Health Clinics (FHC) in high-risk areas to increase access for higher-risk key populations by identifying and setting priorities for high-risk areas to set up STI clinics or integrated STI services that include:

(i) Provision of appropriate training, including training to reduce stigma and discrimination among healthcare providers

(ii) Provision of adequate clinical and laboratory equipment for FHC.

(iii) Providing training to those sites on reporting system.

4.2. Increase user-friendliness of STI services for key populations.

4.2.1 Upgrade STI/RTI services in FHC by renovation of Family Health clinics and introduce de-medicalized designing.

4.2.2 Utilize the potential for clinic coordinators from key population networks to facilitate access to STI services by key population.

4.2.3 Introduce PSF, MI and Health 4 All approaches to FHC service.

4.3 Improve STI screening, immediate diagnosis and clinical management of asymptomatic STI among key populations and general population and partners and and address emerging antimicrobial resistance (AMR).

4.3.1 Introduce the point of care of HIV and syphilis dual rapid test at FHC for Key population and at ANC for pregnant women.

4.3.2 Provide the syphilis screening at first visit at FHC for all clients and at a six months interval for higher risk key populations.

4.3.3 Refer and treat all detected syphilis client (refer to revised national guidelines on STI).

4.3.4 Develop the STI/RTI training curriculum and work with the MoH to integrate STI service as part of CPA in Referral Hospitals.

4.3.5 Strengthen the referral of HIV reactive clients to confirmation test at VCCT using the B-IACM mechanism.

4.3.6 Provide a routine STI check-up in every 3 months interval for higher risk key population.

4.3.7 Collaborate with AIDS Care unit and NMCH to strengthen the referral and follow up system for all syphilis pregnant women or KPs who are treated, ensure same-day treatment for pregnant women with a positive syphilis test, and follow up of exposed infants.

4.3.8 Collaborate with AIDS care unit to integrated PrEP in STI services.

4.3.9 Work with private STI clinic and maternity including NGO clinics to refer and/or report the STI patients to appropriate service for treatment and report to national level routinely.

4.4 Ensure appropriate supplies for appropriate diagnosis and treatment of STI are available at all facilities providing STI services.

4.4.1 Coordinate with Logistic Management Unit and Procurement units to provide adequate STI test kits/STI drugs/consumable, supplies, and condoms to all FHC sites.

4.4.2 Coordinate with Logistic Management Unit and Procurement units to provide adequate clinical and laboratory equipment and supplies to all FHC sites.

4.4.3 Provision of adequate clinical and laboratory equipment for FHC.

4.5 Improve STI/RTI prevention and case management.

4.5.1 Update national STI case management guidelines according to current WHO recommendations.

4.5.2 Provide STI case management practice and training/refresher for health care providers, including prevention and raising awareness of the risk of acquiring STIs that are asymptomatic.

4.5.3 Provide comprehensive STI case management at FHCs for key populations and priority HCs for the general population, as much as possible in a one-stop-shop service.

4.5.4 Provide proper diagnosis and management of gonococcal infection.

4.5.5 Provide training to paediatric services for syphilis treatment of exposed infants who are born to mothers who have syphilis.

4.6 Strengthen the reporting and reliability of STI data to guide the program.

4.6.1 Work with relevant units of NCHADS and partners to conduct SSS and IBBS that include an STI component.

4.6.2 Work with relevant national and international institutions to conduct regular Gonococcal Antimicrobial Susceptibility Program (GASP) to support the update of STI guidelines for prevention and control of gonococcal AMR.

4.6.3 Work with Data Management Unit to improve the monitoring and evaluation system to follow up trends of major STI syndromes (urethral discharge and genital ulcer) to investigate and rapidly respond to STI outbreaks.

4.6.4 Update recording and reporting forms for FHC to identify key populations and PLHIV and to capture access by key populations to HTC, BS, Pre ART/ART and FHC.

4.6.5 Provide a routinely monitoring to FHC and relevant service delivery.

4.6.6 Set up the quarterly meeting to review the STI case detection with all relevant partner to remove the redundancy and improve the data quality.

CORE COMPONENT 6: LABORATORY SERVICES

I. Rationale

Laboratory services played a key role in Cambodia reaching HIV/AIDS epidemic control in 2020 and receiving global recognition for being one of only seven countries to have achieved the interim "90-90-90" treatment in July 2017. The National Center for HIV/AIDS Dermatology and STD (NCHADS) laboratory provides HIV viral load (quantitative), quantitative Early Infant HIV Diagnostic (EID), CD4 count, and Hepatitis C viral load testing services. The NCHADS Lab and the HIV/AIDS Testing Service Unit of NCHADS have jointly conducted HIV/AIDS rapid testing, and internal quality control trainings to all staff at the 69 Voluntary Counseling and Testing (VCT) sites. In partnership with the National Institute of Public Health Laboratory, NCHADS also provides HIV External Quality Assurance Scheme (EQAS) to all VCT sites and follows up with corrective actions to underperforming sites. NCHADS leads in managing and coordinating the genotyping service with Cambodia Institute Pasteur and Macrogen laboratory in Korea for patients with repeated virological failure to identify mutations for drug resistance.

To inform the revised HIV/AIDS Strategic Plan 2021-20125, NCHADS coordinated and led the HIV/AIDS Joint Program Review (JPR). Four international consultants, one national consultant, two team members from the WHO Regional Office in Manila and one team member from the UNAIDS Regional Office in Bangkok with local technical experts conducted the JPR from August to September 2019.

The JPR found that HIV and STI laboratory services, such as HIV rapid testing, syphilis testing, CD4 count, EID and viral load testing, are established and available within the health services. The SOP for laboratory testing for specific diseases was updated in 2017. The NCHADS Laboratory provides HIV viral load (quantitative), EID (qualitative), CD4 count, and HCV viral load test services and supervises ART sites. Syphilis testing is routinely providing to high-risk populations and at ante natal care (ANC), using the dual test for HIV and Syphilis. For the general population, single tests are used. There are 9 CD4 testing sites in the country (out of 69 treatment sites). Opportunistic Infection (OI) testing, for example for Cryptococcus and hepatitis C, can be performed at the operational district (OD) level. NCHADS is the only laboratory that performs early infant HIV diagnosis, but sample collection is available at all hospitals and ANC clinics. NCHADS has participated in EQA for viral load, EID and syphilis testing organized by US- CDC (twice a year) and HIV serology organized by NIPH.

The following are the challenges encountered:

- Laboratory technical staff input laboratory data. Each system was installed on separate computers and there is no data back-up system.
- The NCHADS and Siem Reap provincial hospital laboratories have experienced electricity interruptions and these caused errors and delayed turn-around time (TAT) of test results.
- For viral load testing at the Siem Reap provincial hospital laboratory, samples are collected at a transfer hub and delivered to the provincial laboratory by staff or contracted taxi drivers, but training on biosafety for the specimens is questionable.

To overcome these challenges, the JPR team recommended:

1) Simplify data management system: consider integrating laboratory data system and linking laboratory information system to NCHADS patient monitoring database system and securing human resources for data management.
2) In order to enhance turn-around time and improve laboratory result delivery, consider providing remote printers to all ART clinics and prepare for electricity outages, and ensure that NCHADS lab staff follow his/her job description and duty roster.
3) To serve as an HIV national reference laboratory, NCHADS lab should consider applying for ISO 15189 accreditation.

II. Objectives

To provide accurate, efficient, and reliable clinical laboratory services, especially HIV viral load, genotype, early infant HIV diagnostic, hepatitis B testing, hepatitis C viral load tests to all people in need for HIV/AIDS, and STI diagnostics, care and treatment.

To improve the laboratory quality management systems (LQMS) at the NCHADS and Siem Reap laboratories, which includes the NCHADS laboratory obtaining ISO 15189 Accreditation.

To provide reliable laboratory data as needed for programmatic analysis surveillance, research, and to improve patient outcomes.

III. Core strategies

3.1 Ensure full coverage of HIV viral load, genotype, early infant HIV diagnostic, access to hepatitis B vaccine and testing and treatment, hepatitis C viral load tests per national HIV/AIDS and STI diagnostics, care and treatment guidelines are accurate and results turnaround time follows international recommendations.

3.2 NCHADS and Siem Reap laboratories implement LQMS, and the NCHADS laboratory obtains and maintains ISO accreditation under a recognized ISO accreditation body.

3.3 Ensure the latest laboratory information system technology is deployed at the NCHADS and Siem Reap laboratories, and is interoperable with the NCHADS laboratory database, and ART clinic patient monitoring system.

IV. Core Activities (Priority actions)

4.1 **Ensure full coverage of HIV viral load, genotype, early infant diagnostic, hepatitis-B services, hepatitis- C viral load tests per national HIV/AIDS and STI diagnostics, care and treatment guidelines are accurate and results turnaround time follows international recommendations.**

4.1.1 All laboratory staff receive training on topics relevant to their work and that they pass the competency assessment test annually.

4.1.2 Continuing education program at laboratories (journal club, lab technical meeting or discussion, online training, etc.) is planned and implemented on a quarterly basis.

4.1.3 Annually/bi-annually review the leasing contracts of the equipment and analyzers at the laboratories to ensure they are using the latest technology, meet NCHADS program needs, and can support testing/diagnostics for multiple diseases.

4.1.4 HIV genotype testing consider to be done at the NCHADS laboratory by 2024.

4.1.5 All equipment and analyzers at laboratories will be under and annual maintenance contract, and validation/calibration will be done per the manufacturer's recommendations.

4.1.6 In 2021, review and ensure supply chain management is fully functioning at laboratories and if possible to be a part of an overall HIV national program to ensure no stock out of reagents, test kits, etc. and to follow ISO15189 standards.

4.1.7 NCHADS lab works with the HIV Testing Service and AIDS Care Unit of NCHADS should conduct initial and re-fresher trainings to HIV/AIDS laboratory and hospital staff on HIV rapid testing, recency testing, CD4, Syphilis, clinicians on specimen collection, packing and transportation and interpretation of laboratory results other new testing per annual work and budget plans.

4.1.8 NCHADS lab conducts quarterly site visits after the trainings focusing on low performing sites/hospitals.

4.1.9 Ensure that the ART clinic patient monitoring system is interoperable with the NCHADS database (i.e. the national laboratory information system), and meets ISO15189 requirements.

4.1.10 In 2021, revise the Sample Transportation System Guidelines - and implement the updated guidelines.

4.2 **The NCHADS and Siem Reap laboratories implement LQMS, and the NCHADS laboratory achieves and maintains ISO Accreditation under a recognized ISO accreditation body.**

4.2.1 Upgrade NCHADS laboratory facilities to comply with Occupational Health and Safety (OHS) and International Standards [ISO 15189 requirement and ISO 15190 (safety).

4.2.2 NIPHL and NCHADS Management develop a Letter of Agreement to guide project implementation (in 2019).

4.2.3 The National Institute Public Health Laboratory provides ongoing technical assistance to the NCHADS laboratory to obtain ISO 15189 Accreditation (NIPHL obtained ISO accreditation in Feb. 2019).

4.2.4 In 2023, NCHADS Laboratory is registered with an ISO 15189 Accreditation body.

4.2.5 The NCHADS and the Siem Reap HIV/AIDS laboratories receive ongoing technical assistance from the National Institute of Public Health Laboratory which obtained ISO accreditation.

4.3 Ensure the latest laboratory information system technology is deployed at the NCHADS and Siem Reap laboratories, and is interoperable with the NCHADS laboratory database, and ART clinic patient monitoring system.

4.3.1 Laboratory information system of NCHADS and Siem Reap laboratories is reviewed and incorporated into the review exercise of the NCHADS program, and IT architecture needs.

4.3.2 Laboratory information system of NCHADS and Siem Reap laboratories is incorporated into the development of NCHADS information systems/platforms that offer data security, has unique identifiers such as PMRS/national ID, and is able to monitor patient care, and is also interoperable with relevant ministry of health information system such as Health Information Management system (HMIS).

4.3.3 When NCHADS and Siem Reap Laboratories' devices/equipment are upgraded, the interoperability with NCHADS information systems/platforms will be assured before deploying.

CORE COMPONENT 7: LOGISTICS AND SUPPLY MANAGEMENT

I. Rationale

Logistics and Supply Management has played a pivotal role in product selection, quantification, procurement, stock management and distribution of antiretroviral drugs (ARVs), rapid diagnostic tests (RDTs) and laboratory commodities to ensure that they are fully available for the utilization at health facilities in Cambodia. Other HIV-related therapies also covered by Logistics and Supply Management include Hepatitis C (HCV) diagnostic tests and treatment, Tuberculosis Prevention Therapy (TPT) and Opportunistic Infection (OI) regimens.

The Logistics Management Unit (LMU) at NCHADS was established into 2005 to meet the increased demand for HIV commodities during the scale-up of antiretroviral therapy. Since 2014, LMU-NCHADS has focused not only on logistics and supply management, but also on strengthening and harmonizing the Logistics Management Information System (LMIS) with patient data systems maintained by the Data Management Unit (DMU).

The LMU has made a number of important contributions to the national HIV program's achievements in reaching the 90-90-90 goals and moving forward to the 95-95-95 target and AIDS elimination. These include the transition of RDTs from HIV-determine to the more precise HIV antigen-antibody combo test, and the commencement of dual HIV/Syphilis test for key populations and pregnant women. In the HIV access program, the LMU has facilitated regimen optimization such as the phasing-out of Nevirapine (NVP) and Tenofovir/Lamivudine/Efavirenz 600 (TLE600), while the phasing-in of Dolutegravir (DTG) and Tenofovir/Lamivudine/Efavirenz 400 (TLE400). In differentiated care, the LMU has supported the implementation of multi-month scripting (MMS) since the initiation and the plan for scaling up MMS by the end of 2019, and the complete roll out to all ART sites by end of 2020. The LMU has also collaborated with other units at NCHADS to implement various initiatives including Pre-exposure prophylaxis (PrEP), 3rd line ARV regimens and HIV/HCV co-infection screening and treatment program. Regarding LMIS, the LMU has incorporated the pilot project using mSupply, managed by the Department of Drug and Food (DDF), Ministry of Health (MOH).

Although the LMU has developed and implemented many activities to enhance logistic and supply management and data system, there are still some gaps in core activities that need to be addressed in the Health Sector Strategic Plan 2021-2025. These activities include updating the revised standard operating procedure (SOP), developing a procurement tracking tool, customizing a national stock monitoring dashboard for RDTs and lab commodities, developing an automated tool capturing consumption, patient, and stock-on-hand data at all ART sites. The LMU must also continue to support scaling up LMIS activity for the paediatric transition from NVP to DTG.

II. Objectives

To ensure end-to-end coverage of all HIV commodities (prevention, diagnostics and treatment) at the national and site level and an uninterrupted supply to all health facilities nationwide.

To build a sustainable, adaptable, and accurate system that works in a timely manner to ensure the correct quantities of optimal products are available at the necessary sites under the right conditions.

III. Core strategies

3.1 Strengthen and monitor consumption reporting and distribution for ARV drugs, RDTs and lab commodities that are needed for implementation of ART health testing service (HTS), HTS/ART, STI, and laboratory programs.

3.2 Complete precise quantification for all required ARVs, OI treatment and prophylaxis drugs, RDTs and lab commodities.

3.3 Ensure effective coordination and collaboration between the LMU, Central Medical Store (CMS), DDF, other relevant MOH departments, external procurement and supply chain partners to ensure effective and un-interrupted supplies of ARVs, OI treatment and prophylaxis drugs, RDTs and lab commodities.

3.4 Strengthen stock management practices for ARVs, OI treatment and prophylaxis drugs, RDTs and lab commodities at the national level.

3.5 Build human resource capacity and stock management capability at the health facilities through local / regional training.

3.6 Safeguard end-to-end tracking of all HIV commodities from ordering to purchasing, to procurement, to delivery at CMS and to distribution to sites.

IV. Core Activities (Priority actions)

4.1 Strengthen and monitor consumption reporting and distribution for ARV drugs, OI treatment and prophylaxis drugs, RDTs and lab commodities that are needed for implementation of ART HTS, HTS/ART, STI, and laboratory programs.

4.1.1 Develop standardized national requisition form (R & R form) for ARVs, OI treatment and prophylaxis drugs, RDTs and lab commodities, to be used at all ART sites countrywide.

4.1.2 Collect and monitor all site consumption reports for regular analysis, reference and corrective action taken when necessary.

4.1.3 Collaborate with site medical staff to ensure that consumption forecasts are aligned with clinical practices following the national guidelines.

4.1.4 Establish an automated fast-track tool for capturing stock, consumption and patient-level data to be utilized.

4.2 Complete precise quantification for all required ARVs, OI treatment and prophylaxis drugs, RDTs and lab commodities regularly.

4.2.1 Incorporate all updated strategic and treatment indicators into the forecast of ARVs, OI treatment and prophylaxis drugs, RDTs and lab commodities.

4.2.2 Revise the forecast with patient morbidity, stock and consumption data as it becomes available.

4.2.3 Update quantification tools to align with treatment updates (e.g. ARV transition plans) to ensure there is a smooth transition in place, avoid stock- out and minimize wastages.

4.2.4 Integrate with implement partners to assist LMU in ARVs, OI treatment and prophylaxis drugs, RDTs, lab commodities consumption data, patient data and consolidate for stock monitoring and annual quantification exercise. Ensuring the highest quality, accuracy and consistency of all data, tools, and exercises.

4.2.5 Work with implementing partners to produce and present the result of quantification to NCHADS management team and other partners in the Logistic Supply Working Group (LSWG) meeting.

4.3 Ensure effective coordination and collaboration between the LMU NCHADS program, CMS, DDF, other relevant MOH departments and external procurement and supply chain partners to ensure uninterrupted supplies of ARVs, OI treatment and prophylaxis drugs, RDTs and lab commodities.

4.3.1 Coordinate quarterly LSWG meeting with all relevant units within NCHADS and external HIV partners to present the forecasting results, discuss and address all possible procurement and supply management issues and provide regular updates on stock monitoring.

4.3.2 Ensure that all the approved ARV drugs, OI treatment and prophylaxis drugs, RDTs, lab commodities are managed and completed in a timely manner.

4.4 Strengthen stock management practices for ARVs, OI treatment and prophylaxis drugs, RDTs and lab commodities at the national level.

4.4.1 Regularly update the national stock monitoring dashboard for ARVs using consumption data and updated stocks and pipeline.

4.4.2 Customize the national stock monitoring dashboard for RDTs and lab commodities and regularly update it.

4.5 Build human resource capacity and stock management capability at the health facilities through local/regional training.

4.5.1 Conduct biennial regional workshops and refresher training for all relevant health care workers at ART sites (including staff working for pharmacy and supply management of health facilities and staff members of health centers that provide HIV testing) services on logistics and supply management.

4.5.2 Train new staff in ART sites on national tools and stock management practices.

4.5.3 Ensure staff and facilities are compliant with Good Storage Practice (GSP)

4.5.4 Ensure that ARV drugs, OI treatment and prophylaxis drugs, RDTs, lab commodities requested from the health facility level meet the adopted drug optimization regimens from NCHADS management.

4.5.5 Develop early detection system to monitor ARV drugs, OI treatment and prophylaxis drugs, RDTs, lab commodities stock management, consumption, and upcoming deliveries at all health facilities.

4.6 Safeguard end-to-end tracking of all HIV commodities from ordering to purchasing, to procurement, to delivery at CMS and to distribution to sites.

4.6.1 Coordinate the collaborative work between LMU, Procurement unit and Procurement Agency (e.g. UNOPS) to ensure that all parties aware of purchase orders, stock location, quantity, status and respective timelines.

4.6.2 Develop mechanisms to closely monitor stock status and progress to ensure that any delays in purchase orders, procurement, deliveries, or distributions are detected and issue is addressed quickly.

CORE COMPONENT 8: **STRATEGIC INFORMATION**

I. Rationale

Cambodia's HIV surveillance systems, along with other data collection systems, have evolved with the epidemic. The first case of HIV was detected in 1991, and by 1995, a surveillance system was already in place in Cambodia. From 1995 to 2004, sentinel surveillance was conducted among female sex workers, policemen, military personnel, pregnant women, tuberculosis patients and hospital inpatients. From 1997 to 2004, behavioural surveillance was conducted annually among brothel and street-based sex workers, beer promoters, soldiers, policemen and moto-taxi drivers. Starting from 2005, in line with global guidance, the surveillance system has evolved into integrated biological and behavioural surveillance (IBBS), and between 2005 and 2018, a series of IBBS were conducted among female entertainment workers, men who have sex with men, people who inject drugs and transgender people. As part of IBBS, key population size estimation exercises are conducted and updated regularly. HIV estimates are integral component to track the 90-90-90 achievements and eMTCT targets and HIV estimates are also regularly updated using AIDS Epidemic Model and Spectrum and reported to UNAIDS Global AIDS Monitoring.

Through Cambodia 1.0 to Cambodia 3.0, care and treatment has always been a key component of the response, and there is a wealth of data on care and treatment. Individual data on care and treatment is captured via multiple databases from diagnosis to treatment – VCCT database, B-IACM database, ART database and lab database. In recent years, additional data on co-morbidities and reproductive health of PLHIV have also been collected, including hepatitis C and TB co-infections, pregnancy outcomes for pregnant women living with HIV, etc. Data collection and analysis of STI patients has remained sub-optimal.

Data on pregnant women living with HIV is collected through both NCHADS and MNCH data systems but has yet to be streamlined and synchronized. In recent years, a national prevention database that uses UUIC has also been developed to monitor prevention interventions among key populations, using the DHIS 2 platform.

Currently, multiple databases are using different platforms with limited or no interoperability between databases. Having a wealth of data without interoperability poses multiple challenges, particularly when there is a paradigm shift of information systems towards people-centred approaches, tracking of individuals through prevention to care, and case-base surveillance approaches. Certain data collection forms are laden with medicalized information and contain minimal information on the risk profiles of clients. Unwieldy data

collection forms also impact the workload at the site level, as well as data quality and data accuracy. The issues of interoperability and data collection workload have been extensively discussed with partners and a streamlined and integrated data system is in the conceptualization stage.

SI Technical Working Group is chaired by the director of NCHADS. The SI-TWG is comprised of representatives from NCHADS, NAA, UNAIDS, WHO, USAID, US-CDC, FHI360, CHAI, KHANA, RHAC, and HP+. The SI-TWG convenes regularly and discusses site and national level constraints, challenges, innovative approaches, and good practices.

Management of information systems for the National HIV program is led by NCHADS and implemented by the NCHADS Data Management Unit (DMU), the Surveillance Unit and the Research Unit.

Data dissemination is mainly conducted though the NCHADS website, where quarterly reports, annual reports, survey reports and other documents are freely accessible and available for public use.

II. Objective(s)

To strengthen generation and use of quality data to track the progress towards the 95-95-95 testing and treatment target and ending AIDS targets, at both national and sub-national level.

To support people-centred data analysis through integrated databases – including integration into the national health information system – that are linked, interoperable, user-friendly at all levels, and sustainable.

III. Core strategies

3.1 Enhance the quality of routine IBBS, programme data and other studies to better understand emerging risks vulnerabilities, co-infections and co-morbidities among key populations and PLHIV

3.2 Strengthen HIV estimation exercises through better and granular data inputs.

3.3 Improved and streamlined data system for pregnant and breastfeeding women living with HIV and their babies.

3.4 Align and harmonize databases through identification, optimization and maximize use of existing unique key identifiers for key populations and PLHIV.

3.5 Continue capacity building and minimize turn over of SI workforce.

3.6 Optimize data quality, analysis and promote data use at site-level, sub-national level, and national level to timely inform the programme and the AIDS response.

IV. Core Activities (Priority actions)

4.1 Enhance the quality of routine IBBS, programme data and other studies to better understand emerging risks, vulnerabilities, co-infections and co-morbidities among key populations and PLHIV.

4.1.1 Assess and evaluate IBBS methodologies and questionnaire to conform with evolving risk behaviours and risk patterns across all key populations and age groups.

4.1.2 Regularly conduct DQA activities and on-site data verification

4.1.3 Granular data collection and analysis to understand the risk by age, gender, sub-groups, locations etc.

4.1.4 Use prevention programme data (BCC, bio-medical intervention, IBBS) to monitor the effectiveness of programme.

4.1.5 Strengthen existing mechanism at site level to improve data collection, analysis and use to track 95-95-95 treatment targets at all levels

4.1.6 Strengthen and streamline data collection processes and systems for co-infections among PLHIV and key populations; timely data analysis and use to improve management and treatment of co-infections.

4.1.7 Establish sentinel surveillance sites for routine monitoring of new cases of HIV and STI infections with system in place for DQA, regular data analysis and data use.

4.1.8 Conduct operational research/ in-depth study/assessment to understand the programme bottlenecks (e.g. LTFU, adherence) and emerging risks (e.g. ATS use, dating apps and high-risk sex, etc.).

4.2 Strengthen HIV estimation exercises through better and granular data inputs

4.2.1 Review and triangulation of proxy measure data inputs such as HIV recency test, mortality data, key population size estimations, differentiated risk profiles from programme and surveys, and key programme data inputs such as ART, VCCT, lab and PMTCT, etc.

4.3 Improved and streamlined data system for pregnant and breastfeeding women living with HIV and their babies (HIV and syphilis)

4.3.1 Strengthen integration and collaboration with MNCHC department in development and use of tracking and monitoring tools, that track mother-baby pairs until the cessation of breastfeeding and confirmed positive or negative HIV status of infants.

4.3.2 Strengthen monitoring data on syphilis-infected pregnant women and their infants.

4.3.3 Bottom up tracking of mother-baby pairs, starting from site level and streamlined at national level.

4.3.4 Joint review of sub-national and national level performance conducted regularly by NCHADS and NMCHC.

4.4 Alignment and harmonization of databases through identification, optimization and maximize use of existing and unique key identifiers for key populations and PLHIV.

4.4.1 Adopt the tools/systems/platforms that offer data security, appropriate data storage, data harmonization and interoperability.

4.4.2 Review data collection tools and user-interface to ensure that they are standardized, easy-to-follow for non-medical professionals, captured key information on risks and vulnerabilities.

4.4.3 Review existing UUIC and potential unique identifiers such as PMRS/national ID and identify existing/potential challenges and shortfalls and address and improve accordingly.

4.5 Continued capacity building and minimize turn-over of SI workforce.

4.5.1 Training and refresher trainings are regularly conducted for all data management staff at sub-national and national level.

4.5.2 Advocate with MoH and relevant ministries to address staff shortage and appropriate compensation.

4.5.3 Minimize unnecessary workload through database integration and system intelligence to foster improved and smart data collection tools and autogenerated reminders and updates.

4.6 Optimize data quality, analysis and promote data use at site-level, sub-national level, and national level to timely inform the programme and the AIDS response.

4.6.1 Improved understanding of risk stratification among newly diagnosed PLHIV through enhanced risk profiling and data collection.

4.6.2 Revisit and define algorithm to detect potential data entry errors.

4.6.3 Validity check mechanisms instituted in the data system at all levels.

4.6.4 Develop and use user-friendly tools to visualize and analyse disaggregated data at all levels.

4.6.5 Train staff on how data can be used for decision-making and programme improvement.

4.6.6 Ensure the implementation of Prakas on private sector reporting with emphasis on data sharing of HIV, STI including for pregnant women.

CORE COMPONENT 9: **PROGRAM MANAGEMENT**

I. Rationale

NCHADS as part of the MOH has lead responsibility for recommending and implementing policies, strategies and Standard Operating Procedures for the health sector response to HIV/AIDS and STI in Cambodia. NCHADS works to achieve the overall goal and objectives to eliminate HIV new infections through the provision of quality of prevention, care and treatment services within the health sector.

NCHADS has developed a Functional Task Analysis (FTA) that identifies NCHADS structure and functions. The Annual Operational Plans (AOP) initiated at OD, provincial and national levels ensures that implementation is consistent with the Strategic Plan, while the various coordination mechanisms are overseen via Technical Working Groups (TWG).

II. Objective

To ensure that all stakeholders are well coordinated to implement this Strategic Plan.

III. Core Strategies

3.1 Enhance partnership and coordination in implementing the Strategic Plan.

3.2 Ensure that roles and responsibilities of managerial structures at national and sub-national level are fit for effective and efficient response to the Strategic Plan.

3.3 Mobilize and use resources efficiently to support the implementation of the Strategic Plan.

IV. Core Activities

4.1 Enhance partnership and coordination in implementing the Strategic Plan.

4.1.1 Ensure good functioning of technical and sub-technical working groups at national and sub-national levels to adapt and adjust components and strategies as necessary to changing situations and needs, new technologies, etc.

4.1.2 Regularly update the Letters of Agreement between NCHADS, PHD, OD and relevant stakeholders.

4.1.3 Set up and update mechanisms as required to ensure good coordination and sharing of responsibilities across all relevant stakeholders involved in the implementation of the Strategic Plan.

4.2 **Ensure that roles and responsibilities of managerial structures at National, and sub-national** levels are fit for effective and efficient responses to the Strategic Plan.

4.2.1 Update the FTA to support the implementation of this Strategic Plan.

4.2.2 With support from the MOH mobilize sufficient and appropriate human resources at national and sub-national levels.

4.2.3 Organize capacity, management and leadership skills building through appropriate channels to strengthen implementation of the Strategic Plan.

4.3 **Mobilize and use resources efficiently to support the implementation of the Strategic Plan.**

4.3.1 Set priority core activities of each program component of the Strategic Plan; and up-date regularly to ensure all resources are used efficiently.

4.3.2 Regularly up-date the costing of the Strategic Plan and ensure costing and accounts/financial management systems are consistent with the Strategic Plan.

4.3.3 Advocate and mobilize resources both human and financial to support the implementation of the Plan.

4.3.4 Develop the Annual Operational Comprehensive Plan (AOCP) based on each component of the strategic plan.

4.3.5 Ensurefunding allocations and timely funding flows to support the implementation of the strategic plan.

4.3.6 Ensure the accountability and transparency of all (financial as well as non-financial) management systems.

D. IMPLEMENTATION ARRANGEMENTS

NCHADS is a national center under the MOH with the responsibility of guiding, implementing, monitoring, evaluating, and mobilizing resources in support of the health sector response to HIV and STI.

NCHADS vision and actions are guided by:

The MOH Strategic Plan; together with guidelines, policies and provisions for health service delivery.

Five-year Health Sector Strategic Plan for HIV/AIDS and STI Prevention and Care are, developed by NCHADS and partners with approval by MOH and complemented by AOCP at the central and provincial levels to implement the activities of this strategic plan.

Periodic updates by NCHADS of the components of the strategies based on experience, shifting needs and priorities, the emergence of new technologies and international best practices.

Detailed SOPs which are produced and/or up dated to guide implementation of components and strategies available on the NCHADS website in both the Khmer and English language (www.nchads.org).

Strong partnerships within and beyond the HIV sector, established through relevant TWG to support the implementation of the Strategic Plan and the Cambodia 3.0 Initiative.

Responsibility for effective implementation of the Strategic Plan is shared between the government institutions and development partners. In practice this is coordinated and overseen by NCHADS together with the Provincial AIDS and STI Program (PASP), though with increasing emphasis on OD level planning and implementation via the Group of Champions for B-IACM.

NCHADS is responsible for the development of overall strategy and guidelines of program components, developing the AOP, coordination of stakeholders, mobilization, and resource allocation to support the implementation of the Strategic Plan.

PASP and PHD develop AOCP based on national guidelines and SOP.

OD implements activities supporting the Strategic Plan with the support of PASP, NCHADS and development partners.

Figure 7: Local Stakeholders

KHANA				FHI 360	AHF	RHAC	FI	Other organizations
TG	*MSM*	*FEW*	*Community Action Approach – CAA*	*Facility Based Care*	*Facility Based Care*	*Facility Based Care*	*PWID*	-CHAI -CRS -HP+ -WOMEN -CPN+ -AUA -MEC -CHEC
MHC MHSS SIT	MHC MHSS Khemara	CWPD Khemara SIT	BFD BSDA CPR SIT WOSO	Chhouk Sar Clinic	• Contract staff supplied in Gov't. facilities	• Rep. Health & STI Services • PrEP	Mith Samlang Korsang	

Figure 8: Stakeholders for Implementation of HSSP 2021-2025

Committees
GFATM Country Coordinating Committee
Technical Working Groups
Provincial AIDS Committees (PAC)
Provincial AIDS Secretariats (PAS)
Group of Champions (GOC)

Partner Agencies / Donors
UN
WHO, UNAIDS, UNFPA, UNICEF

US Government
USAID, US-CDC, PEPFAR

The Global Fund
GFATM Portfolio Team
Local Fund Agent - PWC
Fiscal Agent - GFA
Procurement Agent - UNICEF

GFATM PR-Offices

NCHADS-PR
UNOPS-PR
MOH-PR
CENAT-PR

INGO
Clinton Health Access Initiative (CHAI)
AIDS Health Foundation (AHF)
Médecins Sans Frontières (MSF)

University & Research partners
URC
Institute for Tropical Medicine - Belgium (ITM)
Agence Nationale de Recherche sur le Sida - France (ANRS)
Palladium

Not for profit facilities
Sihanouk Hospital - Center for HOPE

stakeholders

National AIDS Authority NAA)

Ministry of Health
HIV National Program
National Center for HIV/AIDS, Dermatology & STI Control (NCHADS)
NCHADS Laboratory
NCHADS Dermatology & STI clinics

National Referral Laboratory (NIPH)

MOH Departments
Department of Communicable Disease Control
Department of Drugs, Cosmetics and Food
Department of Hospital Services
Department of Mental Health & Substance Abuse
Department of Planning & Health Information
Department of Preventive Medicine

Related MOH Institutions
National Center for Tuberculosis & Leprosy Control
Central Medical Stores (CMS)
National Blood Transfusion Service (NBTS)
National Health Promotion Center (NHPC)
National Institute of Public Health (NIPH)
University of Health Sciences (UHS)

National Hospitals (PNH) x 9
National Pediatric Hospital
National Center for Mother & Child Health

Provincial
Provincial Health Departments (PHD)
Provincial AIDS & STI Program (PASP)
Referral Hospitals:
(FHC/ VCCT/pre-Art/ART centers)
Operational Districts
Health Centers

Ministry of Planning
Ministry of Economics & Finance
Ministry of Labor & Vocational Training

D.1 MOH Departments and National Centers

The National MCH Center (NMCHC) is the key agency to implement B-LR to eliminate MTCT of HIV and syphilis. CENAT is the main partner with NCHADS in relation to a coordinated response to HIV and TB co-infection.

NCHADS collaborates with:

CENAT to share concerns and updates on coordinated TB/HIV activities.

Ministry of Economy and Finance (MEF) serves as the Principal Recipient of the Global Fund grants. The MEF collaborates with all disease programs (TB, Malaria and HIV) to facilitate tax exemptions for imported medicines, health commodities, office equipment, vehicles etc. and payment of VAT used as part of ODA project implementation. MEF works with MOH as ODA decreases to increase the national budget to support national programs, and to oversee the transition of budget allocations for MOH and staff funded via the Global Fund programs.

Ministry of Labor & Vocational Training (MOLVT) collaborates with NCHADS to educate and inform workers in establishing HIV prevention program in the workplace and ensuring anti-discrimination policies for HIV are included as part of the Labor law.

MOH Central Medical Stores (CMS) and the Department of Drugs and Food (DDF) to ensure for registration, storage, quality assurance and quality control, logistics and distribution for medicines, reagents, and health commodities to health facilities.

MOH Department of Communicable Disease Control (DCDC) provides a coordination role for communicable diseases including the HIV, TB and malaria programs.

MOH Department of Mental Health and Substance Abuse (DMHSA) for harm reduction initiatives.

MOH Department of Planning & Health Information (DPHI) in relation to the passive surveillance system, development, and integration of NCHADS AOCP into

the MOH AOP, and health financing including HEF for PLHIV to access to HIV care and treatment services at the public health facilities.

MOH Department of Preventative Disease is responsible for non- communicable diseases including all chronic diseases such as diabetes, heart disease,

hypertension etc. and will provide guidance about non- communicable diseases in general to improve the PLHIV.

MOH Department of Hospital Services (DHS), Laboratory Bureau to ensure the supply of reagents and other consumables to referral hospital laboratories.

National Blood Transfusion Center (NBTC), who have the primary responsibility for

blood safety and for referral of confirmatory reactive cases for HIV and Syphilis to VCCT sites and to ART/STI clinics at the health facilities.

National Health Promotion Center (NHPC) for shared work on integration of CBPCS into broader volunteer health system.

National Institute of Public Health (NIPH) for collaborative work on training and research on HIV and STI including using the national Referral Laboratory located at NIPH for collaboration on QA/QC for HIV testing.

University of Health Sciences (UHS) and other training institutions for integrating training described under this Plan.

Shared responsibilities

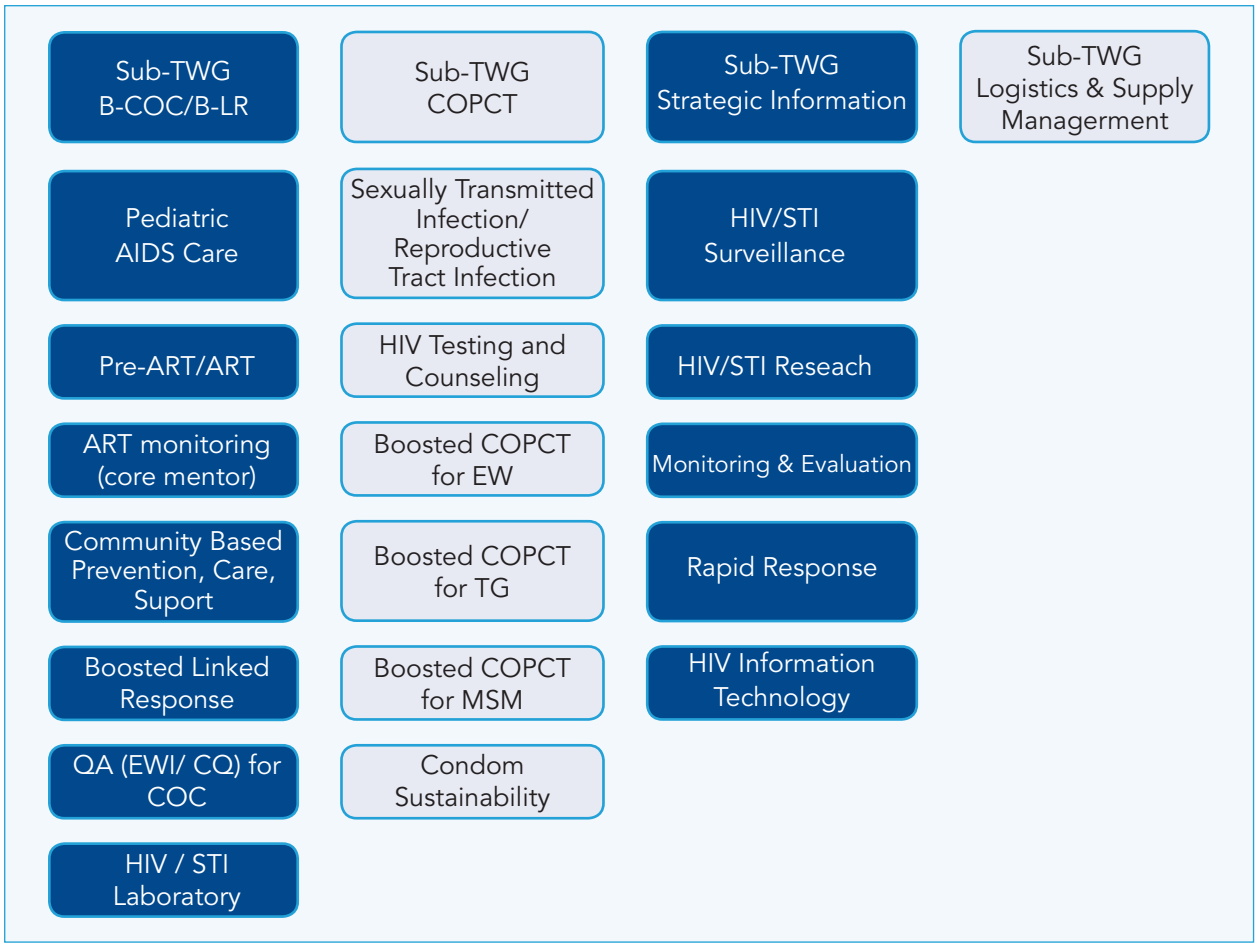
Other Government Institutions: The National AIDS Authority (NAA), and its policy and technical boards (of which the MOH is a member); provincial entities, including PHD, Provincial AIDS Committees (PAC), and Provincial AIDS Secretariats (PAS).

Partner organizations: NCHADS works closely with I/NGO and other partners involved in HIV/AIDS activities. These may be small, local NGO and Community Based Organizations (CBO), such as those receiving funds through KHANA, and through NCHADS on CBPCS activities (Figure 9) NCHADS also works with international organizations such as the AIDS Healthcare Foundation (AHF), UNAIDS, USAID and WHO to support the implementation of this Strategic Plan.

D.2 Coordination mechanisms

NCHADS has established Technical Working Groups to ensure the full benefit of technical expertise and experience from all partners.

Figure 9: Structure of Coordinating Mechanisms – TWGs



D.3 NCHADS Annual Operational Plan (AOP)

NCHADS is responsible for supporting and coordinating provinces to develop Annual

Operational Comprehensive HIV/AIDS and STI Plans (AOP) and compiling these plans into an overall work plan for the HIV/AIDS Program and ensuring this planning process is aligned with the Annual Operational Plan (AOP) of the MOH.

The NCHADS Annual Operational Comprehensive Plan (AOP) aims to:

Develop national annual targets for HIV/AIDS and STI control within the health sector.

Identify all partners working at OD, province and national level.

Identify annual funds available for HIV/AIDS and STI control.

Allocate annual funds to the provinces.

Develop three year rolling plans as part of the MOH budget process for submission to the Ministry of Health (MOH) as part of MOH' AOP to submit to the Ministry of Economics and Finance (MEF).

Stakeholders involved to develop the AOP, include HIV/AIDS management teams (PHD or Deputy PHD Director, PASP and PHD Accountant), PHD Planning Officer, NCHADS technical officers and participants from HIV/AIDS prevention and care,

partners, donors, technical advisors, NAA, other national programs, and MOH departments, and PLHIV networks.

D.4 Functional Task Analysis - NCHADS

NCHADS describes its organizational arrangements in the Functional Task

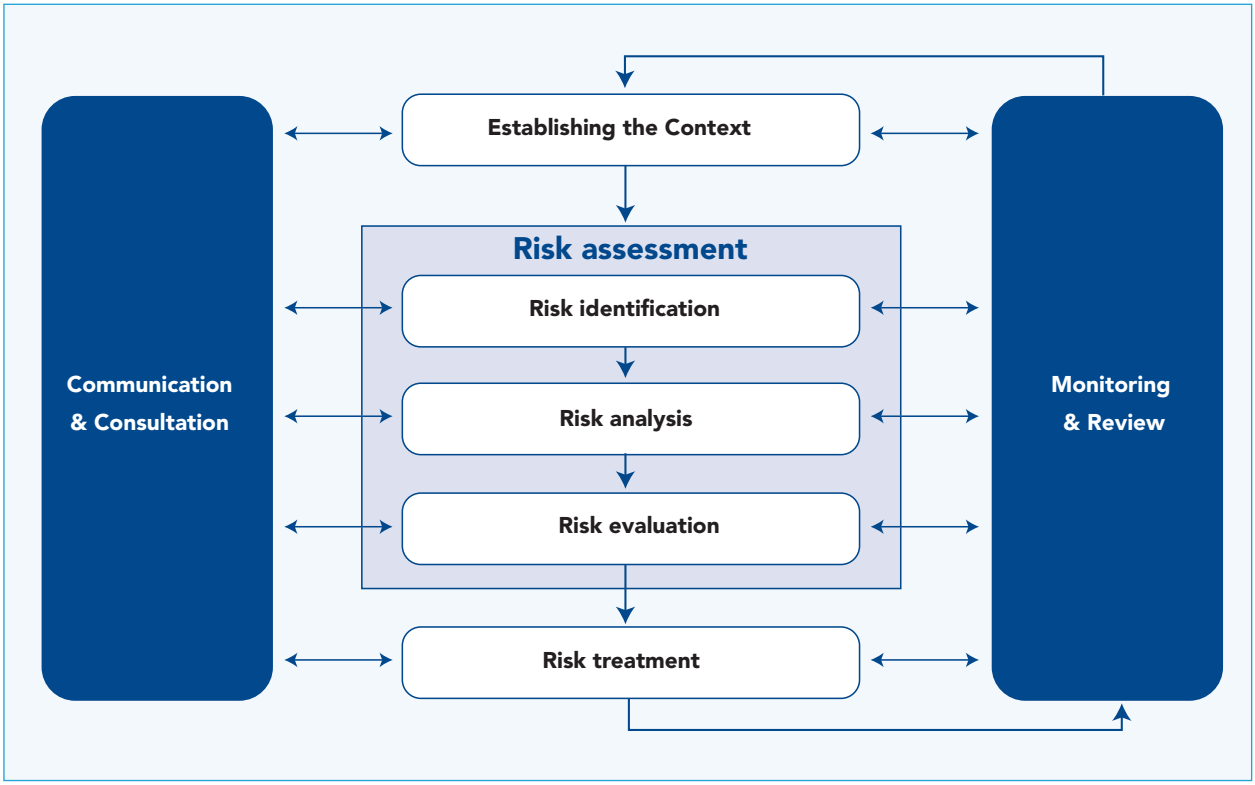
Analysis (FTA). The NCHADS FTA aligns with the Strategic Plan to support the implementation of the Cambodia 3.0 Initiative for Elimination of HIV infections.

The FTA facilitates better management practices across the range of NCHADS activities providing greater clarity about operational aspects including the roles of units, their staff, as well as defining lines of accountability and responsibility.

E. RISK MANAGEMENT

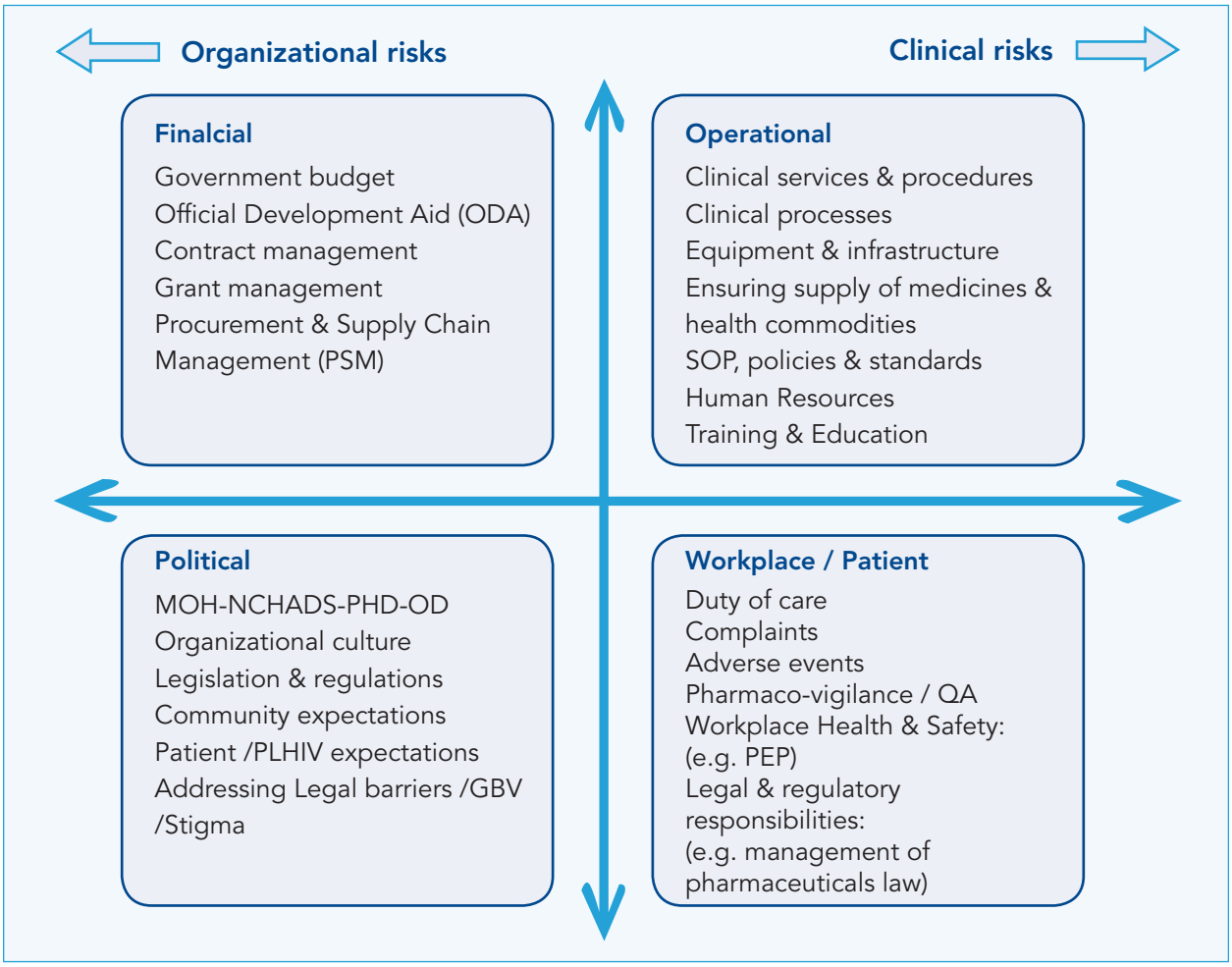
Risk is assessed and monitored in the HIV program in the four aspects related to organizational and clinical risk: Financial; Operational; Workplace/Patient; and Political (Figure 21). A comprehensive planning and consultation process has been enmeshed as part of strategic planning, limiting risk liability through the support of clinical guidelines, procurement and financial guidelines, HR policies; implementation of SOP, program monitoring and evaluation, disease modeling, TWG, stakeholder consultation, financial audits, costed planning and legal compliance.

Figure 10: Risk Management process[74]



74 Based on ISO 31000:2009 Risk Management http://www.iso.org/iso/home/standards/iso31000.htm

Figure 11: Dimensions of risk for the HIV program[75]



E.1 Key Risks

E.1.1 Human Resources

Financial incentives to government staff paid by donor partners have been discontinued since 2015, and similarly all contract positions located in government institutions (NCHADS and PHD/OD) paid by the Global Fund ceased in 2018. Under the current KHM- C-MEF 2018-2020 GF grant all these contract positions are covered by the national budget through the Ministry of Economy and Finance (GF PR) to ensure the successful implementation of the GF grant. This has led NCHADS to work with the MoH to safely navigate the reduction in the number of contract staff, the creation of new MOH positions to absorb the tasks undertaken by contract positions, and for contract positions (such as data management) to be engaged and financed directly by the MOH. Additionally, as part of overall public sector reform and decentralization and de- concentration, the RGC has committed to a gradual increase in government workforce salaries from year to year. It is anticipated that this process will strengthen the retention and performance of health staff.

75 Based on The Australian Council on Healthcare Standards (ACHS) Risk Management and Quality Improvement Handbook. EQUIP National. July 2013 http://www.achs.org.au/media/69305/risk_management_and_quality_improvement_handbook_july_2013.pdf

E.1.2 Financial resources

Without an adequate financial commitment, the HIV program will find effective implementation increasingly difficult. Although domestic contributions have steadily increased in recent years the HIV program in Cambodia remains largely dependent upon external resources. The AEM modeling and other strategic information used to cost the Strategic Plan has been useful to provide justification for adequate government budget allocation as well as evidence for additional resources from donor partners.

E.2 Longer term risks

E.2.1 Resurgence of the epidemic

While most technical and professional opinion and supported by AEM modeling suggests that a resurgence of the epidemic is highly unlikely in Cambodia, there is a potential risk of re-emergence if the program continues to be divested of significant funding. Many of the risk behaviors that spread HIV remain within the Cambodian context (buying and selling sex, high-risk MSM sex, drug use, chemise, etc.) can be targeted and addressed effectively. However, in the absence of a robust prevention program transmission could easily escalate in the future if left un-checked.

E.2.2 Failure to reach sustainability

NCHADS has been actively working with the concerned institutions of the MOH to explore linkages and mainstreaming strategies by integrating HIV services of care and treatment into the existing health care system (refer to Integration Component section). It is working to fully incorporate laboratory services, logistics supply management into CMS and the DDF system, and strategic information into MOH LMIS systems (Logistic Management Information System); and to ensure that the needs of PLHIV are fully included into wider MOH community and equity fund systems, and other health insurance programs.

E.2.3 Deterioration in the enabling environment

Because many of the behaviors that spread HIV may be socially or culturally unacceptable and can often be illegal, HIV programs are particularly vulnerable to changes in the enabling, regulatory environment with regard to these behaviors. The closure of brothels after implementation of the 2008.

Law on Suppression of Human Trafficking and Sexual Exploitation, caused high volume sex work to move from brothels where it could be relatively easily targeted, to a wide variety of entertainment establishments and venues, as well as freelance, where effectively targeting higher-risk situations has proved challenging. Discrete implementation of prevention programming among MSM and PWID is possible in the relatively tolerant enforcement environment. If the regulatory environment were to change significantly, for example because of harsher crack-downs on PWID, outreach and other prevention programs would suffer.

F. INTEGRATION AND SUSTAINABILITY

F.1 Situation analysis

Integration

Integration refers to "managerial or operational changes to health systems to bring together inputs, delivery, management and organization of particular service functions as a means of improving coverage, access, quality, acceptability and (cost)-effectiveness"[36]

The Royal Government of Cambodia (RGC) through the Cabinet of Minister approved a policy circular (SarChorNor #213) in early 2019 for sustaining the response to HIV/AIDS. Policy measure # 6 in that circular focuses on the Integration of HIV/AIDS into Health Systems "The Ministry of Health shall continue to strengthen human resources, procurement system, supply chain management, and health information system that allow a mainstreaming of HIV/AIDS response to be more effective and sustainable". Whereas Policy measure # 1 of the same SarChorNor #213 reads that the National AIDS will collaborate with the Ministry of Interior and the Ministry of Economy and Finance to allocate a specific budget package for integration of HIV activities into Commune/Sangkat five-year development plans and three-year rolling investment plans.

Historically, the HIV response and services have been largely separated from much of the rest of the health system in terms of financing, data systems, drug and commodity procurement (and supply management), human resources and recruitment and training, laboratory use and service provision. The integration of HIV/AIDS in the health system is not only to sustain the response but also optimize the impact by increasing efficiency and maximizing use of resources at all levels, national to local. Also, there is considerable potential for integration with other services, including STI, reproductive health, NCD, TB, harm reduction and mental health, cervical cancer, viral hepatitis and GBV services. The integration of HIV/AIDS response to other sectors has already been prioritised in the fifth national strategic plan for multi-sectoral and comprehensive response for 2019-2023 (NSP V) under the coordination of the National AIDS Authority (NAA).

Sustainability

Sustainability should refer not only to the financing part but also the comprehensive elements of the response. One solution to the issue of the sustainability of the response is the integration of HIV services within broader health system that needs to be strategically prioritized in the next MoH's national health strategic plan (2021–2030). In order to build and sustain service quality, it will be critical to maintain access

[36] Watt N, Sigfrid L, Legido-Quigley H et al. 2017. Health systems facilitators and barriers to the integration of HIV and chronic disease services: Lessons learnt from a systematic review. Health Policy and Planning Supplement 32:

to continuing professional development for a sustainable cohort of specialists, and proactive engagement with the broader range of service providers/ clinicians, for whom the care and treatment of PLHIV is one aspect of their professional roles. Also, according to the Policy Measure # 3 of SCN #213, The Ministry of Health and Ministry of Economy and Finance are requested to jointly develop rules and procedures for health centers and referral hospitals to use their own funding for the HIV response.

Community Participation

Community participation is a major principle of people centered health systems, with considerable research highlighting its intrinsic value and strategic importance. Existing reviews largely focus on the effectiveness of community participation with less attention to how community participation is supported in health systems intervention research[37].

In a broader term, Community Participation would refer to the engagement of community people, networks of key populations, local and community-based organization, civil society organization in planning, management, monitoring and service delivery of community systems and responses which are one of the elements defined in the health system. In the Global Fund's framework of Resilient and Sustainable System for Health (RSSH), community responses and systems are one of the critical elements[38].

The RGC has now been moving to real implementation of de-concentration of health services to the provincial level with the new Sub-degree dated 4 December 2019 which indicated how important is to bring healthcare services close to people by promoting the engagement of the community[39].

The MoH has developed an un-finished community participation policy back in 2008 which emphasized the functioning of the Health Center Management Committee (HCMC) and the Village Health Support Group (VHSG). In the preparation for the implementation of the GF's RSSH grant, MoH has approved the roadmap on integration of health volunteers for HCMC, in which the MoH's National Center for Health Promotion (NCHP), will take care of significant part of the GFATM's RSSH grant implementation. This implies a significant move for improving the systems to enable engagement of community.

NCHADS's Community Action Approach Framework (CAAF) has relied on VHSG to play a critical role in taking care of PLHIV, ensuring ARV adherence and reducing LTFU. Based on this assumption, the current GFATM grant did not allocate budget for community volunteer support (CSV) who previously played the important role outlined above. The expectation was that the VHSG is taking it up linking with the ART clinic-based structures of Community Action Workers (CAW), Community Action Counsellors (CAC) and Facility Based Worker (FBW). A rapid assessment of the CAAF framework in 2018, finds that there is a disconnect between health care providers at ART facilities and VHSGs, as well as between CSVs/community volunteers and VHSGs with regard to the HIV response in the community[40]. Also the capacity of community

---

37 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4619861/

38 Building Resilient and Sustainable Systems for Health through Global Fund Investment, Geneva Switzerland, The Global Fund, 30 May 2017

39 Sub-degree No 193, dated 4 December 2019, on Transferring the health management functions and service delivery to Municipality and Provincial Authority

40 Rapid Assessment of Community Action Approach (CAA) and Partner Notification, Tracing, and Testing (PNTT). 2018. NCHADS and LINKAGES program (USAID). Strategic Plan for HIV and STI Prevention and Care in the Health Sector 2021-2025

volunteers and VHSGs remains a concern as VHSGs need to know how to identify the right person who might benefit from HIV testing at the local level, encourage them to get tested, and be able to keep the results confidential.

F.2 Objectives

The objective of the integration and sustainability component of the HSSP is to contribute to achieving the six primary objectives of NCHADS's SPHIV/STIs 2021-2025 (page 16), in particular the sixth objective. It is understood that if the integration objective is achieved the other two dimensions of sustainability and management/governance would follow.

Below are the two broad objectives:

- To define a feasible integration framework of HIV/AIDS integration into the broader health system. The integration framework will be aligned with the elements/ dimensions of Cambodia health system which will be defined by the MoH's Health Sector Strategic Plan to be developed in the near future. Key elements that could be prioritized for integration include HIV Service Delivery, Human Resources, HIV Information System, Governance, HIV financing, Drug and Commodity Procurement and Supply Management, and Community Participation.
- To work with MoH to include the defined integration framework in the MoH's NSP and to ensure its implementation along with NCHADS's SPHIV/STIs and NAA's NSP V.

Specific objectives of the component are as follows in order of priority:

1. To have assigned staff providing HIV/AIDS services at the health facilities at all levels and to develop capacities of health care workers who are involved in HIV/ STI related service delivery. (Care and Treatment, Human Resources and Service Delivery).
2. To fully implement the policy Measure 33 of the SarChorNor#213 by allocating national budget for HIV/AIDS response in the health sector, particularly at the health facility level who is delivering the services to clients. (Financing and Service Delivery).
3. To strengthen the ownership, governance and leadership of HIV/AIDS along the lines of the MoH from national to local levels (i.e. health centers). (Governance)
4. To build inter-operability of the NCHADS's HIV/AIDS databases and the MoH HIS (Health information systems).
5. To build and institutionalize ARV and commodity forecasting and quantification capacity within NCHADS (Procurement).
6. To have clear and functional structures of the community systems for the response to HIV/AIDS. (community participation)
7. To develop and implement a financing transition plan from donor financing to domestic.

F.3 Core Strategy, Priority Actions and Process

To develop the integration, sustainability, and management section of the SPHIV/STIs,

the TWG has met and discussed the dimensions proposed in the WHO transition framework above (except for financing covered in another working group) and prioritized the following elements. However, overall, the process will start by executing a quick situation analysis of the dimension.

The World Health Organization Western Pacific Region has provided guidance to manage the transition (Regional Framework for Action on Transitioning to Integrated Financing of Priority Public Health Services in the Western Pacific – WHO 2018) from externally financed vertical priority program to sustainable and resilient health systems. This guidance focuses on transition of priority public health programmes, such as HIV and TB as well as Malaria.

Integration dimensions and framework – the building blocks of health system:

- Service delivery
- Health workforce
- Procurement and Supply Management (PSM),
- Health information systems
- Ownership, leadership and governance
- Health system financing (in the chapter)-HEF
- Community participation

Referring to the draft framework of integration of HIV in broad health systems in Cambodia recently developed with technical and financial support by HP+, the implementation of the integration is at all levels from national to community level.

For a truly effective, comprehensive, and nationally owned response to integrate the HIV services in public health, the RGC, its ministries, and agencies need to play a leading role in shaping and driving the integration policies and programs, making use of their legal authority and infrastructure for implementing them. Sustainability cannot be achieved until the system embraces long-term strategic planning, and state health agencies direct financial and programmatic support where it is most needed. The integration framework for HIV, aims to support effective integration of HIV services in all health policy discussions and deliberations, at national and sub-national levels (including provincial, district and commune levels) to maintain efficiency gains, sustain the HIV response; eliminate the HIV epidemic and to align fully with the UNAIDS Fast-Track approach (95-95-95 goals by 2030 and in Cambodia by 2025).[41]

[41] Optima HIV model 2020

F.3.1 National health system and service delivery

Integration of HIV Services within Health Service Delivery Core strategies for this section are:

- To build and institutionalize HIV services into Minimum Package of Activities (MPA) and Complementary Package of Activities (CPA) of the Ministry of Health. (with regard to the HIV Care and Treatment component);
- NCHADS, NAA, and partners continue to engage in the updates of the MPA and CPA every two years to ensure HIV services remain integrated and service packages are updated based on NCHADS guidelines.

Additional strategies:

HIV testing (particularly, facility-based HIV testing), ARVs, opportunistic infections, STI treatment, and viral load testing are well established and already integrated into the public health system of Cambodia. There are 69 VCCTs and 69 HIV treatment facilities in existence, most of which are established at referral hospitals. Some of the clinical services which could be easily integrated with HIV/AIDS interventions are as follows:

Laboratory services - VCCT, CD4, viral load testing

Referral hospital services including antenatal care - test pregnant women for their

HIV status and if found HIV-positive, link them with the ART treatment facility or center for antenatal care

Safe abortion with STI services for key populations and people living with HIV

Human papillomavirus (HPV) vaccination, HPV routine screening, and cervical cancer care program for female people living with HIV and female entertainment workers

Mental health and substance abuse services

HIV co-infection with Hepatitis C and Hepatitis B management

Non-communicable diseases and other chronic disease services, including treatment for comorbidities associated with HIV.

In Cambodia, public health service delivery is organized through two levels of service. The first is a Complimentary Package of Activity (CPA) that is provided at three levels of referral hospitals (CPA 1, 2, 3). The second is a Minimum Package of Activity (MPA) that is provided at health centers. To ensure the implementation of integrated service delivery, building and institutionalizing the minimum and complimentary package of activity for HIV services per the NCHADS guidelines is necessary. Capacity building approaches and guidelines for providing stigma and discrimination-free services, particularly about sexual orientation and gender diversity, gender-based violence, and key population-competent services are needed to increase case detection and retention. Furthermore, the appropriate legal basis to back up and institutionalize certain efforts, such as harm reduction, is needed.

F.3.2 Human Resources for Health – HIV (HRH for HIV)

Human resources are a fundamental part of the efforts to achieve the health-related SDGs, UHC, and to build resilient and sustainable health systems. Human resources have been recognized as a key component to scale-up and deliver high-quality health services. The staff are deployed at four levels for managing and implementing the HIV program in Cambodia:

Management and coordination professionals,

Health care providers – doctors, nurses, counselors, outreach workers, and peer educators,

Procurement and supply chain workforce,

Professionals for data systems.

Prima facie, most HIV personnel working at public health facilities seem to be already integrated. However, HIV being a vertical program and funded by external donors, these staff are beholden to their respective project requirements and their salaries or incentives are funded through the respective donor. However, with the RGC's agreement to use a national budget of USD 1.1 million per year to contract officials engaged in managing Global Fund activities, around 47 percent of staff salaries were stated to be covered by the government funds.[42] Similarly, the policy shift to the Boosted Integrated Active Case Management and Community Action Approach Framework has brought a more professionalized full-time workforce (facility-based workers, community action workers, and community action counselors) based in the ART facilities.

However, the reviews and external evaluations conducted by various agencies found that these time-bound contractual positions resulted in high turnover and a lack of long-term commitment. Insufficient human resources, lack of adequate capacity to perform their day-to-day job, lack of peer support mechanisms, lesser salaries resulting in accountability, and commitment issues were identified as major gaps in delivering HIV services. The challenges to consider are shortages and maldistribution of staff, high turnover, inadequate skills, poor working conditions, and a lack of appropriate health workforce information.

Increasing the numbers and competencies of health workers is essential for the achievement of ambitious health goals. Investment in qualified and empowered staff, development of a human resources recruitment and equitable distribution strategy, a comprehensive capacity building plan, and development of a staff retention policy is urgently needed. The stages of health workforce development as suggested by WHO are relevant to creating a qualified and committed workforce. Also, integration of donor and government human resources funding and integration of staff into the public health workforce is critical for integration efforts to work effectively.

[42] The Fifth National Strategic Plan for a Comprehensive, Multi-Sectoral Response to HIV/AIDS (2019-2023), National AIDS Authority (NAA)

F.3.3 Commodity supply chain integration

The Logistics Management Unit at NCHADS was established in 2005. Since 2014, NCHADS's Logistics Management Unit has focused not only on logistics and supply management but also on strengthening and harmonizing the logistics management information system with patient data systems maintained by the Data Management Unit. The supply chain for the national HIV response is largely vertical. Antiretrovirals drugs, medicines for opportunistic infections, and other HIV-related supplies are imported in bulk by the United Nations Office of Project Services. In recent years given increased government contributions to the HIV program, the procurement and supply systems have started integrating with the larger public health procurement and supply division for commodities including non-ARV/viral load drugs and reagents, which are purchased with domestic funds. Most drugs including ARV are stored and distributed by the Central Medical Stores.

Although, 90 percent of health products are funded by the Global Fund and procurement mainly follows Global Fund requirements. The remaining 10 percent is financed by the RGC and the procurement follows the Ministry of Economy and Finance procedure which requires a minimum 6 month processing time, resulting in a weakly integrated supply chain. Other challenges to consider are poor recordkeeping resulting from incomplete or outdated stock and consumption records, late, incomplete and poor-quality reporting, data not moving up or down the system (facilities not submitting to provinces, provinces not sending reports to the central level, and the central level not providing feedback to provinces and facilities) and therefore data is not available for decision making, resulting in reduced reliability.

To strengthen the PSM activities, there is a need to revise standard operating procedures, develop procurement tracking tools, customize national stock monitoring dashboards for rapid diagnostic tests and lab commodities, and develop an automated tool capturing consumption, patient-related information, and stock-on-hand data at all ART sites. Currently, quantification and forecasting have been done by implementing partners supported by donor funding. The capacity of existing staff needs to be built for the PSM components and to overcome the issues related to the oversupply of products in areas of low demand and incidences of stock-outs in areas of high demand.

The integrated PSM system should ensure that the team has real-time logistics management capabilities covering point of origin to point of consumption. The provision of quick data would ensure the availability of adequate quantity and quality of health commodities at the point of service to meet patient's demands.

F.3.4 Health information systems

Having timely and quality data is necessary to respond quickly to the changing circumstances of public health crises and to deliver the highest quality of services to those encountering health adversities. For effective implementation of integrated services, it is time to move beyond surveillance and reporting to active and real-time usage of data at all levels, to inform policies, manage and evaluate programs and to formulate budgets. The integrated monitoring and evaluation system should identify efficient and effective pathways for each domain sub-component to coordinate, manage, implement, and monitor the progress of the integrated HIV/AIDS program.

Currently, data in the HIV program is captured via multiple databases from diagnosis to treatment including the VCCT database, Boosted Integrated Active Case Management database, key population database, ART database, and lab database. Besides, data on comorbidities and reproductive health of people living with HIV have also been collected, including Hepatitis C and TB co-infection and pregnancy outcomes for pregnant women living with HIV. Data on pregnant women living with HIV is collected through both NCHADS and maternal, newborn, and child health data systems. In recent years, a national prevention database that uses the Universal Unique Identifier Code has been developed to monitor prevention interventions among key populations, using the DHIS 2 platform. However, as per the 2019 Joint Program Review and discussions with the key stakeholders, it was noted that these multiple databases are poorly integrated with both the HIV-related database and the larger health system's database.

The Data Management Unit of NCHADS and its partners in coordination with MOH need to develop a detailed operational plan, monitoring framework, and corresponding indicators, for monitoring integrated efforts regularly. Also, all the important databases within HIV/AIDS need to be streamlined, synchronized, and inter-operable with the larger HMIS. Integrating multiple data collection systems into a national integrated HMIS will improve decision-making and accountability at all levels, from individual health care workers in the community to subnational, national, regional, and global policy-making processes.

F.3.5 Ownership, Leadership and Governance

In Cambodia, while the Ministry of Health leads all the public health interventions, the National AIDS Authority (comprised of senior officials from 28-line ministries and other government agencies) leads multi-sectoral collaboration and develops partnerships to help achieve the goals and targets for HIV. NCHADS is an operational unit within the MoH that leads the implementation of policies and strategies, provides strategic leadership support, technical expertise, and maintains standards of patient care for the health sector response to HIV/AIDS and STIs. NCHADS works in partnership with other government ministries, CSOs, donor bodies, and provincial health departments. At the provincial level, the Provincial AIDS and STI Program is a sub-unit within the Disease Control Unit, under the Technical Bureau, in the Provincial Health Department. At the commune level, components of HIV service delivery have been integrated within the Commune Development and Investment Plan.

At all levels, the requirements for strong leadership and governance need to be supported by an enabling environment. Creating an enabling environment necessitates a clearly defined National HIV/AIDS Strategy that provides guidelines for implementation, identifies specific roles and responsibilities of key actors, fosters active participation of the broad spectrum of multi-sectoral stakeholders at all levels, and facilitates the effective coordination of development efforts involving the state, civil society, and the private sector[43]. Critical elements of effective leadership and governance are linked to several requirements, some of which are demonstrated by the RGC. These elements include:

[43] GOVERNANCE OF HIV/AIDS RESPONSES Issues and Outlook, UNDP (December 2015)

Strong political leadership and commitment - SarChorNor #213;

Adequate capacities of relevant ministries and institutions – MoH, NAA, NCHADS, and other relevant ministries[44];

Willingness to increase domestic spending on HIV prevention, treatment, and care in the context of the national budget – *National Strategic Plan for aComprehensive, Multi-Sectoral Response to HIV/AIDS (2019-2023), Strategy 4:* Increase government financing to 50 percent of all HIV expenditure by 2023 and allocate a share of the government budget to CSOs for delivery of critical HIV services;

Decentralization of authority, decision-making, and resources to the local level – the MoH's recent development and implementation of decentralization and de-concentration policy[45] to strengthen health sector governance along with a progressive delegation of regulatory functions and transferring resources to subnational level administrations;

Involvement of the private sector, civil society and community networks to ensure transparency and accountability;

Respect for human rights and promotion of gender equality; and the incorporation of AIDS concerns into broad social and economic policies.

However, multiple reviews, studies, and discussions with stakeholders revealed that the issues related to a lack of coordination, poor accountability, weak governance, and ownership are prevailing at various levels of program implementation. The RGC has noted willingness to engage in open dialogue about governance challenges of HIV and has acknowledged that ad-hoc, short-term and individual efforts may not be the answer.

Strengthening governance requires a participatory approach to policy formulation, decision-making, and performance evaluation at all levels of the health system. Focus on the political and institutional dimensions of the HIV response is needed for an integrated and long-term approach to shape more innovative and operational strategies. Government and development partners agreed that greater efforts are needed to strengthen governance and ownership for an effective HIV response that is consistent with the targets for a fast-track approach for achieving the SDGs. Sustained leadership, commitment to implementing the right policies with focused investments and a human-rights based approach can make it a reality, within the next decade.

---

[44] Ministry of Economy and Finance; the Ministry of Interior; the Ministry of Education, Youth, and Sports; the Ministry of Social Affairs, Veterans, and Youth Rehabilitation; the Ministry of Women's Affairs; the Ministry of National Defense; the Ministry of Labor and Vocational Training; the Ministry of Information; the Ministry of Tourism, etc.

[45] Sub-degree No 193, dated 4 December 2019, on Transferring the health management functions and service delivery to Municipality and Provincial Authority

F.3.6 Community Participation

The involvement of communities is essential in health promotion as they create a demand for services that reach the vulnerable and marginalized, prioritize prevention efforts, and foster healthy behaviors thus reducing the burden on the health system. Systems for health that involve the community are always the first to identify, report, and respond to emerging health emergencies[46]. Marginalized groups of communities including female entertainment workers, men who have sex with men, people who inject drugs, people living with HIV, and transgender people, often only consent to receiving HIV services if they are treated with dignity, feel safe, and that their human rights are being respected. Engaging individuals in their communities are more proactive than waiting to engage individuals in clinical settings. Community engagement allows for ongoing reinforcement over time by multiple parties.[47],[48] Though in recent years, with the changing needs of people living with HIV, evolving programmatic requirements, and reduced funding, the role of PLHIV organizations including the Cambodian People Living with HIV/AIDS Network, the ARV Users Association, and *Mondul Mith Chuoy Mith* (Center for Friends Helping Friends), have received less emphasis in the HIV response.

Nonetheless, NCHADS, through its Community Action Approach Framework, relies on VHSGs to play a critical role in taking care of people living with HIV, ensuring ARV adherence, and reducing loss to follow-up numbers. VHSGs are intended to align with the ART clinic-based structures such as community action workers, community action counselors, and facility-based workers for coordinated outreach efforts. However, the capacity of community volunteers and VHSGs remains of concern as VHSGs have limited capacity to identify populations who might benefit from HIV testing at the local level, encourage them to get tested, and maintain the confidentiality of test results. The rapid assessment of the Community Action Approach Framework in 2018, found that there is a disconnect between healthcare providers at ART facilities and VHSGs, as well as between Community Support Volunteers (CSV)/community volunteers and VHSGs about the HIV response in the community[49].

Creating an enabling environment through community involvement and participation in decentralized planning, programming, and implementation is crucial to ensuring that services are available for all population groups. Besides, CSOs involvement (key populations, affected and infected populations) in various technical and steering committees, as well as in policy discussions at all levels is essential to create provisions for timely, need-based services.

---

46 Building Resilient and Sustainable Systems for Health through Global Fund Investments Information Note

47 Whitlock EP, Polen MR, Green CA, Orleans T, Klein J. Behavioral counseling interventions in primary care to reduce risky/harmful alcohol use by adults: a summary of the evidence for the U.S. Preventive Services Task Force. Ann Intern Med. Apr 6 2004;140(7):557-568.

48 U.S. Preventive Services Task Force. Screening for obesity in children and adolescents: Recommendation statement. AHRQ Publication No. 10-05144-EF-2, January 2010. Available at: http://www.uspreventiveservicestaskforce.org/uspstf10/childobes/chobesrs.htm Accessed Nov, 2011.

49 Rapid Assessment of Community Action Approach and Partner Notification, Tracing, and Testing. 2018. NCHADS and LINKAGES program (USAID).

1. Strategies

Assessment of the current CAAF framework to identify the impact/outcomes and gaps of the current HIV/AIDS care, support, and treatment cascade linked to the limited functions of the VHSG. The assessment should determine whether and how VHSGs can support new case finding and address LTFU, whether and how Commune Councils (CC) and VHSGs can support an enabling environment, reduce legal barriers, and any negative impact if the OD structure is modified to be in line with the administrative system (i.e. roles of new players, less influence from PHD, based on the recent decentralization initiative launched by MoI).

Work with/support the NCHP, who is managing the RSSH Grant, in building the community systems focusing on improving the HCMC and VSHG functions which include HIV/AIDS tasks.

Work with/support NAA in implementation of the integration of HIV/AIDS in the commune/sangkat investment plans.

Work with MoH to ensure that community participation/systems are prioritized in the new health strategic plan (HSP).

2. Priority Actions

- Design the CAAF assessment and identify resources for conducting the assessment.
- Disseminate the results/findings of CAAF assessment, highlighting the impact gaps relative to lack of engagement of the VHSG and HCMC.
- NCHADS includes the community engagement strategies for HIV AIDS in the RSSH concept note and follow up with the NCHP and the CCC.
- NCHADS provides technical support to the NCHP in the implementation of the RSSH grant to build and integrate the community systems for HIV/AIDS.
- NCHADS engages with the NAA in monitoring the implementation of the integration of HIV/AIDS in the Commune/Sangkat investment plans by providing necessary technical support.
- NCHADS to prioritize the community systems (which include all community based healthcare, including HIV/AIDS) in the new MoH health strategic plan (HSP) with support from the NAA. NAA support provides opportunities from bi- annual Policy Advisory Board meetings, monthly Technical Advisory Board meetings, and various Technical Working Groups.

G. COSTING AND FINANCING THE STRATEGIC PLAN

G.1 Background

NCHADS developed the Strategic Plan for HIV and STI Prevention and Control in the Health Sector 2021-2025 (HSSP HIV 2021-2025). The Strategic Plan consists of nine Core Components: 1. HIV prevention; 2. HIV testing; 3. HIV care and treatment; 4. eMTCT; 5. STI prevention and control; 6. Lab services; 7. Logistics supply management; 8. Strategic information; and 9. Program management. Core Component Working Groups comprised of members from the government and development partners were responsible for the development of strategies and activities. The Financing and Costing Technical Working Group worked with the Core Component WGs to cost the strategies. Costing methods and methods for financing analysis are summarized below. A detailed description of the HSSP HIV costing, analysis, and findings may be found in the HSSP costing document, "National Health Strategic Plan for HIV/AIDS in Cambodia (2021- 2025), Costing and financing: Methods and findings", developed with NCHADS in a collaborative effort with the Health Policy Plus (HP+) project funded by PEPFAR (the U.S. President's Emergency Plan for AIDS Relief), and the input of component technical working groups.

G.2 Scope and Process

The costing was conducted based on the strategies and activities of the eight core components of the SPHIV/STIs. The estimated resource needs for the SPHIV/STIs 2021- 2025 were assessed through a detailed and comprehensive costing analysis. The core activities in the SPHIV/STIs were disaggregated from the strategic level to enable costing. Core Component Working Groups (WGs) identified sub-activities and provided information on unit, quantity, unit cost, and the frequency of each of those sub- activities to enable the achievement of their respective targets of each component.[50]

[50] *National Health Strategic Plan for HIV/AIDS in Cambodia (2021-2025), Costing and financing: Methods and findings, May 2020 (Validated final draft report)*

Process (summarized from *"National Health Strategic Plan for HIV/AIDS in Cambodia (2021-2025), Costing and financing: Methods and findings"*):

STEP 1

Data Collection & Data Entry

Summary of Inputs:

- Staff salaries and incentives
- Unit costs for per diem, transportation, and other meeting costs
- Antiretrovirals (ARVs) and rapid diagnostic test (RDTs)
- Medical supplies and equipment
- Office supplies and running costs
- Payment for results.

STEP 2

Data Analysis

Calculation technique:

- Training /Meeting/workshop/supervision: Unit cost x Number of day x Number of people x Frequency per years
- Salary: Unit cost x number of people x 1month x Frequency per year
- ARV/OI/Test kits: Unit cost x Number of PLHIV x tablets x Frequency per year
- Lab commodity: Unit cost x bottle/box x estimated quantity require x Frequency per year.

Cost generation:

- Cost of Activity: Total sum cost of inputs
- Cost of Core Activity: Total sum cost of supporting activities
- Cost of Strategy: Total sum cost of core activity.
- Cost of Component: Total sum cost of strategy

STEP 3

Costing Validation

The cost and financing estimates were validated by the SPHIV/STIs technical working group. Feedback was collected on the estimates and these were revised based on the most current information on committed and projected financing provided by partners.

G.3 Resource Needs

Estimated total resource needs for the five year period of the SPHIV/STIs 2021-2025 are USD 186 million. This represents about 37.2 million per year on average with a cost increase of 8% from 2021 (35.7 million) to 2025 (38.5 million). The largest portion of the total resource needs (61.8 million or 33.2%) falls under the core component of logistics and supply management which includes the costs of ARVs. This is followed by the program management component at 35.2 million (18.9%), HIV care and treatment

(34.1 million; 18.3%), and HIV prevention (26.2 million; 14.1%). The largest share of costs based on input type is human resources at 46.6 million (25%), then travel and training costs (41.2 million; 22.1%), followed by pharmaceuticals (33.3 million; 17.9%). ARV costs are expected to increase from USD 5.6 million in 2021 to 6.5 million in 2025, and an estimated increase in human resource costs from USD 8.8 million in 2021 to 9.8 million in 2025.

G.4 Resource Gap

With estimated total resources needed to fund the HSSP at 186 million USD and a funding projection of 150.5 million, an estimated total resource gap of 35.5 million exists for the five year period represented in the plan. To sustain the HIV response during this period it is "essential to identify and implement technical and allocative efficiencies, enhance integration of HIV management and services into the existing health system and increase government financing."[51] Please refer to figure 12 for more details.

Figure 12: Resource Needs, Projected Funding, and Resource Gap, by Core Component, 2021–2025 (US$ million) Source: NCHADS 2020

Core Componet	Resource Needs					Projected Funding					Resource Gap
	2021	2022	2023	2024	2025	Total	Gover-ment	Global Fund	PERFAR	Total	
HIV prevention	5.15	5.23	5.22	5.27	5.29	26.15	3.07	16.27	-	19.35	(6.81)
HIV testing services	0.88	0.82	0.83	0.82	0.88	4.23	-	1.47	3.12	4.59	(0.36)
HIV care and treatment	6.84	6.82	6.78	6.81	6.81	34.06	15.68	12.39	-	28.07	(5.99)
eMTCT/BIACM/P4R	1.72	1.59	159	1.54	1.66	8.10	-	0.35	-	0.35	(7.75)
STIs	0.48	0.39	0.39	0.72	0.39	2.37	-	0.68	-	0.68	(1.69)
Laboratory services	0.70	0.93	0.85	0.67	0.67	3.83	-	0.54	2.56	3.10	(0.73)
Logistics and supply management	11.28	11.97	12.57	12.86	13.17	61.84	25.11	33.46	0.97	59.55	(2.30)
HIV strategic information	2.10	2.02	2.06	2.01	2.06	10.25	2.37	2.37	3.23	7.75	(2.50)
Program managerment	6.52	6.71	7.03	7.03	7.62	35.20	14.32	1.78	10.97	27.07	(8.13)
Total	35.67	36.50	37.32	38.02	38.53	186.04	60.33	69.33	20.85	150.51	(35.53)

51 *National Health Strategic Plan for HIV/AIDS in Cambodia (2021-2025), Costing and financing: Methods and findings, May 2020 (Validated final draft report).*

To address this resource gap the SPHIV/STIs costing document suggests the following steps:

Use the costing projections to mobilize funds for implementation of strategies and activities as per the financing goals of NSP V and SPHIV/STIs.

Explore options to increase implementation efficiencies using the results and recommendations of the forthcoming Optima analysis and other available evidence.

Advocate with the MoH and MEF, private sector and CSOs/NGOs for increased domestic funding for HIV.

REFERENCES

1. Clinton Health Access Initiative – CHAI (2017). *Viral Load and Early Infant Diagnosis (EID) Scale-Up in Cambodia, 2017*.

   Country Cooperation Strategy for Cambodia, 2016-2020, WHO-Western Pacific Regional Office, 2016.

2. George, A.S., Mehra, V., Scott, K., Sriram, V. (2015). Community Participation in Health Systems Research: A Systematic Review Assessing the State of Research, the Nature of Interventions Involved and the Features of Engagement with Communities. *PLoS One*. 2015; 10(10): e0141091. Published online 2015 Oct 23. doi: 10.1371/journal.pone.0141091

3. Human Development Indices and Indicators: 2018 Statistical Update Cambodia, available at http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/KHM.pdf.

4. ISO 31000:2009 Standards. Risk Management. http://www.iso.org/iso/home/standards/iso31000.htm

5. National AIDS Authority – NAA and UNAIDS. (2018). *Towards Ending AIDS in Cambodia:* Transition Readiness Assessment 2018.

6. National AIDS Authority – NAA. (2018). Global AIDS Monitoring data, 2018.

7. National AIDS Authority – NAA. (2019). *National AIDS Spending Assessment 2016-2017 (NASA VI).* National AIDS Authority (NAA), September 2019.

8. National Center for HIV/AIDS, Dermatology, and STD - AIDS Care Unit. (2018). *NCHADS AIDS Care Unit report.*

9. National Center for HIV/AIDS, Dermatology, and STD – NCHADS and FHI/LINKAGES. (2018).

   Rapid Assessment of Community Action Approach (CAA) and Partner Notification, Tracing, and Testing (PNTT). NCHADS and LINKAGES program supported by USAID, 2018.

10. National Center for HIV/AIDS, Dermatology, and STD – NCHADS and National Maternal and Child Health Center – NMCHC. (2018). *National Road Map for the elimination of Mother–to- Child Transmission of HIV and Congenital Syphilis (eMTCT) in Cambodia, July 2018.* NCHADS and NMCHC.

11. National Center for HIV/AIDS, Dermatology, and STD - NCHADS. (2019). NCHADS Data Management Unit, ART Database

12. National Center for HIV/AIDS, Dermatology, and STD - NCHADS. (2017, 2018, 2019).

    National Population Size Estimation, Integrated Biological and Behavioral Survey (IBBS) reports. Various: MSM/TG, PWID/PWUD, FEW.

13. National Center for HIV/AIDS, Dermatology, and STD - NCHADS. (2019). *NCHADS Quarter 1, 2019 report.*

14. National Center for HIV/AIDS, Dermatology, and STD – NCHADS. (2020). Cambodia Ministry of Health (2020). *National Health Strategic Plan for HIV/AIDS in Cambodia (2021-2025), Costing and financing: Methods and findings,* July 2020

15. National Center for HIV/AIDS, Dermatology, and STD - NCHADS. HIV Joint Programme Review, 2019. (unpublished).

16. National Center for HIV/AIDS, Dermatology, and STD. Boosted-Integrated Active Case Management (2019). *NCHADS B-IACM 2019 Q1 report - data from 39 sites.*

17. National Institute of Statistics, Ministry of Planning. (2019). Provisional report on the General Population Census of Cambodia, June 2019; World Health Organization (WHO).

18. National Maternal and Child Health Center – NMCHC. (2016). *National Guideline For the Prevention of Mother-to-Child Transmission of HIV and Syphilis, March 2016.* NMCHC.

19. National Maternal and Child Health Center – NMCHC. (2019). Cambodia Ministry of Health (2019), *PMTCT Linked Response Report, January to June 2019.*

20. R. Sharma, M. Srey, and B. Jain. 2020. Framework for the Integration of HIV/AIDS Services in Public Health Systems in Cambodia. Washington, DC: Palladium, Health Policy Plus.

21. Royal Government of Cambodia. (2014). *National Strategic Development Plan 2014-2018 for Growth, Employment, Equity and Efficiency to reach the Status of an Upper Middle-Income Country, 2014.*

22. Royal Government of Cambodia. (2018). *Rectangular Strategy for Growth, Employment, Equity and Efficiency: Building Foundation Towards Realizing Cambodia Vision 2050 (Phase IV).* Sixth Legislature of the National Assembly, September 2018.

23. Royal Government of Cambodia. (2019). *"Sub-decree No 193, dated 4 December 2019, on Transferring the health management functions and service delivery to Municipality and Provincial Authority".*

24. The Australian Council on Healthcare Standards – ACHS. (2013). Risk Management and Quality Improvement Handbook. EQUIP National, July 2013.
http://www.achs.org.au/media/69305/risk_management_and_quality_improvement_handbook_july_2013.pdf

25. The Global Fund to Fight AIDS, Tuberculosis, and Malaria. (2017). Building Resilient and Sustainable Systems for Health through Global Fund Investment. GFATM, Geneva, Switzerland. 30 May 2017.

26. UNAIDS. (2017). *Ending AIDS: Progress towards the 90-90-90 targets.* Global AIDS Update 2017. Joint United Nations Programme on HIV/AIDS (UNAIDS). UNAIDS/JC2900E

27. UNAIDS. (2019). 2019 Global AIDS Update. UNAIDS. 10 Dec., 2019.

28. UNAIDS. (2019). AIDS Data Hub Country – Review: Cambodia Country Data UNAIDS 2019.
https://aidsdatahub.org/Country-Review/Cambodia,

29. UNAIDS. Cambodia Country factsheet 2018.
https://www.unaids.org/en/regionscountries/countries/cambodia

30. UNDP.(2018). *Human Development Indices and Indicators: 2018 Statistical Update, Cambodia.* United Nations Development Programme (UNDP), 2018.

31. Watt N, Sigfrid L, Legido-Quigley H et al. (2017). Health systems facilitators and barriers to the integration of HIV and chronic disease services: Lessons learnt from a systematic review. *Health Policy and Planning Supplement 32,* iv13–iv26.

32. World Bank. (2017). "The World Bank in Cambodia: Overview". Higher Education Improvement Project (HEIP) – Cambodia: Equity Assessment and Equity Plan, November 2017.

33. World Health Organization – WHO. (2016). *Country Cooperation Strategy for Cambodia, 2016-2020,* WHO-Western Pacific Regional Office, 2016.

Design and Printing Supported by UNAIDS