Review of the National Response to HIV/STI Epidemic in Sri Lanka

2021

REVIEW OF THE NATIONAL RESPONSE TO HIV/STI EPIDEMIC IN SRI LANKA 2021

External Review Report

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TABLE OF CONTENTS

Acknowledgements 2

Acronyms and Abbreviations 5

Executive Summary 7

Strategic Direction 1: Prevention of HIV/STI 8

Strategic Direction 2: Diagnosis Treatment and Care 10

Strategic Direction 3: Strategic Information Management 12

Strategic Direction 4: Health Systems Strengthening 13

Strategic Direction 5: Supportive Environment 14

Objectives of the Review 17

Strategic Directions of the Current NSP (2018-2022) 18

Methodology 20

Background: Status of the STI/HIV epidemic in Sri Lanka 21

Findings and Recommendations 26

Strategic Direction 1 (SD1): Prevention of HIV/STI 26

SD 1.1: Prevention of transmission of HIV/STI among Key Populations 26

SD 1.2: Prevention Of Transmission of HIV/STI among vulnerable groups - including returnee migrant workers, armed forces and police personnel, tourist industry workers 34

SD 1.3: Prevention of Transmission of HIV/STI Among General Population Including Young People 37

SD 1.4: Prevention of Transmission Through Infected Blood 39

Strategic Direction 2 (SD2): Treatment, Diagnosis and Care 41

SD 2.1 HIV testing and counselling 41

SD 2.2 : ART Services 50

SD 2.3 : Quality and Coverage of STI Services 61

Strategic Direction 3 (SD3): Strategic Information Management System 69

Key Observations 69

Recommendations 72

Strategic Direction 4 (SD4) : Health Systems Strengthening 74

Political Commitment and Multisectoral Response 74

Finance and Programme Sustainability 75

Standard package for KP interventions 75

Human Resources 75

Enabling environment 76

Strategic Direction 5 (SD5): Supportive Environment 77

Capacity building of health care workers to minimize stigma and discrimination in health care settings 77

Accessibility and responsiveness of STD services 78

SRH education in the school curriculum 78

PLHIV and KP networks and support services 79

Legislation, policies and law enforcement 79

Condom Accessibility 81

Recommendations 82

Conclusion and Overarching Recommendations 84

References 90

ANNEXES 92

Annexure I - Assessment Strategies for STD clinics and specific STI Services 92

Annexure II - Centers doing HIV RDT testing and total number of tests done for 2019 and 2020 99

Annexure III- The availability of PHLTs and lack of MLTs in the 41 STD clinics 101

Annexure IV - Data on 40 STD clinics with different tests available 102

Annexure V – Figure for Number of Donor Blood units Tested and HIV positivity Rate 102

Annexure VI - Key Informants interviewed for SD 1.2-1.4 and SD 5 104

Annexure VII – NSACP Cadre Details 105

Annexure VIII -Update on action taken on recommendations from 2017 review 107

Annexure IX – Additional Material on SD 2.2 : ART Services 110

Annexure X - Prioritisation Framework for Funding Interventions – Core and Synergising 111

Annexure XI – Progress against NSP Indicators 113

Annexure XII – Impact of NSP : A need for consolidation and a way forward through partnerships 121

ACRONYMS AND ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral
AST	Antimicrobial Susceptibility Testing
BB	Beach Boys
BCC	Behavior Change Communication
CFM	Case Finding Method
CBO	Community Based Organization
CBT	Community-Based Testing for HIV
DBS	Dried Blood Spots
DIC	Drop in Center
EID	Early Infant Diagnosis
ELISA	Enzyme Linked Immunosorbent Assay
EMTCT	Elimination of Mother to Child Transmission
EQAS	External Quality Assurance Scheme
FGD	Focus Group Discussion
FHB	Family Health Bureau
FPA	Family Planning Association
FSW	Female Sex Worker
GAM	Global AIDS Monitoring
GFATM	Global Fund to Fight AIDS, TB and Malaria
HLC	Healthy Lifestyle Clinics
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HCW	Health Care Worker
HIV	Human Immunodeficiency Virus
HSS	HIV Sentinel Surveillance
HTS	HIV Testing Services
IBBS	Integrated Biological and Behavioural Surveillance Survey
IDH	Infectious Disease Hospital
IEC	Information, Education and Communication
INH	Isoniazid
IPT	Isoniazid Preventive Therapy
KP	Key Population
LFU	Loss to Follow Up
LGBT	Lesbian Gay Bisexual Transgender
LIMS	Laboratory Information Management System
M&E	Monitoring and Evaluation
MIC	Minimum Inhibitory Concentration
MLT	Medical Laboratory Technologist
MoH	Ministry of Health
MSM	Males who have sex with males
NAC	National AIDS Committee

NBTS	The National Blood Transfusion Service
NGO	Non-Government Organization
NRL	National Reference Laboratory
NSACP	National STD/AIDS Control Programme
NSP	National Strategic Plan
OI	Opportunistic Infection
OST	Oral Substitution Treatment
PAC	Provincial AIDS Committee
PE	Peer Educator
PEM	Peer Educator Model
PrEP	Pre-exposure prophylaxis
PEP	Post Exposure Prophylaxis
PHLT	Public Health Laboratory Technician
PIMS	Prevention Information Management System
PLHA	People Living with HIV and AIDS
PLHIV	People Living with HIV
PMTCT	Prevention of Mother to Child Transmission
PR	Principal Recipient
PreP	Pre Exposure Prophylaxis
PHLT	Public Health Laboratory Technologists
PWID	People Who Inject Drugs
PWN	Positive Women's Network
PWUD	People Who Use Drugs
RDHS	Regional Director of Health Services
RSA	Rapid Situation Assessment
SD	Strategic Direction
SIM	Strategic Information Management
SLBFE	Sri Lanka Bureau of Foreign Employment
SRH	Sexual And Reproductive Health
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TasP	Treatment as Prevention
TPPA	T pallidum particle agglutination test
TB	Tuberculosis
TG	Transgender
ToT	Training of Trainers
VDRL	Venereal Disease Research Laboratory test
VL	Viral Load
WHO	World Health Organization

EXECUTIVE SUMMARY

The main objectives of the review were to assess the progress made by the National Response to the HIV/STI epidemic in Sri Lanka under the current National Strategic Plan (NSP 2018-2022). In addition, we also considered the impact of the current NSP towards the goal of ending AIDS by 2025 and eliminating STIs by 2030.

Through the review process, we examined the different strategies employed under the NSP, identifying key areas for programmatic improvement. We hope to make several key strategic recommendations that would allow Sri Lanka to come closer to ending HIV and eliminating STIs in the country.

The 5 Strategic Directions of the National Strategic Plan (2018-2022) were

1. Prevention of HIV/STI
2. Diagnosis, Treatment and Care
3. Strategic Information Management Systems
4. Health Systems Strengthening
5. Supportive Environment

Sri Lanka's response to HIV and other STIs' has been good overall for the general population as it has continued to remain a low prevalence epidemic country with demonstrated political commitment, major domestic resource allocation and prioritization of marginalized populations in the strategic plans.

Sri Lanka's elimination of mother-to-child transmission of HIV and congenital syphilis shows its ability to target a population group when necessary and scale up efficiently. It has also demonstrated the country's commitment to public health and builds on the strong foundation of primary health care services that it laid several decades ago.

However, based on the current trajectory alone, Sri Lanka will not be able to reach its target of ending AIDS by 2030 for a variety of reasons. The problem primarily lies in the lack of a strategic approach to follow to reach key populations at scale, and necessary investment on human and financial resources as well as addressing the barriers to scaling up.

In this review report, we also make recommendations that offer optimal ways to achieve broader STI/HIV elimination in Sri Lanka. There are however several key questions that need to be answered to get both the approach and the nuances of implementation right. These have to do, among other things, with prioritization of population, location and intervention; choice of service delivery models and mobilization and use of resources, both human and financial backed up by the strong political commitment of the leaders to End AIDS and STI in time as promised under the 2030 Agenda for Sustainable Development adopted by all United Nations Member States in 2015.

We present a summary of observations made during the review as well as recommendations based on the different strategic directions:

Strategic Direction 1: Prevention of HIV/STI

SD 1.1: Prevention of infections among KP

Performance against the priority actions in the 2017-2022 NSP has been mixed. For example, peer-led approaches have been continued but the coverage has remained low, and prevention has not been a priority within these approaches. However, the introduction of the Case Finding Method (CFM) was an expansion of peer-led outreach, and it has led to some improvements in testing. The new strategy for Integrated Virtual HIV Services (2021-2025) and its use of different communications methods have the potential to be a significant addition to the HIV response in the country. In addition, the introduction of HIV self-tests is proceeding, and it also has the potential to strengthen the HIV response. PrEP has been launched but there are multiple concerns about the approach being used. Other priority actions have fared less well.

The commitment to drop-in centers (DICs) has declined. The capacity of many CBOs, including KP networks, remains weak. Stigma and discrimination at service delivery sites remain high. Hidden populations continue to be largely unreached. Harm reduction services (e.g., needle exchange, substitution therapy) are not available for PWID and condoms are not available in prisons. Moving forward, NSACP needs to ensure HIV/STI prevention services for KP are sufficiently funded to reflect its priority status in the national strategy and to improve the coverage of these services. NSACP and the provinces should also work together to tailor prevention approaches to districts based on need (e.g., number and size of key populations) and capacity, including both clinic and outreach capacity. Developing tailored prevention activities for individual districts will require having good knowledge of the local situation, which may include conducting local population size estimates for different key populations, identifying and understanding existing/emerging risk factors and risk behaviours in the populations, identifying and understanding the barriers these KP face in accessing HIV/STI services. As part of being sensitive to the local situation, prevention activities at STD clinics and through outreach programmes must be implemented in ways that address the specific circumstances and meet the specific needs of KP. In addition, Provincial Health Authorities and NSACP need to actively and urgently collaborate on targeted initiatives to improve the quality of services provided in government STD clinics for all clients, including KP.

SD 1.2: Prevention of infection among vulnerable populations

Migrant workers, tourist industry workers and tri-forces and police personnel are identified as vulnerable populations. Pre-departure training programmes are being conducted by the Sri Lanka Foreign Employment Bureau (SLFEB) for first-time migrant workers, with STD/HIV training incorporated into the training programme. Training curriculum on HIV for migrant workers was reviewed and updated in 2016. And the last TOT programme has been conducted in 2017. Periodic review and updating of the training curriculum, conducting refresher training for the instructors and reviewing and ensuring the quality of the educational sessions conducted are recommended. HIV testing is conducted for all migrant workers for purposes of visas. However, the reporting of data from the screening centers to NSACP is not satisfactory and it is recommended to collaborate with SLFEB and the Private Health Services Regulatory Council to establish a functioning system to

obtain data on HIV testing of out-bound migrants. For returnee migrants, there are no programmes developed at present for HIV testing. There are plans to direct the returnee migrants to the Healthy Lifestyle Clinics and conduct HIV testing along with the other screening activities and it is recommended that this programme is implemented. Sri Lanka Army, Sri Lanka Air Force and Sri Lanka Navy are conducting HIV awareness and well-institutionalized testing programmes. HIV/AIDS prevention is included in the basic and in-service training programmes. Tri-forces personnel who return after serving in the UN Peace-keeping Forces are tested for HIV twice – initially at the airport immediately on arrival and after three months. Testing coverage is 100% for the on-arrival testing and about 60% for the three-month testing. It is recommended to strengthen the collaboration with the Tri-forces and ensure coverage of HIV testing at 3 months follow up for returnees of UN Peace Keeping Forces. Programmes have been formally conducted in the tourism sector in collaboration with the Sri Lanka Tourism Development Authority in the tourism-related training courses conducted by the Sri Lanka Institute of Tourism and Hotel Management (SLITHM). Training-of-trainers programmes for instructors of SLITHM have been conducted in 2016, 2017 and 2018 however, there is no mechanism to follow up on the implementation of the HIV-related activities in these training programmes. It is recommended to strengthen collaboration with SLITHM and other private sector tourism training institutions to ensure that HIV/AIDS training is conducted in all training programmes.

SD 1.3: Prevention of infection among young people

Several youth training institutions like the National Youth Corps and National Youth Services Council have been identified as access points to reach the young people and collaborations are made with these institutions in incorporating HIV/STD-related inputs into their curricula. However, the mechanism is not well-established to monitor and review these programmes periodically and revise and update them. Programmes of HIV/STD prevention are conducted in universities and vocational training institutions, however, these are not conducted regularly. An e-learning module on SRH and STD/HIV is being developed targeting university students to be incorporated into the orientation programme. However, due to the unavailability of funding this programme has not been completed.

There is a well-planned mechanism in the public health system to provide SRH awareness and primary prevention inputs on HIV/STD to youth and adolescents through the MOH system and 'Yowun Piyasa' clinics. However, this system is not functioning to its optimum level and is given less priority in the MOHs. National Communication Strategy (NCS) on control and prevention of STI/HIV/AIDS has been developed by NSACP, which serves as an important initiative for raising awareness among the general population and reaching out to a wide audience, however, its implementation is hindered by the lack of funding. It is recommended to use the District AIDS Committees as a platform to strengthen the collaborations between peripheral STD clinics, MOH offices and other relevant multisectoral stakeholders and to plan, implement and monitor the primary preventive activities at the district level. Completing and implementing the e-learning platform developed to deliver SRH knowledge to students of universities and vocational training institutions and using youth-friendly platforms and mechanisms more extensively to provide information on HIV/STD and SRH to the young population are recommended.

SD 1.4: Prevention of infections through infected blood

Donor blood collected by National Blood Transfusion Services (NBTS) and private hospital blood banks are screened for HIV and samples tested positive are sent to the NSACP for confirmatory

testing. Donors identified as HIV positive are referred to the NSACP for management and care. HIV positivity rate in donor blood has remained at or below 0.01% from 2012 through 2019. There is regular reporting on tests conducted by the NBTS, but not from the private hospital blood banks. It is recommended that NSACP collaborates with NBTS and Private Health Services Regulatory Council to ensure that all private sector blood banks are registered with and monitored by NBTS and to streamline the reporting of HIV testing from private blood banks.

Strategic Direction 2: Diagnosis Treatment and Care

SD 2.1: HIV Testing and counselling

HIV testing in Sri Lanka is done at all STD clinics wherein the screening is done by a 4th generation assay and any sample found to be reactive is confirmed at the NRL by Western Blot and/or molecular test. This can lead to a longer turnaround time in reactive cases. However soon the NSACP will implement three test algorithms at all testing centers, awaiting WHO validation of rapid tests. Apart from this HIV testing with single rapid tests is carried out in several teaching hospitals, base hospitals, and district hospitals. In addition, community-based testing is carried out for KPs at DICs at Colombo and Gampaha and in certain facilities like prisons by outreach workers supervised by the STD clinics staff. Countrywide Introduction of rapid tests and three test algorithms in all the testing centers can improve the confirmation of the estimated PLHIVs and thereby reach the target of the first 90 (of UNAIDS 90-90-90 targets) and this will help to achieve the plan of ending AIDS by 2030 in Sri Lanka. HIV Testing Services (HTS) are not available at TB chest clinics but as per the 2020 annual report there is only a gap of 9% in HIV testing among TB diagnosed patients. Currently, the pre-test and post-test counselling are carried out by trained medical officers and nurses but dedicated counsellors at least in centers where the PLHIV population receiving care is high will benefit the program. HIV testing data at Blood Banks in the government sector is captured by the NSACP program but there is a need to get data from the 5 blood banks in the private sector.

SD 2.2: ART Services

The ART programme in Sri Lanka was initiated in November 2004 and is fully integrated with STI services. Presently, ART services are provided at 30 centers - 29 in STD clinics in 25 districts and one at the National Institute of Infectious Diseases. All those with positive reactive HIV tests undergo HIV confirmation with a Western Blot test, for which results are obtained the same day at the Colombo site but may take 2-3 days for other sites. The country needs to widely adopt three rapid test algorithms, which was recommended in the 2017 review as well. ART centers have well laid down SOPs (requiring a battery of clinical and laboratory tests) and ART initiation happens in most cases in 7-10 days, but the same-day initiation has not been adopted so far as a practice except at the NSCAP main clinic.

The percentage of PLHIV presenting with CD4 less than 200 (advanced HIV disease) has declined over the years indicating earlier suspicion/diagnosis. However, the country is lagging behind on UNAIDS 90-90-90 and 90-81-73 treatment targets, earlier planned to be reached by 2020. Cumulatively 70% of estimated PLHIV know their status. To reach the first 95 of 95-95-95 set by UNAIDS for 2025, there is a need to increase HIV Counselling and Testing (HCT) sites to improve the access for HIV Testing Services, especially in western provinces with a high HIV burden in the country. The country must

quickly scale up community-led testing services and HIV self-testing also. Almost one in five (17%) people are lost from diagnosis to initiation of the treatment and will be non-suppressed virally and remain a source of transmission. The EIMS defaulter tracing mechanism needs further improvement for online tracking of all patients from diagnosis all through the treatment cascade.

TREAT all recommendation of WHO has been adopted all over the country. Dolutegravir (DTG) has been adopted as the preferred first-line therapy but presently fixed-dose combinations with Dolutegravir are not available. PLHIV currently on other regimens should be transitioned to DTG based regimen at the earliest. Annual viral load for all PLHIV is a policy and was confirmed in interviews at ART sites but the data from strategic information does not support this as only half of those on ART underwent viral load tests. The point-of-care viral load testing using NAAT/Xpert needs to be considered to reduce the time taken to obtain a report from the central lab.

HIV/TB Services

Tuberculosis is the second most common OI among PLHIV. All persons with presumptive TB are offered HIV testing. The samples are collected at the chest clinic and sent to STD clinics which are generally in the same premises or nearby. But at some places, there are gaps due to distance. It is recommended that the lab technician at the chest clinic should be trained for the HIV screening test and those found reactive can be referred to the ART center for confirmation with three test algorithms. The positive rate is quite low as out of 7000 TB patients screened for HIV, only 10 were found to be HIV positive.

All PLHIV undergo 4 symptom screenings for TB at the time of registration and also during a visit to the facility. Isoniazid (INH) is provided for those among whom TB has been excluded. The country needs to move to a 3HP based TB preventive therapy in place of INH. As per guidelines, ART should be initiated for all HIV TB coinfected persons after two weeks of anti-tubercular treatment (ATT) in HIV TB co-infected patients. However, available data reveals that out of 36 HIV TB co-infected persons in 2019, only 15 got ART and only one got Co-trimoxazole Preventive Therapy (CPT). A similar pattern was seen in 2020 also. It is recommended that all HIV /TB co-infected persons must get ART and CPT as per guidelines. In terms of documentation, the HIV status of TB patients is entered in the district TB register, but this is not documented in the TB card available at the facility.

The country needs to have a manual for HIV TB coordination with national and district level coordination committees and regular review to bridge the gaps highlighted above.

SD 2.3: Quality and Coverage of STI Services

The quality of existing clinic services provided to anyone who walks into an STD clinic in Sri Lanka is already among the best in the region. Strengthening them further is the key to reaching elimination targets for STI, HIV and viral hepatitis. Doing so would also align with regional recommendations to integrate strategic plans across these three overlapping disease areas.

Strengthening STD clinic services requires closing a critical gap – the low reach and uptake among key populations. This can be done by 1) providing comprehensive, integrated services that meet KPs' needs, 2) promoting their use at scale in the community, and 3) monitoring service uptake and continued utilization against population size estimates.[1]

[1] Microplanning and trusted access platform guidance provide a framework and examples for how this works elsewhere

Providing comprehensive services for KP would enable the programme to detect both asymptomatic and symptomatic STIs, including HIV and viral hepatitis, support prevention, and provide effective treatment and related services including HBV vaccine, PrEP, etc. Structural issues at STD clinics – including limited space, lack of privacy and confidentiality, and staff attitudes in some places – require attention to encourage and accommodate increased clinic attendance by KP for a check-up. This may require expanding space/hours at STD clinics themselves as well as providing more complete services through branch clinics, evening and weekend hours, mobile services, DIC, etc.

Promoting regular medical examinations for KP 'to stay healthy' requires optimizing community outreach, adapting face-to-face and virtual strategies to districts with different needs. Key populations will not use STD clinic services unless trust and confidence in those services are built. In addition to addressing infrastructure issues mentioned above, STD clinic services should be actively promoted through strengthened peer-based outreach.

Monitoring key programme indicators against population size estimates is needed to guide the programme towards 'saturation' targets (for example >90% KP reached and using clinic services). Gaps to address at local, district and national levels include 1) monthly review of priority indicators to assess progress towards KP uptake and utilization targets, 2) KP prevalence data, particularly for gonorrhoea, syphilis and HBV/HCV, and 3) community feedback on the quality of and satisfaction with services.

Strategic Direction 3: Strategic Information Management

Strategic information on HIV and STIs in Sri Lanka will play an increasingly important role in NSACP programmes as the country pushes to reach HIV and STI elimination goals in 2030. Good data and good use of data are particularly important in the HIV response as undiagnosed cases become more difficult to find, as prevention to avert infections becomes a higher priority and as rapid initiation and long-term retention on ART by PLHIV becomes standard practice.

Sri Lanka has a longstanding commitment to strategic information and monitoring and evaluation (M&E) related to STIs and HIV. Historically, strong systems and protocols have been in place to support the key components of a robust SI/M&E programme, including consistent data collection (e.g., routine, surveillance, surveys), relevant research, sound data analysis, timely dissemination of data, data quality assurance, data security, regular use of data for decision-making and ongoing training. As is the case with every SI/M&E programme around the world, there is always room for improvement, but the programme in Sri Lanka has the benefit of having a solid foundation and a willingness to improve. The very capable Strategic Information Management (SIM) unit within NSACP oversees and implements the overall programme. One of the hallmarks of the SIM unit is its strong commitment to learning from its experiences in the country as well as from broader international experience to continuously strengthen its approach to SI and M&E.

NSACP generally, and the SIM unit specifically, has also taken advantage of multiple opportunities available through international partners to strengthen the capacity of its strategic information infrastructure. In the coming year, the better use of data — particularly at the clinic and community level — must be a priority for NSACP. Essentially, the commitment to strategic information that is clear at the national level, including the capacity of the SIM unit, must be appropriately translated to the district level, so that STD clinics and CBO partners regularly and consistently use data to

understand the local context and to implement effective programmes and activities. In addition, more and better data on STD clinic operations, including the client perspective on their experiences, must be collected, analyzed and used if coverage and effectiveness of HIV and STI prevention, diagnosis and treatment are going to be improved; qualitative data, including inputs from management, staff, clients and partners, should be an integral part of this process. NSACP should also lead an initiative to build a consensus across stakeholders (e.g., Provincial Health Authorities, STD clinics, CBO partners) about how to collect, analyze and use local data to strengthen local programmes. The goal of this initiative should be to ensure active participation and support for local data programmes that will benefit both the local and national programmes. In the near term, NSACP should also review the wide range of HIV and STI indicators that it uses for data collection and reporting to assess the importance and utility of each one, including rationales for why it is important, how/if it is used and whether it can be dropped or de-emphasized. This review should also be an opportunity to explore gaps in indicator sets where additional and/or better data should be collected, including broader use of frontline indicators to track performance at the clinic and community level that can be used for programme improvement. As Sri Lanka moves towards the elimination of HIV and STIs, it becomes increasingly important to focus its strategic information resources in the areas where they will make the greatest difference.

Strategic Direction 4: Health Systems Strengthening

The Sri Lankan health system has been a good example for countries of the Global South due to its success in providing Universal Health Coverage to its population (despite its low to middle-income status). Overall health Indicators for SDG 3 seem to be on track, however those under SDG 3.3, including the incidence of new HIV infections and the incidence of tuberculosis, have not shown major improvements over the last few years.

In addition, the post-Covid health system may face the challenge of catching up with the faltered services while resources available for health and specific diseases like HIV may not remain the same. The most important aspect of health system strengthening is sustaining the success for the general population in the health and other programmes of the country, as well as calibrating and improving the current system to address the missing elements of services, quality and their link with the health system of the country.

While the gains made in the vertical transmission and congenital syphilis need to be fully integrated with the reproductive health services, services for vulnerable populations like those for uniform services and migrants need to be fully integrated and scaled up in the respective ministries concerning them, For young people ministry of education can scale up and sustain the education programme on sexual health and reproduction.

Standardisation and scaling up of services for KP. For health service and prevention programmes to scale up, a package of intervention activities, frequency and quality of services for KP in facilities and community need to be standardized and have unit cost estimated and calibrated according to the type of location and burden of infection and facilities. Standardization indeed should allow flexibility of mixing different models of peer education and case finding as well as the facility-based approach. Services for population group like PWID needs to be phased in mainstream service delivery. Local advocacy currently undertaken with local law-enforcement groups and community leaders can be improved by local data collected from KP (as suggested in other sections). Expansion

of national laboratories for space, instrument and capacity should be part of national health system improvement and integrated with improved lab services required for other diseases (TB, hepatitis, emerging pathogens).

Training and Capacity Building. While different models of services in the community and their link with facilities are being explored, training and capacity building needs to transform to mentoring and handholding. Such a unit can be separately funded over and above grant allocations from the GFATM and or from other sources like the UN agencies and can be affiliated with the national program.

The unit can act as an umbrella organization for capacity building of NGOs and CBOs, through a mother-NGO organization, as well as assist in design and calibration of interventions led by different agencies of the government.

Human Resources. Targets for recruitment of consultant community physicians and venereologists have been reached whereas some public health posts have remained vacant. Currently, the ratio of part-time or full-time service providers (CBOs or in the govt.) has not been estimated based on need or according to the local context. There is a great need for standardization and calibration based on local data.
Community Systems Strengthening. Recent UNAIDS and HLM strategy has advocated for community-led intervention, which needs to be adopted to the country situation and integrated with the existing health system of the country.

Governance and Leadership. High-level political commitment to HIV in a multi-sectoral approach is yet to be translated into financial commitment and availability of resources. This is unlikely to happen unless political commitment is ensured through a High-level multi ministerial body. It is high time to consider an alternative to the National AIDS council that was originally planned to serve the above purpose. The National AIDS committee which is the other functioning group can be fully empowered and sustained only under the support of a national level head of state or his representative led body. Need for political advocacy that Sri Lanka, otherwise well-positioned to meet SDG indicators, is likely to fail meeting SGD 3.3 indicators (mainly due to HIV and TB) unless financing is improved.

Financing. Coupled with a lack of fund release and poor utilization of the GF resources KP funding has suffered. There needs to be a drastic increase in resource allocation to HIV/STI response. Resource allocation per capita for key populations need to be increased, with district and provincial level resource need estimation per intervention and capita KP.

Strategic Direction 5: Supportive Environment

Capacity building for health care workers to minimize stigma and discrimination in health care settings

HIV/AIDS and stigma and discrimination are addressed in basic training of health care professionals and during pre-service and in-service training programmes. Training programmes specifically addressing stigma and discrimination have been planned for STD clinic staff in 2020 and were conducted in some districts. However, this programme was interrupted due to the Covid-19 pandemic. Programmes have been conducted for hospital staff other than those of the STD clinics, private practitioners and physicians also in 2017 and 2018. Capacity building programmes for health care staff, specifically addressing stigma and discrimination, should be continued and further scaled up and strengthened.

Accessibility and responsiveness of STD services

Stigma and discrimination status in STD clinic services is perceived as improved by PLHIV and KP attendees. However, all the services are not free of stigma and discrimination because some instances of discriminatory treatment are reported. Long waiting time, inadequate space and having to wait outside, poor privacy due to lack of space, transport difficulties to reach some clinics and difficulties experienced in reaching the services during the allocated time are also identified as areas for improvement. Conducting a facility survey of the STD clinics and identifying and correcting the structural limitations of the STD clinics is recommended.

SRH education in the school curriculum

Comprehensive SRH curriculum including STD/HIV for Grade 12, before the students start their different study streams, has been developed and pilot tested. Revisions to the overall school curriculum are also currently underway, and it is planned to deliver simple, age-appropriate SRH education along with life skills for Grades 6 – 11. SRH education in schools is a highly controversial topic in the Sri Lankan education sector, sudden, major changes are not feasible. School teachers' skills in delivering the SRH content is a crucial factor for the effectiveness of SRH education and needs to be addressed through teacher training programmes.

PLHIV and KP networks

PLHIV and KP networks are engaged in providing services like counselling and psychological support services, maintaining drop-in centers, self-employment and financial support and advocacy and awareness. They have formal collaborations with NSACP. However, the different networks do not have many collaborations with each other, hence lacking a collective voice and strength in appearing for policy matters.

Legislation, policies and law enforcement

Some laws in Sri Lanka (e.g. Section 365 and 365 A of the Penal code, Vagrants ordinance, Brothel ordinance and section 399 of the Penal code) negatively affect HIV prevention among key populations. There is limited progress concerning amendments to the existing punitive laws that adversely influence HIV control, however, actions are taken to address this issue at the level of law enforcement. Advocacy programmes have been conducted for higher officials in the police and training programmes have been conducted for police officers regarding the laws that adversely affect HIV prevention in key populations. It is recommended to continue and scale up advocacy and training for the police officers emphasizing the importance of creating a supportive legal environment for HIV prevention in key populations.

Condom accessibility

There is no legal restriction on keeping condoms. Using possession of condoms as evidence of sex work has largely reduced over the recent years due to advocacy with and training of law enforcement officers. National Condom Strategy is implemented and accordingly, in addition to the condom distribution through STD clinics and KP interventions, condom dispensers have been distributed through peripheral STD clinics and located in hospitals, RDHS offices, MOH office, tri-forces camps,

police stations, supermarkets, filling stations, construction sites, hotels, SPAs, economic centers and public toilets. Although the Policy on Prison HIV Prevention states that all preventive measures available for HIV prevention in the population should be made available in the prisons, there are no provisions to make condoms available in the prisons. NSACP needs to advocate officials of the Prisons Department for making condoms available in prison settings.

In conclusion, this NSP has taken an overall evidence-based approach to lay the foundation for a robust national program, though one that is yet to be scaled up towards Ending AIDS. That task can be taken up now in partnership with people infected and affected by HIV, government, healthcare providers and others, in collaboration with international and UN agencies.

OBJECTIVES OF THE REVIEW

1. To assess the level of, and trends in the HIV/STI epidemics (incidence, prevalence, mortality) and its distribution.
2. To illustrate the progress made towards reaching the targets and goals defined in the National Strategic Plan 2018 to 2022 including the impact of the Covid -19 pandemic on achieving these targets and goals
3. To examine the impact of the National Strategic Plan (2018-2022) including programmatic and cross-cutting factors on the level and trends in the epidemic and its distribution.
4. To identify the main areas in need of improvement in the programme to achieve set targets/ impact;
5. To provide recommendations to update the NSP (2023 -2027) for program improvement to achieve the set targets.

STRATEGIC DIRECTIONS OF THE CURRENT NSP (2018-2022)

Five objectives will help achieve the goal of ending AIDS by 2025. These are:

I. To prevent new infections of HIV/STI among key populations, vulnerable populations and the general population

II. To provide universal access to HIV/STI diagnosis and treatment, care and support services for those infected and affected by HIV/STI

III. To strengthen strategic information systems and knowledge management for an evidence-based response

IV. To strengthen health systems at different levels and to ensure an effective multi-sector HIV/AIDS/STI response

V. To provide a supportive environment for easy access and delivery of HIV prevention, diagnosis, treatment and care services for all

The table given below mentions the specific objectives along with the respective strategic directions and sub-strategies under each SD.

Objectives	Strategic Directions (SDs)	Sub-strategies of SDs
I. To prevent new infections of HIV/STI among key populations, vulnerable populations and the general population	SD 1. Prevention	SD1.1. Prevention of transmission of HIV/STI among KPs – the KPs include FSW, MSM, TG, BBs, PWUD/PWID and prisoners SD 1.2. Prevention of transmission of HIV/STI among vulnerable groups - the groups include returnee migrant workers, armed forces and police personnel, tourist industry workers SD 1.3. Prevention of transmission of HIV/STI among general population including young people SD 1.4. Prevention of transmission through infected blood
II. To provide universal access to HIV/STI diagnosis and treatment, care and support services for those infected and affected by HIV/STI	SD 2. Diagnosis, Treatment and Care	SD 2.1. HIV testing and counselling (including laboratory aspects of testing) SD 2.2. ART services SD 2.3. Quality and Coverage of STI services SD 2.4. Elimination of Mother to Child Transmission of HIV (EMTCT) and Congenital Syphilis SD 2.5. HIV TB services

III.	To strengthen strategically information systems and knowledge management for an evidence-based response	SD 3. Strategic Information Management System (SIM)	3.1.HIV and STI Surveillance 3.2. Programme Monitoring and Routine Reporting 3.3. HIV/AIDS/STI Research Knowledge Management
IV.	To strengthen health systems at different levels and to ensure an effective multi-sector HIV/AIDS/STI response	SD 4. Health Systems Strengthening (HSS)	
V.	To provide a supportive environment for easy access and delivery of HIV prevention, diagnosis, treatment and care services for all	SD 5. Supportive Environment	

METHODOLOGY

The external review team consisting of six consultants, five international and one national consultant, were chosen by the NSACP based on their expertise in their respective fields. Each reviewer was assigned specific areas of the strategic directions outlined in the NSP 2018-2022 as shown in Table 1 below:

Table 1: External reviewers and their key areas of focus

External Reviewer	Key Areas of Focus
Bharat Bhushan Rewari	HIV treatment and care (SD2)
David Hales	1. HIV and STI Prevention interventions (KPs)(SD1.1) 2. Strategic information management (SD3)
Dulani Samaranayake	1. Supportive environment (SD5) 2. HIV and STI Prevention interventions other than KPs (SD1.2-1.4)
Rajesh Kannangai	HIV/STI diagnosis (Laboratory diagnosis) (SD2)
Richard Steen	1. STI treatment and care (SD2) 2. HIV and STI Prevention interventions (KPs)(SD1.1)
Swarup Sarkar	SD 4: Health Systems Strengthening

The review was conducted virtually over the months of August, September, and October 2021. The team created a draft work plan that was approved by the NSACP. Following that, the team conducted an extensive literature review and a desk review of the progress made by the NSCAP on the current NSP. This was greatly aided by the exhaustive inventory of documents that were provided to the reviewers by the NSACP, as well as additional documents that were provided to the reviewers by the national focal points.

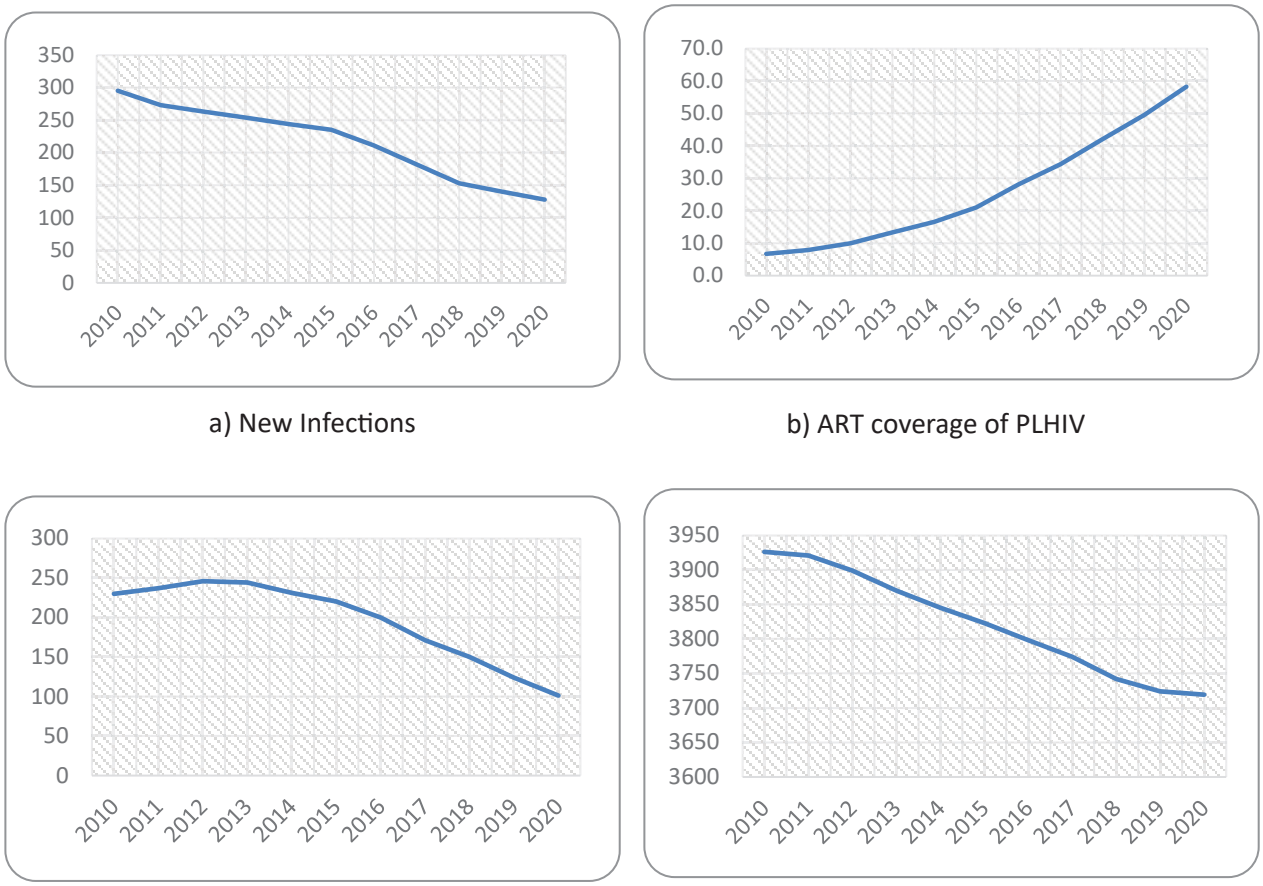
The team conducted key-informant interviews as well as group sessions with individuals at the policy as well as implementation level. In addition to that, sessions with members of the key populations and other beneficiaries were also interviewed about their experiences with the national response.

The interviews were conducted mainly in English. The reviewers coordinated among themselves to minimize overlaps in interview requirements and held frequent meetings to leverage each other's expertise and insights. More specific methodologies used in the review process have been specified in the individual subsections of the review.

A limitation faced due to the review being conducted virtually has been the complete reliance on qualitative measures and key-informant virtual interviews – leading to some variation in the findings by the different consultants. We have tried to reconcile this by synthesizing a summarized report, in addition to Strategic Direction-wise findings and recommendations. For more elaboration on a specific topic, we would request the reader to refer to the findings and recommendations for the relevant Strategic Direction.

BACKGROUND: STATUS OF THE STI/HIV EPIDEMIC IN SRI LANKA

There has been a declining trend in the number of new infections and deaths due to HIV. Combined with expanded and increased ART coverage, this has resulted in a decline in HIV prevalence as well. All of the above corroborates the strength of the HIV response in Sri Lanka, which is one of the first countries in the region to achieve EMTCT of HIV and congenital syphilis, an achievement that indicates their strong health infrastructure and ability to implement a large scale, targeted approach at scale. Since 1952, Sri Lanka has shown a sharp decline in STI infections (Figure 2) from 1952 to the current time. However, since 2000, there has been an increasing trend in the number of Syphilis infections as can be seen in Figure 3.



a) New Infections

b) ART coverage of PLHIV

c) AIDS-related deaths

d) Number of PLHIV in Sri Lanka

Figure 1: Incidence, prevalence, AIDS-related deaths, ART coverage in Sri Lanka. 1990-2010. Source: UNAIDS

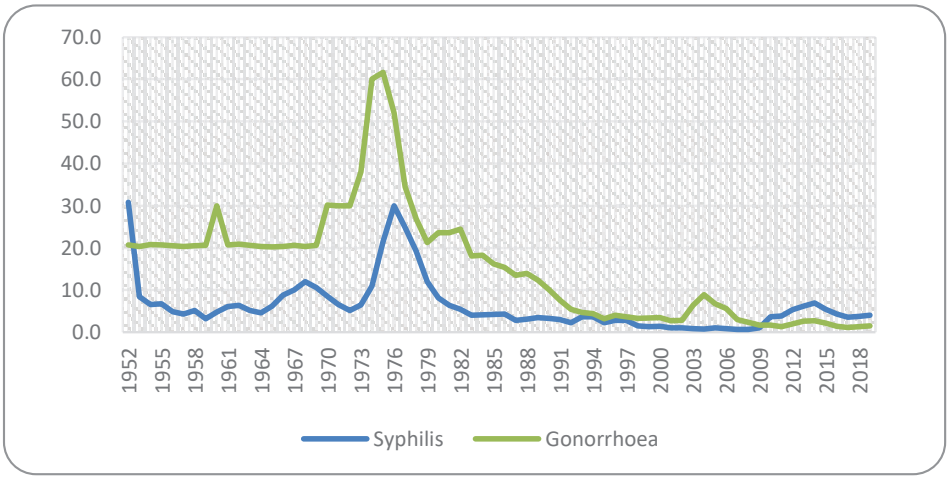


Figure 2: Trends in sexually transmitted infections in Sri Lanka. 1952-2019, Source: NSACP

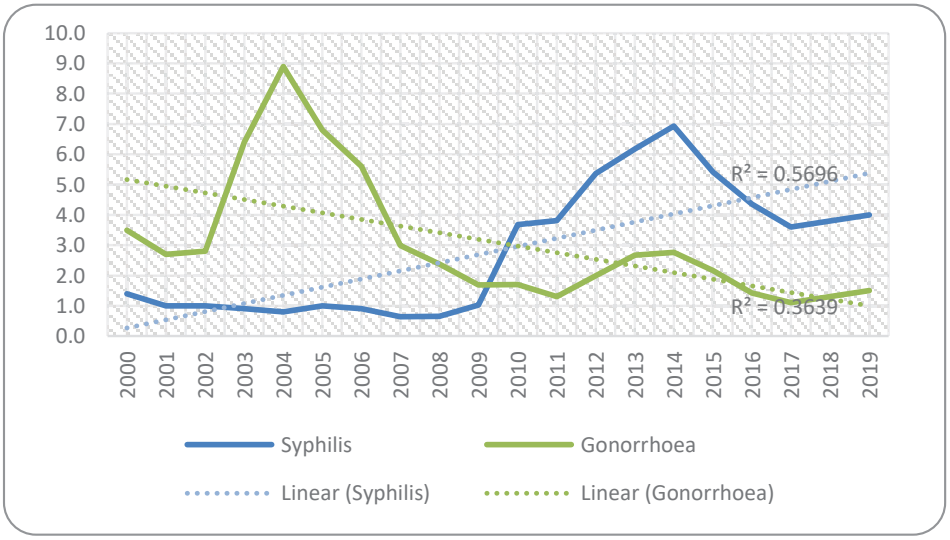


Figure 3: Increasing Trend in STI infections since 2000, Source:NSACP

Even with this spectacular progress, Ending AIDS by 2025 or even by 2030 would remain difficult due to poor coverage.

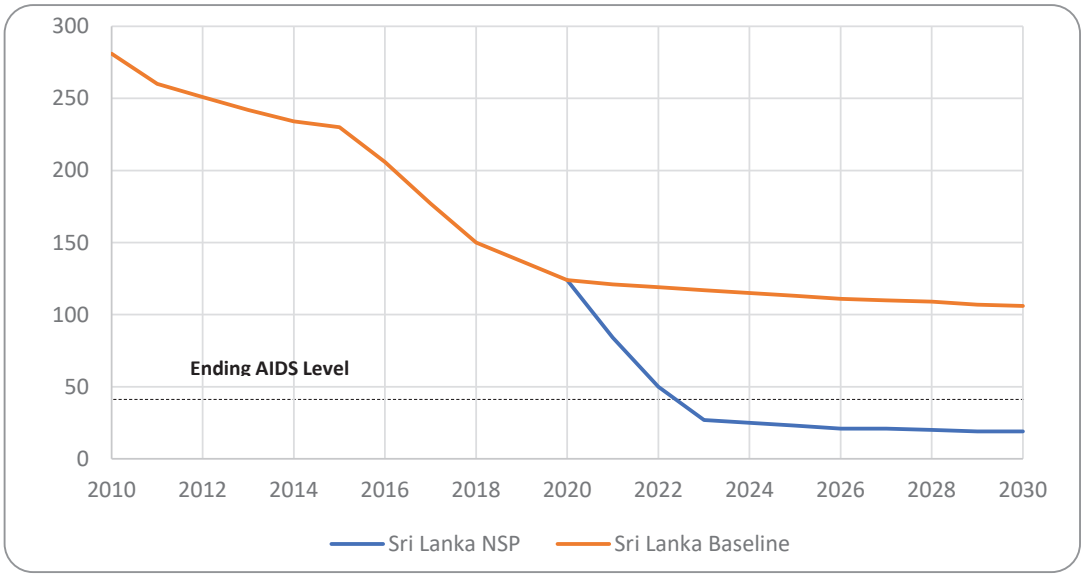


Figure 4: Baseline vs projected new infection 2010- 2030 AEM 2018[2]

[2] Sri Lanka College of Sexual Health and HIV Medicine, "Technical REPORT on HIV Estimation in SRI LANKA-2019," n.d., 53.

This is due to several epidemiological and programmatic reasons:

- Unaddressed new HIV infections amongst MSM and TG populations: Going by recent estimates, new infections among MSM and TG populations seem to be rising. Despite coverage target being set as 80 per cent since NSP 2007[3], these coverage targets have not been reached. A larger portion of new infections can be attributed to these sections, as can be seen from the AEM projections given below.

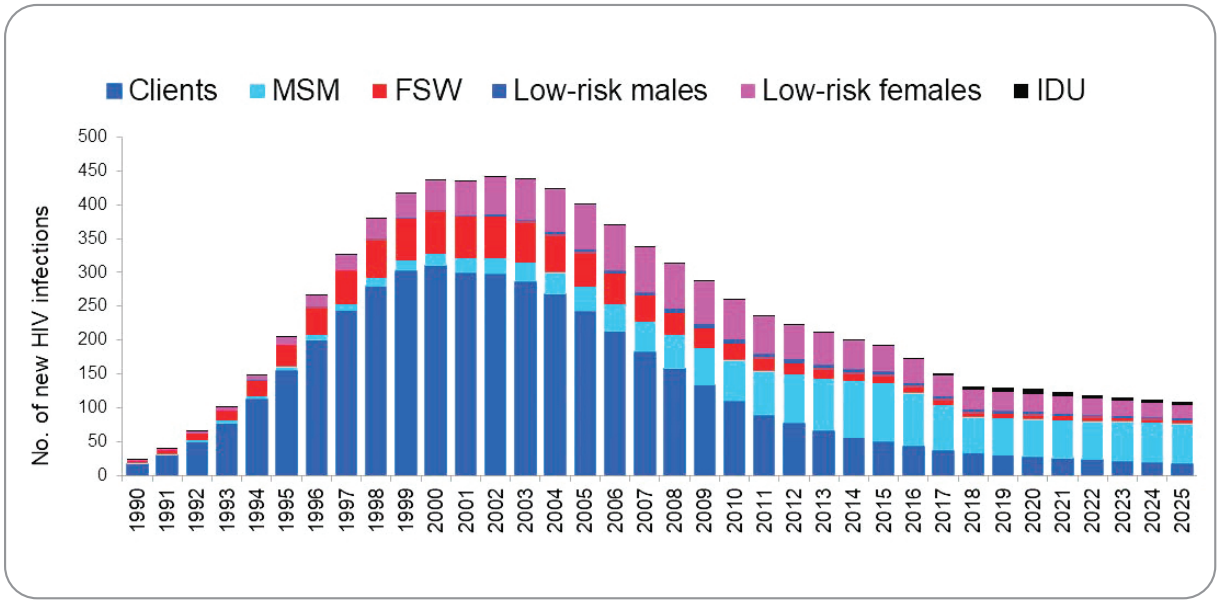


Figure 5: Source of new infections, Source: Annual Report 2018, NSACP

- There has been a significant decrease in the number of infections among FSW and their clients. This would suggest that interventions targeting these categories have had impact on the epidemic among them, however due to low coverage of SW we can not assert the magnitude of the interventions with certainty.
- However, these gains may not be sustained if there is an absence of consistent programming targeted at the FSW and threshold coverage of 80 % consistent condom use and reach of 90 per cent [4]. The prevalence of certain STIs among sex workers is a cause for concern [5]. The prevalence of chlamydia among sex workers is around 20%. As such no data for gonorrhea and very little data on syphilis and viral hepatitis among KP is available. Stringent implementation of the SIM strategy must be undertaken to continuously monitor epidemiological dynamics among the KP.

[3] Page 3, National STD/AIDS Control Programme (NSACP) - Sri Lanka, "National HIV/AIDS Strategic Plan 2007-2011," 2007, https://www.aidsdatahub.org/sites/default/files/resource/sri-lanka-national-hiv-aids-strategic-plan-2007-2011.pdf.
[4] Page 45, National STD/AIDS Control Programme (NSACP) - Sri Lanka, "National HIV/STI Strategic Plan Sri Lanka, 2018-2022," 2018, https://www.aidsdatahub.org/sites/default/files/resource/national-hiv-sti-strategic-plan-sri-lanka-2018-2022.pdf.
[5] Page 36,National STD/AIDS Control Programme (NSACP) - Sri Lanka. states the syphilis amongst sex workers should be less than 3%

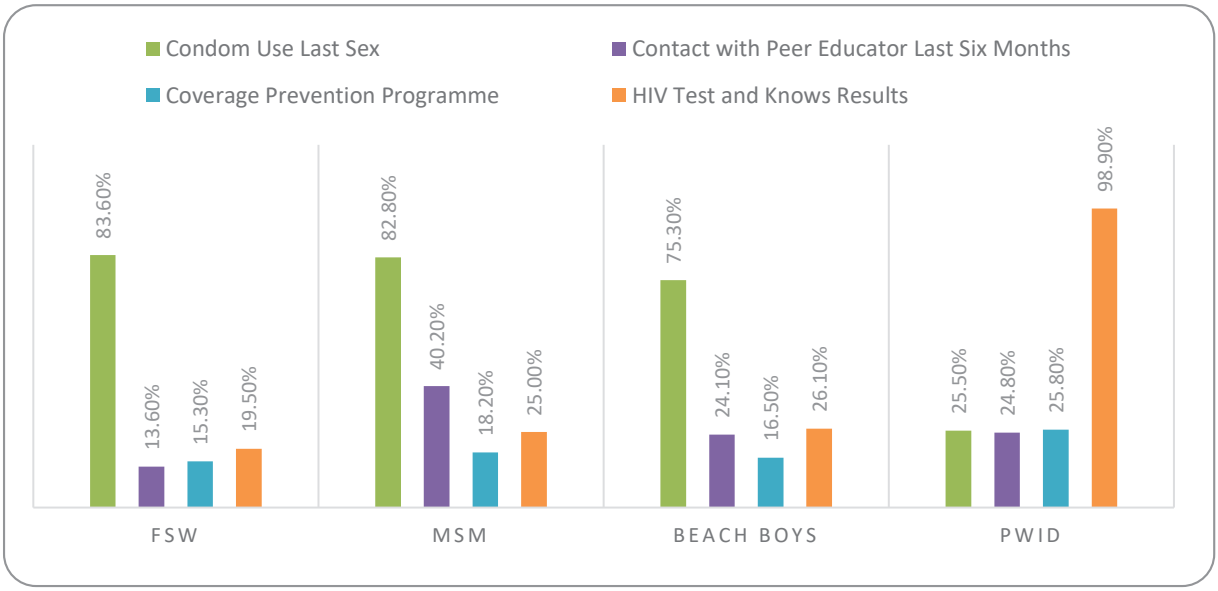


Figure 6: Performance against NSP 4 targets (Source: NSACP data[6])

- Harm reduction measures, such as needle exchange and substitution programmes, targeted at PWID –have been long overdue[7] and are only being implemented right now and that too as a pilot. These interventions need to be rapidly scaled up, starting with districts with high concentration of other KP also having high concentration of PWID, aiming for complete service saturation among the KP since the PWID-FSW link can result in a large-scale epidemic in the future.
- The vast prevention benefit that can be gained from early treatment of KP by making the person non-infectious is lost despite having a strong ART infrastructure that was successfully used for the prevention of mother-to-child transmission of HIV. Almost one in five (17%) people are lost between diagnosis and initiation of the treatment, and will be non-suppressed virally and remain a potential source of new infections.
- Most importantly data on size, reach, coverage with comprehensive intervention[8] and consistent safe behaviour and uninterrupted ART use for HIV positives are not available.
- Lack of local data, denominators and programme response data remain the biggest barrier to better describe the epidemic dynamics and for better resource allocation, human and financial.
- The ability to reach "hidden" and marginalized communities remains a key problem. Creating an enabling environment for interventions to result in behavioural change remains important for this reason.

[6] National STD/AIDS Control Programme (NSACP) - Sri Lanka, "Integrated Biological And Behavioural Surveillance (IBBS) Survey Among Key Populations At Higher Risk Of HIV In Sri Lanka, 2018," 2018, https://www.aidscontrol.gov.lk/images/pdfs/publications/research_documents/IBBS-REPORT-PDF.pdf.

[7] Page 16 National STD/AIDS Control Programme (NSACP) - Sri Lanka, "National HIV/AIDS Strategic Plan 2007-2011."

[8] World Health Organization, *Consolidated Guidelines on HIV Prevention, Diagnosis, Treatment and Care for Key Populations* (Geneva: World Health Organization, 2014), https://apps.who.int/iris/handle/10665/128048.

- Perception of key populations and the service providers are central to calibrating the program by location and improving the quality-of-service provision.
- Real-time data that can be generated through the EIMS and PIMS must be fully exploited to tailor responses in the programme and coordinate with NGO/CBOs and other partner organizations.

Overall, the STI/HIV response in Sri Lanka shows signs of early success, but unless evidence-based allocation of resources and intervention efforts are in place, the achievement of ending AIDS will remain uncertain and potential gains unsustainable.

FINDINGS AND RECOMMENDATIONS

Strategic Direction 1 (SD1): Prevention of HIV/STI

SD 1.1: Prevention of transmission of HIV/STI among Key Populations

Overview

Performance against the priority actions in the 2017-2022 NSP has been mixed. For example, peer-led approaches have been continued but the coverage has remained low and prevention has not been a priority within these approaches. However, the introduction of the Case Finding Method (CFM) was an expansion of peer-led outreach and it has led to some improvements in testing. The new strategy for Integrated Virtual HIV Services (2021-2025) and its use of different communications methods has the potential to be a significant addition to the HIV response in the country. In addition, the introduction of HIV self-tests is proceeding and it also has the potential to strengthen the HIV response. Pre-exposure prophylaxis (PrEP) has been launched but there are multiple concerns about the approach being used.

Other priority actions have fared less well. The commitment to drop-in centers (DICs) has declined. The capacity of many Community Based Organizations (CBO), including Key Population (KP) networks, remains weak. Stigma and discrimination at service delivery sites remains high. Hidden populations continue to be largely unreached. Harm reduction services (e.g., needle exchange, substitution therapy) are not available for People Who Inject Drugs (PWID) and condoms are not available in prisons.

Table 2 juxtaposes 2013 and 2014 data for a set of key HIV-related indicators with 2018 and 2020 data for those same indicators. These data reinforced the mixed performance of the HIV programme in Sri Lanka. For example, declining HIV prevalence among Female Sex Workers (FSW), Men-who have- Sex-with-Men (MSM) and prisoners; increasing prevalence among Beach Boys and PWID. Declining condom use at last sex by FSW but increasing use by MSM. Continuing low coverage of prevention programmes, but with a sizeable decline among FSW and a major increase among PWID.

Table 2: Key HIV-related indicators for KP: 2013-2014 data versus 2018-2020 data

Population at Risk	Size Estimate (Range) (2013)	HIV Prevalence (IBBS 2014))	Condom Use Last Sex (IBBS 2014)	Contact with Peer Educator Last Six Months (IBBS 2014)	Coverage Prevention Programme (IBBS 2014)	HIV Test and Knows Results (IBBS 2014)
FSW	14,132 (12,329 – 15,935)	0.81%	93%	14%	30%	35%
MSM	7,551 (6,547 – 8,554)	0.88%	58%	15%	19%	15.4%
Beach Boys	1,314 (1,142 – 1,486)	0%	70%	3.5%	7.8%	4.3%
PWID	423 (328 – 516)	0%	24%	4%	4.1%	8.7%

Population at Risk	Size Estimate (Range) (2013)	HIV Prevalence (IBBS 2014))	Condom Use Last Sex (IBBS 2014)	Contact with Peer Educator Last Six Months (IBBS 2014)	Coverage Prevention Programme (IBBS 2014)	HIV Test and Knows Results (IBBS 2014)
PWUD	17,459 (15,338 – 19,542)	Not available	<40%	Not available	Not available	Not available
Prisoners	30,000 (at any one time) 100,000 (throughout the year)	0.03% (positivity rate)	N/A	Not available	Not available	Not available
Population at Risk	**Size Estimate (2018)**	**HIV Prevalence (IBBS 2018, except prisoners)**	**Condom Use Last Sex (IBBS 2018)**	**Contact with Peer Educator Last Six Months (IBBS 2018)**	**Coverage Prevention Programme (GF PUDR 2020)**	**HIV Test and Knows Results (GF PUDR 2020)**
FSW	30,000	0.02	83.6	13.6	15.3%	19.5%
MSM	40,000	0.15	82.8	40.2	18.2%	25.0%
Beach Boys	4,500	0.2	75.3	24.1	16.5%	26.1%
PWID	900	0.81	25.5	24.8	25.8%	98.9%
PWUD	-	-	-	-	-	-
Prisoners	18,256	0.01	-	-	N/A	24.49%

**All data provided by NSACP*

The complete list of priority actions under SD1.1 is comprehensive and relevant to the different key populations. The main issue is how well the actions are prioritized and how extensively and effectively they are implemented. A secondary issue is whether there are different and/or additional actions that should be included under SD1.1.

Key Observations

Data from the 2018 population size estimate shows that a significant percentage of the KPs are found in only four districts: Colombo, Gampaha, Galle and Kandy. This can be seen from Table 3. For example, nearly 40% of FSW are in these four districts, as are more than 41% of MSM and more than 55% of MSW. If an additional 12 districts with higher populations of different KP are factored into the equation, the percentage who can be reached in a subset of districts in the country dramatically increases. For example, more than 80% of MSM are in 13 districts. These data provide Sri Lanka with an opportunity to improve the targeted allocation of resources to strengthen the coverage and the effectiveness of prevention activities.

Table 3: Distribution of key populations in Sri Lanka (2018 Population Size Estimate)

District	FSW	MSM	MSW	TG	PWID	BB
Colombo	17%	14.3%	19.6%	17.6%	75.2%	--
Gampaha	14.2%	14.4%	19.7%	11.1%	4.2%	9.9%
Galle	6%	6.3%	8.6%	4.9%	1.8%	58.7%
Kandy	7.5%	6.6	6.5%	6.5%		--
Anuradhapura	5.3%	4.3%	4.3%	--		

District	FSW	MSM	MSW	TG	PWID	BB
Ratnapura	6.5%	5.2%				
Kaluthara		5.8%	5.7%	5.6%		12.7%
Kurunegala		7.8%	7.7%			
Puttalam		3.7%	3.7%			3.2%
Hambantota			2.8%			
Nuwara			3.3%			
Jaffna		2.9%				
Kegalle		3.9%				
Matara		3.8%				
Polonnaruwa		2.0%				
Trincomalee						1.6%
4 Bold	39.7%	41.6%	55.1%	40.1%	81.2%	68.6%
4+	51.5% (6 districts)	81% (13 districts)	82.6% (10 districts)	45.7% (5 districts)	81.2% (3 districts)	86.1% (5 districts)

Peer-led outreach activities are a central component of the KP programme (e.g., Peer Educator Model (PEM), Case Finding Model (CFM). There were signs in recent years that peer outreach could be scaled up, but coverage of these activities has remained low (see Table 2 above) and prevention activities have always been a minor part of outreach, because of the focus on testing uptake.

There are growing concerns the commitment to providing the necessary technical and financial support to sustain and grow effective peer outreach is declining. For example, there has been a shift away from using populations size estimates for KP to determine the number of outreach workers in a district to assigning three outreach workers per KP group in a district, regardless of the size of the population. Consequently, the ratio of outreach workers to clients has grown from 1:100 to upwards of 1:1,000 in some settings. The increase makes it effectively impossible to provide proper coverage and it compromises the quality of the outreach work, including the delivery of prevention services.

Even with more favourable ratios of outreach workers to clients (e.g., 1:100-200), peer outreach in Sri Lanka has underperformed in parts of the country where the concentration of KP is significantly lower than Colombo and Gampaha. Smaller numbers of KP make it inherently more challenging for outreach workers to find and meet with them. Plus, the underperformance is linked to a series of other factors, including limited knowledge at STD clinics and CBOs about the local KP communities, networks and dynamics; a corresponding inability to develop and target prevention programmes that will reach KP members; fewer individuals with the ability and/or interest to be an outreach worker, given the low pay and the intensity of the work; travel distance/time required by outreach workers to find and meet with KP members; unreimbursed transport costs for outreach work; fewer CBOs with the capacity to manage and support outreach programmes; and high levels of stigma and discrimination in more outlying parts of the country, which makes KP in those areas even more reluctant to seek services, including basic outreach.

The reluctance of KP to seek HIV/STI services is reinforced by reports that an estimated 65% of MSMs and 70% of FSWs do not disclose their status to their family and/or within the community, giving the country a sizeable number of KP who are “hidden” and/or “unreached” by the services provided by STD clinics or community-based organizations. The abovementioned lack of knowledge at STD clinics

and CBOs about the local KP communities, networks and dynamics hinder the ability to reach these hidden populations.

The Peer Educator Model (PEM) is based on a paradigm where part-time peer educators, who have limited training, visit places that are known to them (e.g., hotspots) to engage with other KP members. The prevention component of PEM is essentially the distribution of condoms, lubricants and leaflets and it is treated mainly as a *pro forma* exercise, not as a significant opportunity to influence behaviours and avert HIV/STI infections. The *pro forma* nature of the prevention work is due largely to the fact that the focus of PEM is encouraging KP to get an initial HIV test and then escorting clients who test positive to an STD clinic for a confirmatory test. Despite its emphasis on initial testing, PEM has been extremely unsuccessful in identifying HIV cases and there is limited effort to leverage negative test results into effective reinforcement of prevention behaviours.

The introduction of the Case Finding Model (CFM) has been a positive development in terms of finding previously undiagnosed HIV clients. However, its coverage is limited, and it is most useful and effective in areas where there are large and concentrated key populations. While the CFM does include a prevention component (e.g., condoms, lubricant and information), it has a strong focus on case finding with limited attention to ongoing prevention. Similar to PEM, the CFM encourages clients to take an initial HIV test in the field and clients who test positive are escorted to an STD clinic for a confirmatory test. This focus is reinforced by a financial incentive system that rewards case finding with no corresponding incentive for prevention activities. The CFM is also a resource-intensive approach technically and financially and there are concerns it may not receive the necessary support from the government to continue operating effectively.

In general, prevention activities in Sri Lanka are built around the provision of commodities (e.g., condoms, lubricants) and the dissemination of simple messages. The systems are not in place in either STD clinics or outreach programmes to support sustained client-centered approaches to prevention. For example, building and maintaining professional relationships with KP communities and individual clients can help clinic and outreach staff better understand existing and emerging risk factors, which can then influence the development and implementation of practical and effective prevention programmes. In addition, valuable prevention activities such as pre-exposure prophylaxis (PrEP) and treatment as prevention (TasP) can and should be more fully integrated into the overall prevention programme. The challenges of implementing a more comprehensive and client-centered approach to prevention range from shortages of staff at clinics, a limited number of capable outreach workers, insufficient training and support to expand prevention beyond commodity distribution and a system that emphasizes case finding over prevention.

The limited work on prevention tends to be HIV-specific. This siloed approach to prevention is a significant missed opportunity to address sexually transmitted infections more broadly among KP. As mentioned above, including other STIs in prevention activities would be a useful contribution to reaching the 2030 STI elimination targets (e.g., 90% reduction in N. gonorrhoea incidence, ≤ 50 cases of congenital syphilis per 100,000 live births). The siloed approach to HIV prevention also reflects the ongoing vertical nature of HIV programmes, which is in contrast to improved integration of HIV services into general health services.

Drop-in centers (DIC) and/or safe spaces for KP currently have only a minor role in the HIV response, due largely to budget constraints. There are also serious concerns that funding for these centers/ spaces will decline as external funds for HIV programmes decrease. The small number of centers/

spaces that are operating provide important and well-received services for KP in a non-stigmatizing, non-discriminatory setting, including access to condoms and lubricants, prevention counselling, peer support and community-based testing for HIV (CBT). Moving forward, these centers/spaces have the potential to play a major role in self-testing, both for the provision of assisted self-testing and the distribution of self-tests.

CBOs play a central role in implementing KP-focused HIV programmes in Sri Lanka, including the limited prevention work that is done. While the capacity of the small CBOs working on the HIV response has improved in recent years due to external support, it continues to be weak overall and there are serious concerns among civil society organizations that it will grow weaker in coming years as external support decreases. The limited capacity of some CBOs raises questions about the effectiveness of capacity-building programs that have been available for these organizations and their leadership/staff. For example, there are complaints that capacity building focuses on training, not on longer-term approaches (e.g., mentoring, recurrent Technical Assistance) that can make a more meaningful and sustainable contribution to CBO capacity.

CBOs working on the HIV response have historically operated in a fragmented and competitive landscape where their activities have largely been supported by external funders and it is unclear if the Government of Sri Lanka will provide sufficient funds for them to build/maintain their capacity and continue their HIV work. Without support from external funders or the government, the ability of CBOs to continue their HIV work — and potentially to continue to exist as viable organizations — will be at serious risk. These CBOs cannot self-fund their participation in the national HIV response nor should they be expected to.

In some contexts, STD clinics and partnership CBOs have an antagonistic or adversarial relationship, which undermines their ability to work together to reach and serve KP. The importance and value of collaboration (i.e., each of them will be more successful if they work together) is not a priority or a requirement. Consequently, their efforts are not well integrated and programme performance suffers.

There continues to be a lack of accepted and supported national networks of organizations working with different KP groups in the country. The absence of effective KP networks limits the ability of these populations to speak with a strong collective voice that would amplify and add imperative to their messages, concerns and recommendations. In the current environment, it is also difficult to nurture capable KP-led and KP-focused organizations, even though they should be the backbone of HIV programmes. As a result, the number, capacity and contributions of KP-led and KP-focused organizations are limited as is their ability to participate in the HIV response.

Deep-rooted stigma and discrimination within the broader culture and various institutions in the country have long been acknowledged as a major barrier to the provision of HIV/STI services for KP in Sri Lanka. The combined impact of KP-related and HIV-related stigma and discrimination on members of key populations are wide-ranging and affect their health-seeking behaviours, risk perceptions and risk behaviours, mental health, family relationships, employment, access to housing and access to legal services. The deep-rooted stigma and discrimination is also a major reason why members of KP groups remain hidden and/or unreachable, directly affecting those people's willingness and ability to access vital HIV/STI Services, including prevention.

Stigma and discrimination towards KP remain a serious problem in many of the country's STD clinics and was widely noted by key informants. While there are clear exceptions at clinics where an open and unbiased staff create a positive and supportive environment for KP, deep-rooted stigma and discrimination among staff is an intractable problem that undermines a clinic's ability to attract and serve KP members. Negative experiences due to stigma and discrimination at clinics are further complicated by client issues with service delivery, including opening hours, wait times, delays in receiving test results and delays in starting treatment.

The availability of PrEP has been a major step forward for HIV prevention in Sri Lanka. However, there are challenges with and concerns about the rollout, including poor communication with likely/potential clients about its use and benefits; a lack of integration with other HIV services; a communications strategy that highlights the potential dangers of PrEP and not the benefits; stigma and discrimination at the dispensing facility; and limited access to the drug. There are also concerns the current approach is so convoluted (e.g., extensive delays in processing to receive the prescription) that it is a serious disincentive to participation.

The introduction of HIV self-testing in Sri Lanka is an important development that could potentially transform the HIV response in the country if it is successfully scaled up. In the context of prevention, it provides KP, including "hidden" populations, access to a critical service with significantly fewer barriers, including, most importantly, the high levels of stigma and discrimination that they face at STD clinics. Self-testing is also a viable way to provide HIV testing if/when STD clinics and mobile clinics are not able to operate due to COVID restrictions.

If it is fully and properly implemented, the new strategy for Integrated Virtual HIV Services (2021-2025) also has the potential to transform the HIV response in Sri Lanka, particularly for KP. The ability to reach KP in a confidential, non-stigmatizing and non-discriminatory way — the know4sure.lk platform — could dramatically increase the number of hidden KP who engage with services (e.g., online education, online risk assessments, online booking and targeted distribution of prevention commodities, including PrEP). If done properly, building trust through online engagement could lead to a decrease in the number of hidden KP, who are currently opting out of the existing set of face-to-face services. In addition, it can be a way to reach certain populations (e.g., MSM and transgender people) who are more accustomed and more comfortable using and meeting in online spaces than physical ones. The effectiveness of the online HIV outreach activities conducted in some districts during COVID lockdowns reinforces the potential of the new strategy. It will be important to track the usage and effectiveness of the new strategy as it expands in the coming months.

The implementation of NSACP's Prevention Information Management System (PIMS) is ongoing. The shift away from a paper-based recording and reporting system to monitor KP interventions to a fully electronic system will strengthen the ability to collect, analyze and use data to improve HIV/STI prevention activities.

The COVID epidemic in Sri Lanka has created many challenges for HIV/STI prevention work. For example, the impact of lockdowns ranged from the inability of outreach workers to be out in public to the closure of STD clinics to reduced access to prisons and prisoners. However, there are stories of how prevention activities did continue; for example, enterprising outreach workers maintained regular contact with clients via phone/text and arranged for different prevention commodities to be delivered to them. Lessons learned from outreach activities with KP during the COVID epidemic provided some early insights into how the new strategy on Virtual HIV Services can work when face-to-face contact is limited, by choice and/or by mandate.

Recommendations

Highest Priority

Sufficient funding. NSACP needs to ensure HIV/STI prevention services for KP are sufficiently funded to reflect its priority status in the national strategy and to improve the coverage of these services. This includes the full range of prevention activities relevant in Sri Lanka, including but not limited to:

1) Consistent promotion and distribution of condoms and lubricant with uninterrupted supply sufficient to meet need/demand;
2) Effective prevention messaging and counselling by well-trained and well-supported personnel in outreach and facility-based programmes;
3) Properly staffed and supported outreach programmes that can effectively reach and provide services to clients;
4) Ready availability of PrEP in conjunction with the targeted counselling and support for populations who are likely beneficiaries; and
5) Effective treatment programmes, including early/rapid initiation and strong retention counselling and support.

Tailored prevention approaches. NSACP and the provinces should work together to tailor prevention approaches to districts based on need and capacity. For example, Table 3 uses the PSE data presented in Table 2 (above) to prioritize "high intensity" approaches (H) for specific populations in specific districts. In addition, Colombo, Gampaha, Galle and Kandy are "high intensity" districts based on the number and size of key populations in each district. Clinic and outreach capacity can and should be considered as well; for example, in Colombo and Gampaha, the combined capacity of STD clinics and NGO/CBO partners enables those districts to implement robust, high-intensity prevention approaches (e.g., the full range of outreach activities and clinical services). In medium-intensity districts, outreach activities could be scaled back (e.g., no DIC due to lower need/demand) and in low-intensity districts, outreach could be limited to focused in-person for the priority KP and virtual/online activities. However, in all districts, high-quality, accessible services should be available at the STD clinic, including PrEP. Clinics could also develop proactive approaches to sexual health such as regular medical checkups.

Table 4 District wise prioritisation framework for intervention

Intensity	District	FSW	MSM	MSW	TG	PWID	BB	Outreach	Clinic
High	Colombo	H	H	H	H	H		In-person, virtual; mobile services; DIC; NGO/CBO; KPU; PHI	Quality, accessible services; PrEP
	Gampaha	M	H	H	M	M	M		
	Galle	M	H	H	M	M	H		
	Kandy	M	M	M	M				
Medium	Anuradhapura	M	M	M				In-person; virtual; mobile services; NGO/CBO; KPU; PHI	Quality, accessible services; PrEP
	Ratnapura	M	M						
	Kaluthara		M	M	M		M		
	Kurunegala		M	M					
	Puttalam		M	M			M		
	Hambantota			M					
	Nuwara			M					
	Jaffna		M						
	Kegalle		M						
	Matara		M						
	Polonnaruwa		M						
	Trincomalee					M			
Low	Other districts							Limited/focused in-person; virtual; PHI	Quality, accessible services; PrEP

Local knowledge. Developing tailored prevention activities for individual districts will require having good knowledge of the local situation, which may include conducting a local PSE for different key populations, identifying and understanding existing/emerging risk factors and risk behaviours in the populations, identifying and understanding the barriers these KP face in accessing HIV/STI services. Better local knowledge will enable implementers, including STD clinics and CBOs working with KP, to do more precise planning (i.e., microplanning) and more targeted interventions, which should contribute to improvements in the reach and coverage of prevention activities.

Specific circumstances and needs of KP. As part of being sensitive to the local situation, prevention activities at STD clinics and through outreach programmes must be implemented in ways that address the specific circumstances and meet the specific needs of KP. For example, 1) ensure stigma and discrimination does not limit or disincentivize KP engagement with critical prevention services; 2) engage CBOs to deliver outreach HIV/STI services to KP in line with international best practices; and 3) continue and expand the use of effective approaches to provide HIV/STI services to KP such as virtual services, condom dispensers, mobile clinics, drop-in centers, safe spaces, community-based testing and self-testing.

Quality of services. Provincial Health Authorities and NSACP need to actively and urgently collaborate on targeted initiatives to improve the quality of services provided in government STD clinics for all clients, including KP. The quality of services can determine if and how those services are used and sustained improvement in the quality has the potential to increase the usage and effectiveness of the services. Critical factors that must be addressed include stigma and discrimination, wait times (for appointments and test results), client relations, responsiveness to client feedback and accountability. The productive integration of activities implemented by CBO partners should also be a priority, given their role serving clients and connecting them with clinics. Better performing clinics should also consider offering more proactive services for sexual health; for example, as mentioned above, regular medical checkups.

High priority

Technical and financial support for CBOs. NSACP should develop and implement a programme to provide the necessary technical and financial support to CBOs for them to play an active and sustained role in HIV/STI activities focused on KP. This programme will require the Government of Sri Lanka to commit resources to strengthen and maintain a results-driven civil society infrastructure. However, rather than build capacity within NSACP to support the participation of CBOs in HIV/STI activities, it may be preferable to work with an established, national nongovernmental organization that can provide the regular operational and implementation assistance that enables CBOs to do their work with KP.

Relationships between STD clinics and CBO partners. NSACP should review the structure and operation of the relationships between STD clinics and the CBO partners that are providing outreach services to identify ways to improve the overall performance of KP prevention programmes. For example, a shift away from an adversarial relationship to one of mutual accountability could reinforce the fact that both parties do essential tasks and that a positive collaboration is critical to success. This review should also consider related issues such as the availability of space for CBO staff in and/or near clinics and streamlined reporting and cross-reporting systems and procedures.

Integration of HIV/STI prevention. Prevention activities for HIV and other STIs among KP should be fully integrated to help reduce the overall incidence and prevalence of all sexually transmitted infections in the country. This includes messaging, risk assessments, counselling and availability of prevention commodities in outreach and facility programmes. As an adjunct to primary prevention, NSACP should explore opportunities to introduce rapid testing for other STIs.

SD 1.2: Prevention of transmission of HIV/STI among vulnerable groups - including returnee migrant workers, armed forces and police personnel, tourist industry workers

Migrant workers

A significant proportion of people living with HIV have a history of external migration[9]. Migrant workers have been identified as a group vulnerable for HIV/AIDS due to the possibility of relationships that may place them at higher risk of HIV while away from home. According to the NSP 2018, the recommendations are, to explore new strategies for effective approaches to encourage voluntary HIV testing among returnee migrants including making available self-testing HIV kits and to ensure all testing data from aspiring migrants from laboratories that conduct tests are provided to NSACP[10].

Pre-departure training programmes are being conducted by the Sri Lanka Foreign Employment Bureau (SLFEB) for first-time migrant workers since 2007, with STD/HIV training incorporated into the training programme. Training curriculum on HIV for migrant workers was reviewed and updated in 2016. Last TOT programme has been conducted in 2017.

HIV testing is conducted for all migrant workers for purposes of visa. Testing is conducted in medical facilities of the private sector that are identified by the visa services of each country. If the screening test becomes positive, the applicants are referred to the NSACP for confirmatory testing. However, the reporting of data from the screening centers to NSACP is not satisfactory. There is no legal binding for the screening centers to report, and therefore, it happens largely on good will basis.

For returnee migrants there are no programmes developed at present for HIV testing. There are plans to direct the returnee migrants to the Healthy Lifestyle Clinics (HLC) and conduct HIV testing along with the other screening activities conducted there. Development officers attached to the Divisional Secretariats of each division are already involved in providing services to returnee migrants and their support can be obtained for identification of returnee migrants and directing them to the HLCs.

Gaps identified

Whilst the HIV training of migrant workers seem to be institutionalized to the SLFEB programme, the collaboration with the NSACP seemed to have waned off during the recent years. The need for periodic review and updating of the training curriculum, conducting refresher training for the instructors and reviewing and ensuring the quality of the educational sessions conducted are some of the areas that need to be addressed.

[9] National STD/AIDS Control Programme of Sri Lanka, Annual Report, 2019
[10] National STD/AIDS Control Programme of Sri Lanka, National Strategic Plan 2018-2022

The system for reporting pre-departure HIV testing data to NSACP, is weak and does not function properly. Only some screening centers comply with the reporting in a timely manner. There is no mechanism yet for HIV testing of returnee migrant workers.

Tri-forces and police personnel

HIV prevention interventions for the tri-forces have been identified as a priority area in the NSP considering their vulnerability factors. Awareness of HIV prevention, HIV testing services and promotion of safe sexual behaviours are the key strategies identified. Sri Lanka Army, Sri Lanka Air Force and Sri Lanka Navy are having HIV awareness and testing programmes which are well institutionalized. HIV/AIDS prevention is included in the basic and in-service training pogrammes. NSACP conducts training-of-trainers programmes for instructors of training centers, public health personnel and peer leaders of the Tri-forces. HIV testing is conducted on recruitment and on designated milestones in their career. There are collaborations between the peripheral camps of the tri-forces and peripheral STD clinics in conducting some of the training programmes, but this is largely dependent on how well the intersectoral coordination occurs at district level. HIV testing data is reported to NSACP. Condoms are supplied to the tri-forces by the NSACP and condom wending machines are installed in the camps.

Tri-forces personnel who return after serving in the UN Peace-keeping Forces are identified as a group vulnerable for HIV due to their prolonged stay out of the country. National Strategic Plan of 2018-2022 recommends to continue HIV testing among UN peacekeeping forces on their return to Sri Lanka and report data to NSACP so that it is included in the national database[11]. Prior to departure HIV testing is carried out as per UN recommendations. Upon arrival, HIV testing is carried out twice – initially at the airport immediately on arrival and after three-months. Testing coverage is 100% for the on-arrival testing and about 60% for the three-month testing. Tracking down the personnel after being posted to different stations, is the main reason for low coverage at three months. The data related to testing of UN Peace Keeping Force returnees are not separately reported to the NSACP.

Training programmes on HIV/AIDS have been conducted for the Police officers, either as 2–3 day programmes or as part of other in-service training programmes. The inputs on HIV/AIDS are incorporated in to most in-service training programmes like domestic violence prevention and gender-based violence prevention conducted for police officers.

Tourist industry workers

Tourist industry workers such as hotel workers and tour guides are identified as a vulnerable group due to their close contact with tourists and the increased probability of having sex with casual partners, which increase their risk of contracting sexually transmitted infections including HIV/AIDS. Country's popularity for sex tourism also has been identified as a risk factor which could potentially increase the rate of HIV transmission within the country. Programmes have been formally conducted in the tourism sector in collaboration with the Sri Lanka Tourism Development Authority since 2016. Sri Lanka Institute of Tourism and Hotel Management (SLITHM) is the educational institute which conducts training courses related to the hotel industry in nine schools of tourism in different parts of the country. Training-of-trainers programme for instructors of SLITHM have been conducted as 2-day workshops in 2016, 2017 and 2018. with the aim of incorporating inputs on HIV/AIDS prevention to

[11] National STD/AIDS Control Programme of Sri Lanka, National Strategic Plan 2018-2022

the young professionals entering the tourism industry following the training programmes conducted at the tourism schools. However, there were no activities on the tourism sector after 2018. There is no mechanism to follow up on the implementation of the HIV-related activities in these training programmes.

A STD/HIV risk assessment was conducted among tour guides in 2017 and based on the findings, a training programme was conducted to train 80 tour guides in 2018.

Recommendations

Highest priority

NSACP needs to strengthen its collaborations with the Tri-forces and ensure that the coverage of HIV testing at 3 months follow up for returnees of UN Peace Keeping Forces is 100%.

Establish a system to direct returnee migrants to Healthy Lifestyle Clinics and provide them services for HIV testing there. Development officers attached to the divisional secretariat offices and the field health staff of the MOH can be used to identify returnee migrants in the community and to direct them to the HLCs. The Sri Lanka Bureau of Foreign Employment desk at the airport can be used to provide information about the HLC to returnee migrant workers.

Moderate priority

NSACP needs to collaborate with SLFEB and the Private Health Services Regulatory Council to establish a functioning system to obtain data on HIV testing of out-bound migrants. It is important to ensure that there is a legal binding to comply with the reporting

Training curricula of the pre-departure HIV training needs to be reviewed and updated. Refresher training for the instructors needs to be conducted regularly.

NSACP should collaborate with the tri-forces to strengthen the reporting mechanism to receive all data on HIV testing in a timely manner.

Continue the training-of-trainers programmes for tri-forces and police personnel and periodically review training curricula, training material and the progress of the HIV prevention measures conducted by the trained trainers.

Develop collaborations with the Sri Lanka Institute of Tourism and Hotel Management and other private sector tourism institutions and ensure that HIV/AIDS training is conducted in all training programmes, develop a mechanism to periodically review the HIV/AIDS training conducted in the tourism schools, to periodically conduct refresher training for trainers and update the training content and material.

SD 1.3: Prevention of transmission of HIV/STI among general population including young people

Percentage of young adults (15-24 years) among reported HIV infections in Sri Lanka has been around 10% over the period of 2015 -2018 and it was 12% in 2019[12]. When considering the longer time frame from 2003, there is a slight upward trend[13]. Creating awareness on HIV/AIDS and safe sexual practices among youth is identified as a priority area by the NSACP. According to the NSP 2018-2022, it is recommended to increase awareness of HIV/STI among young people through multiple means including social media apps and to conduct special awareness programmes on HIV/AIDS/STIs with students of schools and universities[14].

A Youth Steering Committee is established under the National AIDS Council to guide the HIV prevention programmes in young people. Different strategies are used by NSACP to access the youth to impart knowledge of HIV prevention. Youth Corp, National Youth Council, Vocational Training Institutes and universities are some of the settings identified. National Youth Corp operates in 60 training centers throughout the country, conducting soft skill development programmes among young people. Annually about 20000 – 30000 youth are trained in these institutions. Sexual health and HIV prevention is incorporated into the training curriculum and a half a day session is currently allocated for HIV prevention. Trainers at the Youth Corp have been trained in TOT programmes conducted in 2017 and 2018 and IEC material has been developed. The training programmes have increased the students' awareness, however, they have many doubts, queries and psychological issues related sexual health and HIV, hence more services are needed. Awareness on the availability of services, a mechanism to obtain information as and when they need, like a helpline, use of more youth-friendly educational platforms like social media are some of the identified needs of the youth.

A research study was conducted in 2018 to assess the level of knowledge, attitudes and practice related to HIV and sexual health among 15-24-year-old Youth Corp members prior to the training programmes, which revealed many gaps in STD/HIV related knowledge and practices in the general youth population and highlights the need for stronger awareness programmes for youth.

National Youth Services Council (NYSC) also collaborates with the NSACP in providing HIV/STD prevention training to young persons. Officers of the NYSC have been trained in two-day TOT programmes in 2018 and 2019. They are expected to carry out training programmes for the members of the organization. Although the trainers from the Youth Corps and NYSC have undergone training, they still seem to lack capability to conduct HIV/STD prevention training programmes. It is reported that the trained instructors are neither comfortable nor confident in delivering the content related to STD/HIV prevention, therefore, they tend to invite resource persons from the STD clinics or MOH offices to deliver these sessions [15].

Universities and vocational training institutes are also identified as important access points to deliver HIV related programmes for the young population. There are no formal collaborations between NSACP and universities in providing HIV/STD-related training to university students. However, HIV/STD awareness programmes are conducted in universities, sometimes on invitation, during the orientation programmes of students. Training programmes for university student counsellors have

[12] National STD/AIDS Control Programme of Sri Lanka, Annual Report, 2019
[13] National STD/AIDS Control Programme of Sri Lanka, Annual Report, 2017
[14] National STD/AIDS Control Programme of Sri Lanka, National Strategic Plan 2018-2022
[15] Family Health Bureau, Ministry of Health, National Strategic Plan on Adolescent and Youth Health 2018-2025

also been conducted in some universities during the last four years. Recently, an e-learning module on SRH and STD/HIV is being developed targeting university students. Advocacy programmes have been conducted for the officials of the University Grants Commission and vice chancellors. It is planned to incorporate this module to the orientation programme of all university students. However, due to unavailability of funding this programme has not been completed. There are no activities by NSACP on any training done in vocational training institutes, during this period.

Adolescent and Youth Health Unit of the Family Health Bureau is engaged in sexual and reproductive health related activities in adolescent population with the support of the NSACP. The National Strategic Plan on Adolescent and Youth Health identifies sexual and reproductive health (SRH) as a priority area. SRH services are provided through the Medical Officer of Health (MOH) system, where the field health staff are conducting SRH education sessions for youth and adolescents at field level. TOT programmes have been conducted in vocational training institutes and inputs on SRH are included into the training curricula of these institutions. At MOH level public health inspectors are also mandated to conduct SRH training in youth training centers in their respective areas.

'Yowun Piyasa' youth-friendly health services have been in operation for many years, however, there was poor utilization of the hospital-based centers. At present, each MOH is expected to conduct one *'Yowun Piyasa'* clinic per month and SRH related education, counselling, medical services and referral and condom provision are made though these clinics. However, the uptake of *'Yowun Piyasa'* clinics by the MOHs is poor still and the other adolescent health activities of the MOH are hindered by the Covid-19 pandemic.

NSP 2018-2022 has recommended to conduct a national SRH Survey among young people between 15-24 years to better understand their current sexual behaviours, drug taking behaviours, gender-based violence and knowledge of HIV/STI transmission and prevention. One of the outcome indicators specified in the NSP is a 60% increase in the percentage of young people 15-24 yrs who know the correct ways of HIV prevention compared to a baseline value of 24%. This data is expected to be generated through the Youth Health Survey, which was last conducted in 2012/13.

A National Communication Strategy (NCS) on control and prevention of STI/HIV/AIDS has been developed by NSACP, which serves as an important initiative for raising awareness among the general population and reaching out to a wide audience. NCS focuses on three main approaches - routine communication activities (carried out by NSACP programme units and clinics), peer-led targeted interventions and use of mass media and social media.

Gaps identified

Trainers and instructors of the youth training centers are not comfortable and confident in teaching HIV/STD related topics.

Several youth training institutions have been identified as access points to reach the young people and collaborations are made with these institutions in incorporating HIV/STD related inputs to their curricula. However, the mechanism is not well-established to monitor and review these programmes periodically and revise and update them.

Implementation of the National Communication Strategy is hindered by the lack of funding.

SRH and STD/HIV related inputs are not formally included in to the university system. E-learning platform on SRH targeting university students, has not been completed due to lack of funding.

There is a well-planned mechanism in the public health system to provide SRH awareness and primary prevention inputs on HIV/STD to youth and adolescents. However, this system is not functioning to its optimum level and is generally not given priority in the MOHs.

Recommendations

High priority

District AIDS Committees should be used as a platform to strengthen the collaborations between peripheral STD clinics, MOH offices and youth training centers to ensure the health sector inputs for the HIV/STD-related training conducted in these training centers.

Strengthen the collaborations between the public health system and STD clinics in implementing HIV/STD prevention activities at the MOH level. STD clinics need to provide capacity building for public health staff in the district on HIV/STD prevention. Primary prevention activities at the district level can be conducted as collaborative activities and the progress of these can be evaluated at the monthly conferences of MOH and the district AIDS committee meetings.

Moderate priority

Strengthen the Youth Steering Committee of the National AIDS Committee and use it as a forum to monitor and review the progress of youth HIV prevention programmes conducted in collaboration with multi-sectoral partners.

TOT programmes for trainers in youth training and educational centers should incorporate more skills building inputs and hands-on training sessions to enhance the confidence of the trainers.

E-learning platform developed to deliver SRH knowledge to university students should be completed and implemented as a mandatory component of orientation programmes.

Youth-friendly platforms and mechanisms should be used more extensively to provide information on HIV/STD and SRH in general to the young population. Use of social media and mobile applications and a helpline to provide SRH counselling are recommended.

SD 1.4: Prevention of transmission through infected blood

The National Blood Transfusion Service (NBTS) is responsible for the provision of blood and blood products to all state hospitals in the country. Some private hospitals that are registered under the NBTS, also receive blood and blood products from them. Blood collection is entirely from voluntary, non-remunerated donors. Donor blood collected by NBTS is tested for HIV, Hepatitis B and Hepatitis C using standard testing. Blood samples, in which the HIV ELISA test becomes reactive, are sent to the NSACP for confirmatory testing. Donors identified as HIV positive are referred to the NSACP for management and care. HIV positivity rate in donor blood has remained at or below 0.01% from 2012 through 2019 (Annexure V).

Private hospital blood banks collect about 10% of the national blood collection. Almost all private hospital blood banks are registered with the NBTS since they are receiving blood and blood products from them. Private hospital blood banks generally operate under the supervision of a consultant in transfusion medicine working in the private sector either full-time or part-time. HIV testing is conducted on the collected blood, however, the testing process used is not accredited. NBTS has no authority over the private hospital blood banks, to ensure the quality of the testing process.

The NSP of 2018-2022 recommends the following, with regard to prevention of transmission through infected blood: 1) Ensure that all blood banks are registered with the NBTS; 2) Continue testing all blood and blood units for donation throughout Sri Lanka. The recommendation to have all private sector blood banks registered with NBTS is only partially achieved since there is still no legal binding for the blood banks to be registered unless they obtain blood/blood products from NBTS.

There is a system for reporting HIV tests done and the numbers positive in NBTS as well as the private sector. However, only a few private hospital blood banks adhere to timely reporting.

Recommendations

- NSACP should work together with the NBTS and Private Health Services Regulatory Council to ensure that all private sector blood banks are registered with NBTS and to have provisions for NBTS to monitor the testing of donor blood in the private sector blood.
- Reporting of HIV testing from private blood banks should also be streamlined with the support of the PHSRC.

Strategic Direction 2 (SD2): Treatment, Diagnosis and Care

SD 2.1 HIV testing and counselling

As per the current HIV testing algorithm, all the reactive samples at the peripheral STD clinics are sent to National Reference Laboratory (NRL) at NSACP Colombo for confirmation either by Western Blot and or HIV-1 nucleic acid testing. This is leading to a turnaround time of about 1 week. This issue was raised during the last review and EMTCT verification.

To address this issue the NSACP has already initiated the process of decentralization of HIV testing and confirmation in the program by the introduction of three rapid tests which awaits validation studies by WHO before implementation.

The three-test algorithm is currently only used in a few teaching, national and district hospitals[16] and not in nearly 800 district and base hospitals[17]. Rapid tests are also carried out in two drop-in centers in community-based work in Colombo

To continue the testing at the STD clinic laboratories, screening by ELISA will be ideal as it is suitable for batch testing (more than 50 samples in each center/day) with available resources. The 2nd and 3rd assays used can be rapid tests. So that all the established HIV infections can be diagnosed at the testing sites and avoid transportation of the sample to NRL, thereby reducing the turnaround time. When there is a discrepancy between the three test results/or suspecting early HIV infection a second sample ideally a plasma sample should be collected and sent to NRL for confirmation by Western Blot. This plasma sample can be used for molecular testing if required in case of suspected early infection and this will again reduce the turnaround time.

All the private hospitals in the country are also following the same algorithm for HIV testing. All screening test HIV reactive samples are sent to NRL for confirmation. But there are few samples received directly at private hospitals for HIV confirmation with molecular testing but no information on the serology status of these patients are available for the testing laboratories. Currently, these data are not captured by the NASCP.

Rapid tests for HIV are carried out as a part of Community Based Testing for KPs which are available at different drop-in centers in Colombo and Gampaha. These tests are carried out by outreach workers. These individuals receive a two-day training at the NRL in rapid testing. Currently, there is no competency assessment done for these individuals following training and no certificate/ documentation issued to them following successful training. These outreach workers are also not protected from vaccine-preventable diseases like Hepatitis B and SARS CoV-2 infection. In certain situations, they are also facing a shortage of PPEs.

In CBT it is ideal to restrict the test to screening for triaging and the confirmation can be done at the nearest STI clinic or NRL if required. Currently, all the facilities wherever rapid tests are used it is restricted to HIV. However, all these key populations are at high risk for all other STIs. A study carried

[16] National hospitals (n=05), teaching hospitals (n=12). general hospitals (n=22)
[17] Base hospitals (n =760), district hospitals (n=29)

out on detection of Chlamydia among attendees at different STD clinics have shown a 17% detection rate among women and 6% among men with a higher rate of 20% among female commercial sex workers. It shows the importance of the expansion of STI diagnosis among KPs. As a priority, the testing can be initiated for HIV and Syphilis by introducing combo (dual) screening rapid assays. Currently, there is no appropriate quality control program for the rapid tests' services provided at the DIC and other facilities.

The coverage of HIV testing among these estimated KPs in these dedicated centers also required immediate attention. There are certain STD clinics in the country where > 90 % of the estimated target groups are tested for HIV but in many of the other testing centers, only 20-30% of the targeted people have undergone HIV testing.

The NSACP guideline shows the syphilis algorithm for an antenatal screen with Venereal disease research laboratory (VDRL) test as screening and using T pallidum particle agglutination

(TPPA) confirmation test. However, for the STD clinic attendees parallel testing of VDRL and TPPA are carried out at the STD clinics laboratories across the country.

Expansion of other STI testing

Currently, the NSACP program is mainly concentrating on HIV and syphilis detection. Most of the STD clinics laboratory have microscopy facilities to detect certain bacteria responsible for STIs, like *Neisseria gonorrhoeae, Trichomonas vaginalis and* clue cells for bacterial vaginosis etc. There was detailed planning carried out in 2016 to extend the gonococci culture facility across the island. The plan was to establish testing in 14 STD clinics where Medical Laboratory Technologists (MLT) services are available.

The main limiting factor for this expansion of STI testing is the availability of MLT and the workload. Therefore an improvement of human resources is of high priority in the expansion of the gonococci culture capacity. During the years there was an increase in the number of Public Health Laboratory Technologists (PHLTs) for microscopy (from 44 to 61) however the MLTs number remain the same as 44. Culturing the gonococci is of utmost importance to identify the drug susceptibility pattern to identify the emergence of multidrug-resistant Neisseria gonorrhoea in the country.

Currently, there are 5 centers wherein a gonococci culture facility is available apart from the NRL. However, the isolation of gonococci even from microscopy positive clinical samples is low. From most of the centers, wherein culture facility is not available samples are sent to the nearest STD clinic with a gonococcal culture facility or NRL. But the isolation of the organism from the transported samples was also not satisfactory. During the last few years of experience, it is found that the smear positivity rate is the same but the culture positivity rate has come down.

In the proposed plan of strengthening priority should also be given to culture all the smear-positive samples rather than culturing all the samples. This is because the microscopic External Quality Assurance Services (*EQAS)* program showed very good performance and the culture positivity of smear-negative samples was almost nil in the last two years (Except 1 all were negative). The gonococci culture system at NRL should be strengthened as well the antibiotic susceptibility testing by including the most common drug like cephalexin as planned. The Minimum Inhibitory Concentration (MIC) technique for Antimicrobial Susceptibility Testing (AST) should also be

introduced. The MIC determination will allow the direct comparison of EQAS samples received as a part of the Gonococcal Antimicrobial Susceptibility Programme (GASP).

Molecular detection of STIs like Chlamydia, HSV, Trichomonas vaginalis were started at the NRL and was doing the testing regularly. However, following the Covid pandemic the real-time PCR equipment used for these testing has been shifted for Covid testing. Molecular testing of the above organisms and GC also should be restarted.

Currently, there are GeneXpert Systems available at 31 centers for TB testing. The possibility of utilizing these facilities for molecular testing should be explored and implemented or else dedicated commercial near point-of-care (POC) testing with multiplex assays should be implemented at the STD clinics.

Following the Covid pandemic, many of the testing centers across the country are equipped with molecular testing. When the pandemic recedes the utility of this equipment for molecular testing of STD can be explored. Commercial assays after verification or in-house assays that can be validated at the NRL can be considered for the centers at the provincial level. Like HIV and syphilis, a nationwide EQAS system also should be implemented.

Infrastructure and human resources

One of the major constraints to implementing the above recommendations is infrastructure and trained manpower. Few of the MLTs have been moved out of the NRL to take care of Covid testing. The laboratory space at the NRL is a major constrain for the expansion of other laboratory tests. The current facility is not enough for the existing workload of the laboratory, including a full-fledged molecular set-up for the diagnosis and monitoring of the PLHIV and the identification of etiological agents of STIs.

The EQAS program for all the country is carried out by the NRL. While strengthening the quality of STD laboratories the NRL should have enough space and human resources for running the EQAS program. The reagents for all NSACP activities for both NRL and all the peripheral laboratories are stored in the cold room at NRL. However, there is no backup cold room available. There are instances the cold room breakdown happened and the reagents has to be shifted to refrigerators in multiple hospitals in Colombo. This applies to the storage area for other consumables. Many of the peripheral STD clinic laboratories also have space constraints especially with the plan for the expansion of STI diagnosis including gonococci culture.

The technical staff should be appropriate for the workload in all the STD clinics. There are peripheral STD clinic laboratories where in available MLT can work only for half days of the week and remaining days they are working in nearby testing centers. This part-time working of technologists further increases the turnaround time of the HIV and Syphilis test results. There are constraints in the testing system when a technologist goes on long leave as well. Even at the consultant level, especially in NRL, the manpower need should be relooked, considering the different job responsibilities involved. When the laboratory is going for accreditation the number of authorized signatories also should be appropriate.

Recently the NRL has carried out a survey on equipment available in all HIV testing laboratories. The significant findings were many of the equipment were more than 10 years old and the number

available was not appropriate with the workload. It is important to look at the redistribution of the equipment as per the workload and also to replace the old equipment.

Quality assurance

There is an initiative to improve the overall quality of the laboratory at the NRL and peripheral laboratories. There is a national EQAS program conducted by NRL for the peripheral STD clinic laboratories for HIV, Syphilis and Microscopy. The performance of the participating laboratories is good. The NRL is participating in the international EQAS program and the performance is very good. The NSACP has carried out multiple training programs to improve the quality of the testing system and technical competence in the last few years. The EQAS should be done for all the tests and NRL should get accredited with ISO 15189: 2012 and another provincial laboratory at Galle, Kandy and Anuradhapura also should initiate the process of accreditation. Currently, there is no EQAS for viral load (n = 2) and CD4 testing (n=9) available at the STD clinic laboratories.

Establishment of new tests

It is important to screen all HIV positive individuals and individuals who are at risk attending STD clinics and IV drug users for Hepatitis B and C infections. Generally, the HBV and HCV screening and confirmation is carried out by the Medical Research Institute (MRI) at Colombo. All the samples from peripheral STD clinics for these screenings are sent to MRI. But recently some of the STD clinics have started to send the samples to NRL and they have started doing the testing. However, they have not started the testing as a program since it takes a few years for the procurements of the kits and for all the referral samples to be tested. All the STD clinic laboratories have got the ELISA system in place and if they can establish the testing at the peripheral laboratories itself it will be easier for the patients.

Cervical cancer screening is currently done by PAP smear at 28 STD clinics. At the remaining 13 clinics, the women must travel to nearby STD clinics or the gynae-obstetrics facility available. It is important to start HPV molecular testing because of several reasons:

a. The current WHO recommendation is to use HPV DNA detection as the primary screening test rather than VIA or cytology for both the general population and PLHIV.

b. WHO is planning to eliminate cervical carcinoma by 2030 and towards this they have initiated a strategy of 90-70-90. According to its last annual report, the third important STI identified is genital warts. It is important to have HPV molecular testing to find the aetiology of these warts. Many private hospitals are currently providing testing for HPV.

Testing at blood banks

104 blood banks are functioning under the NBTS Sri Lanka in 24 clusters. Among these 18 have a testing facility. Apart from these, there are about 5 private blood banks in Sri Lanka. All these donations are screened for HIV, Hep B, Hep C, Syphilis and Malaria. In the year 2020, there are about 397833 donations. The HIV /HBV/HCV screening is carried out using ELISA or CMIA technology. Among the 533 samples which were reactive for HIV at the blood bank, 34 were confirmed at NRL as positive. There were 900 samples reactive in VDRL testing. The screening data from the 5 private blood banks are not available for the NBTS or to NSACP.

M.TB and HIV co-infection

All PLHIV undergo 4 symptom screenings for TB at the time of registration and also during a visit to the facility. INH is provided for those among whom active TB has been excluded. A chest physician visits the ART center at NSCAP every Wednesday but is available on other days at the chest clinic, sometimes nearly 2 km away. This is a potential area of linkage loss for HIV TB co-infected and there is already a gap of 9% in HIV testing coverage that needs to be reduced.

ART is initiated for all HIV and TB co-infected persons after two weeks of ATT. However, available data reveals that out of 36 HIV TB co-infected persons in 2019, only 15 got ART and only one got Cotrimoxazole Preventive Therapy. A similar pattern was seen in 2020.

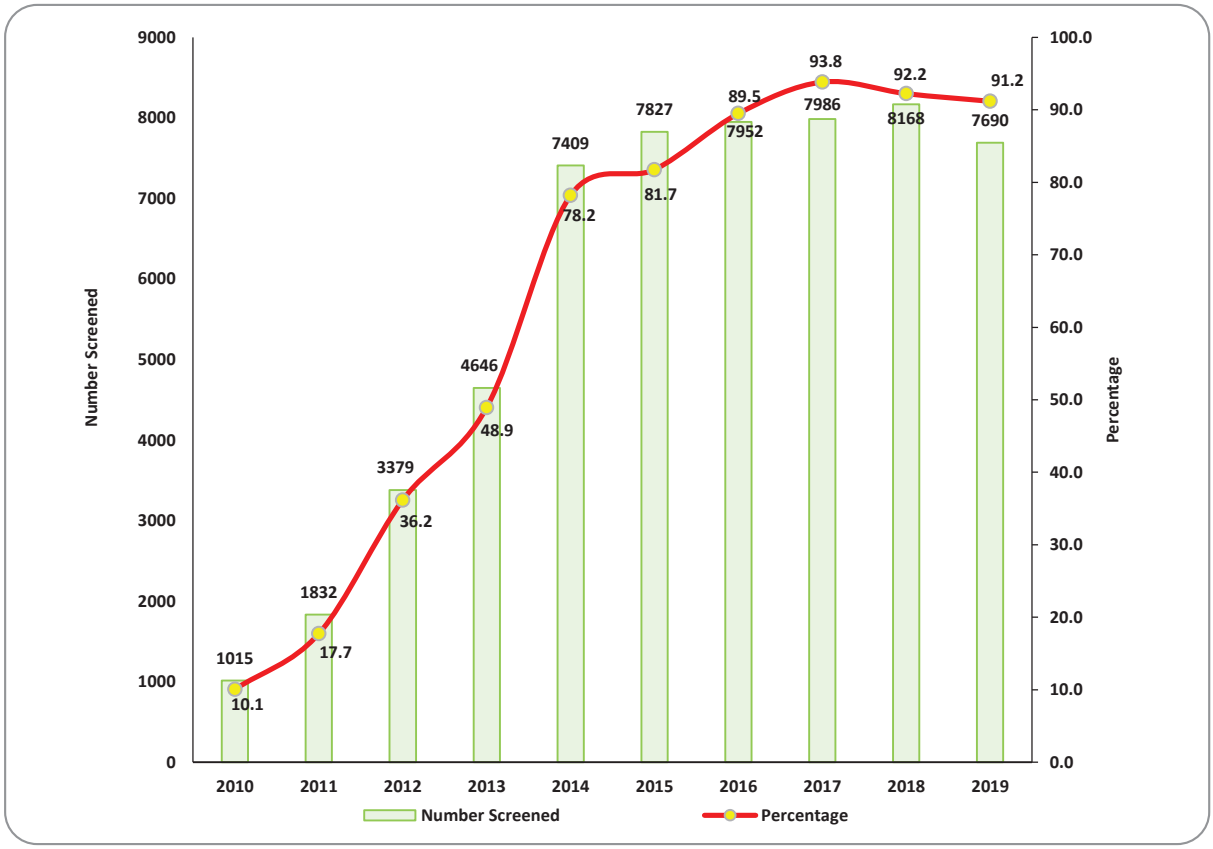


Figure 7: TB HIV screening data 2010-2019

Table 5: HIV-TB coinfection by district

TB - HIV Coinfection By District – 2020			
District	**TB patients found screened for HIV**	**Referred from NSACP**	**No. of total Coinfection cases**
Anuradhapura	0	1	1
Batticaloa	0	1	1
Colombo	0	5	5
Galle	0	1	1
Gampaha	6	3	9
Kegalle	0	1	1
Kurunegala	0	1	1

TB - HIV Coinfection By District – 2020			
Nuwara Eliya	0	3	3
Puttalum	0	3	3
Ratnapura	0	1	1
Hambantota	2	0	2
Jaffna	1	0	1
Kalutara	1	0	1
Monaragala	1	0	1
Polonnaruwa	1	0	1
Trincomalee	1	0	1
Total	13	20	33

Progress on EMTCT

In 2019 Sri Lanka became the fourth country in the SEARO region declared by the Global Validation Committee (GVAC) of the WHO, to eliminate mother-to-child transmission (EMTCT) of HIV and syphilis. It was important for the country to sustain its status in the subsequent years. In 2020 there were sixteen (16) women living with HIV who delivered. Among these, 10 were identified during the antenatal screening. The remaining 6 were known women with HIV who became pregnant while on ART. All 16 infants were started on antiretroviral prophylaxis soon after delivery and DNA PCR testing was carried out regularly and all were found to be negative. In the year 2020, three children were identified with HIV infection. Their age ranged from 3 to 6 years. Among these, two children were born before the establishment of EMTCT services in these districts and the third mother was negative for HIV in her early pregnancy.

Table 6: Impact indicators of EMTCT

	Target	2020 (numerator/ denominator)	2019 (numerator/ denominator)	Data sources
HIV MTCT rate by birth cohort	<2%	0% (0/16*100)	0%(0/16*100)	NSACP
Annual rate of new paediatric HIV infections	≤ 50	0 (0/16)	0(0/16)	NSACP/ RGD
Annual rate of congenital syphilis cases (including syphilis- associated stillbirths) per 100,000 live births	≤ 50	0.7 2/301,706	1.7 5/319,010	NSACP/ RGD
HIV mother-to-child transmission (MTCT) rate by birth cohort	<2%	0% (0/16*100)	0%(0/16*100)	NSACP

Table 7: Process indicators for EMTCT

	Target	2020 (numerator/ denominator)	2019 (numerator/ denominator)	Data sources	
ANC1 coverage (government sector)	> 95%	99.7% (331,027/ 331,877)	96.3% (338,000/350,911)	NSACP/ RGD	ANC1 coverage (government sector)
HIV testing coverage of pregnant women	> 95%	96.9% (321,445/ 331,877)	95.2% (333,964/350,911)	NSACP/ RGD	HIV testing coverage of pregnant women
Syphilis testing coverage of pregnant women	> 95%	96.9% (321,501/ 31,027)	98.9% (334,275/338,000)	NSACP/ RGD	Syphilis testing coverage of pregnant women
HIV treatment coverage of pregnant women	> 95%	100%(16/16)	100%(16/16)	NSACP	HIV treatment coverage of pregnant women
Syphilis treatment coverage of pregnant women	> 95%	97.2%(35/36)	95.1%(39/41)	NSACP	Syphilis treatment coverage of pregnant women

Source: NSACP data

Other issues

Currently, an electronic information system is available in the country wherein registration of the STD clinic attendees is happening. Following sample collection, all the information is documented manually. A laboratory information system (LIS) is not currently available to manage the laboratory data and reporting system across the country. This information system should be able to run the EQAS program in a better way also maintain the inventory of kits and consumables for the program.

Currently, about 30% of the PLHIV on treatment in each STD clinic are not showing viral suppression despite repeated viral load testing. Individual labs during their presentation have shown that the viral suppression among those under care varies from 55 to 82%.

In these individuals, the treatment regimen has been changed following HIV-1 drug resistance testing. Currently, these tests are outsourced to India. Since the number of individuals showing drug resistance is on the rise it is ideal to start the drug resistance at the NRL, NSACP.

Most of the diagnostic tests for STI and monitoring tests are becoming molecular. Currently, these tests are carried out by MLT. However, in their curriculum at the council, there is no teaching program for molecular testing. This year onwards the Government is going to stop the MLT course by the council and subsequently, the eligibility criteria for the technologist post will be a University degree or post-graduation in the appropriate subjects. Then it is important to give adequate training to the existing MLT staff in molecular testing

Procurement of reagents is taking a long time. The forecasting of the reagents needs to be done 2 years before the requirement to avoid delays.

Recommendations

Highest priority

- Decentralization of HIV testing by the introduction of three rapid tests or One ELISA test with two rapid tests based on facilities following WHO verification is required to provide same-day results. A quality control program for rapid tests needs to be implemented. Whenever there is a discrepancy at the peripheral laboratories between three tests a plasma sample should be sent to NRL for confirmation, either by Western Blot and or molecular testing to reduce the turnaround time.
- The Community Based Testing should be provided across the country or extended to 10 additional districts, where about 81% of the key population are residing. The testing should not be restricted to HIV but the feasibility of including syphilis and other STIs should also be explored by introducing combo testing (duo- HIV and syphilis) or Quadro testing (HIV, Syphilis, Hepatitis B and Hepatitis C). A quality control program for these rapid test services should be established.
- Immediate steps are needed to implement the plan for expansion of gonococci culture in peripheral STD clinic laboratories. The quality of isolation of gonococci and transport of samples needs to be given preferable importance by the NRL. If there is an issue with the availability of resources, then only the smear-positive samples should be attempted for culture. All these isolates should undergo appropriate antibiogram including cephelexin with existing methodology and MIC determination.
- Decentralization of other STI diagnoses at the peripheral laboratories should be done by introducing available near POC testing with multiplex assays. The utility of existing GeneXpert Systems in 31 TB testing centers or the recently established molecular system for SARS CoV-2 testing (when the pandemic recedes) should be explored. The utility of these systems for HIV-1 viral load testing also needs to be looked into.
- There should be an effort to start HPV molecular detection considering the WHO strategy of 90-70-90 towards cervical cancer elimination and to identify the etiological agent of genital warts.
- Since there are many PLHIV under care showing treatment failure, it is important to establish a genotypic HIV-1 drug resistance testing in the country at the NRL, rather than outsourcing.
- WHO is targeting hepatitis elimination as a public health problem and also the elimination of mother-to-child transmission.
- All the STD clinic laboratories have got the ELISA system hence Hepatitis B and C screening at these centers can be started for both ANC attendees and high-risk groups like Key Population with adequate quality control measures.
- EQAS for viral load testing and CD4+ T cell estimation at the peripheral STD laboratories should be immediately implemented by the NRL.

High priority

- The infrastructure at many of the laboratories needs improvement, especially for the expansion of STI lab services like gonococci culture.
- The NRL should establish a full-fledged molecular set-up for the diagnosis and monitoring of HIV infected individuals and the identification of the aetiology for other STIs.

- For the efficient running of the national EQAS programs for HIV and other STIs NRL should have adequate space. The storage of reagents and consumables that are being used for NSACP activities for both at NRL and all the peripheral laboratories are stored in the cold room and storage area at NRL. To avoid any wastage of these kits and consumables backup facility is needed.
- The technical staff should be appropriate for the workload in all the STD clinic Laboratories. There are several laboratories including NRL that need more manpower. Additional manpower should be provided at the peripheral STD clinic laboratories where an expansion of STI testing service is planned. Even at the consultant level especially in NRL the manpower should be increased looking at the different job responsibilities involved like diagnostic services, National EQAS program, training and administration.
- The NRL should get accredited with ISO 15189: 2012 with SLAB and other provincial laboratories like the ones at Galle, Kandy and Anuradhapura should initiate the process of accreditation. After the accreditation with ISO 15189:2012, the NRL should also get accredited with ISO 17043:2010 since they are the PT provider for the STD laboratories across the nation.
- The turnaround time for the procurement of test kits should be minimized since this has a direct impact on the new services being initiated and also to avoid unnecessary stock-outs of existing tests.
- It is important to establish a laboratory information management system (LIMS) to manage the laboratory data with access across the country for laboratory test reporting, EQAS and inventory management. If a laboratory module is already available in the recently developed EIMS that should be available for the NRL and other peripheral laboratories for its use.

Moderate priority

- The training program for outreach workers at the DIC should also include biomedical waste management. Competence assessment should be done for these individuals after training and a certificate should be issued following successful training. These outreach workers also should be given immunization against Hepatitis B and SARS CoV-2.
- Information/data on samples received directly for HIV confirmation at private laboratories for molecular testing should be captured by the NSACP.
- The screening data from the 5 private blood banks should be available to the NBTS or NSACP. The blood banks should aim for accreditation.
- The NSACP should look at the gap in HIV testing (9%) among M TB infected patients and if required rapid testing should be introduced in chest clinics where there is difficulty in getting HIV tests done.
- The syphilis algorithm followed among STD clinic attendees needs to be incorporated in the national testing guidelines as it uses parallel testing with VDRL and TPHA.
- Incorporating molecular testing in the curriculum of MLT / University courses gives adequate training to the existing MLT staff in molecular testing.
- The availability of dedicated counsellors needs to be explored to enhance treatment adherence and reduce the number of those lost to follow up.

SD 2.2: ART Services

Sri Lanka has a very low prevalence of HIV and the first case of HIV in Sri Lanka was detected in 1986. As of now, there are an estimated 3719 PLHIV in the country. Nearly 2612 of these know their status, which translates to 70 % in terms of the first 90 of the 90-90-90 targets. Around 58% of estimated PLHIV are on ART and 27% of all estimated PLHIV are virally suppressed.

The antiretroviral treatment programme was initiated in November 2004. Presently, there are 30 ART centers in the country - 29 in STD clinics in 25 Districts and one at IDH (National Institute of Infectious Diseases), which currently is a COVID hospital (Figure 8). The Colombo district has four centers--NSACP central clinic, Kalubowila, Awissawella, Homagama and IDH hospital.

The ART programme is fully integrated with STI services. ART services are also available once a week at an additional 11 base hospitals through weekly visits of a consultant venereologist. Not all base hospitals in the province have STD clinics at the moment. In view of a new DTG-based robust ARV regimen, it is recommended to expand/ decentralize ART services (STD clinics) to all base A and B hospitals, especially in the western province, for purpose of provision of drugs nearer to patients residence. This will increase adherence and reduce chances of loss to follow up.

Figure 8: ART Services in Sri Lanka, Source: NSACP[18]

[18] National STD/AIDS Control Programme (NSACP) - Sri Lanka, "Annual Report 2020," National STD/AIDS Control Programme Sri Lanka, 2020, https://www.aidscontrol.gov.lk/images/pdfs/publications/annual_reports/Annual-Report-2020_NSACP-on-line.version.pdf.

Colombo HIV clinic had the highest number of PLHIV receiving ART followed by Ragama, Kandy, Kalubowila, IDH, Kurunegala, Galle, Kalutara, and Matara. These nine clinics provide services to over 80% of all PLHIV on ART. A snapshot of the number of PLHIV in HIV care during 2020 is given in Table 8 below.

Table 8: PLHIV on ART across Sri Lanka 2020

	Name of the STD clinic	No. in HIV care	Lost to Follow Up	Dead	Total	% of Lost to Follow Up
1	Ampara	1	-	-	1	0.0
2	Anuradhapura	45	2	10	57	3.5
3	Avissawella	5	-	-	5	0.0
4	Badulla	26	-	4	30	0.0
5	Balapitiya	8	-	-	8	0.0
6	Batticaloa	11	1	-	12	8.3
7	Chilaw	31	5	6	42	11.9
8	Colombo	990	246	255	1,491	16.5
9	Gampaha	52	8	1	61	13.1
10	Hambantota	23	2	1	26	7.7
11	NIID (IDH)	88	9	36	133	6.8
12	Jaffna	40	1	10	51	2.0
13	Kalubowila	104	18	7	129	14.0
14	Kalutara	59	8	3	70	11.4
15	Kandy	113	9	16	138	6.5
16	Kegalle	34	1	4	39	2.6
17	Kilinochchi	1	-	-	1	0.0
18	Kurunegala	77	9	6	92	9.8
19	Mahamodara	65	19	14	98	19.4
20	Matale	23	1	1	25	4.0
21	Matara	53	-	1	54	0.0
22	Monaragala	7	-	1	8	0.0
23	Negombo	45	11	2	58	19.0
24	Nuwara Eliya	8	2	1	11	18.2
25	Polonnaruwa	31	4		35	11.4
26	Ragama	230	47	47	324	14.5
27	Ratnapura	36	5	6	47	10.6
28	Trincomalee	10	-	1	11	0.0
29	Vavuniya	11	-	1	12	0.0
30	Wathupitiwala	4	-	-	4	0.0
	Total	**2,231**	**408**	**434**	**3,073**	**13.3**

Source: NSCAP annual report 2020

This shows a high percentage of patients being lost to follow (13.3%) and around 14% death rate.

Overall, ART services have been scaled up significantly from the last review in 2017. TREAT all have been adopted all over the country. The percentage of PLHIV presenting with CD4 less than 200 (advanced HIV disease) has declined over the years, indicating earlier detection/diagnosis.

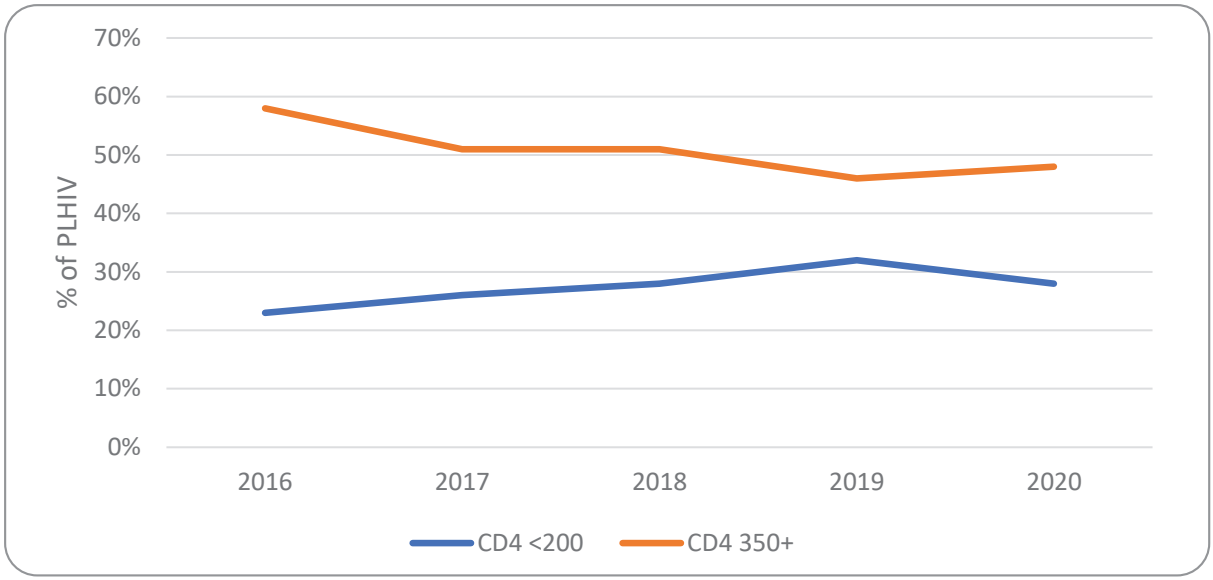


Figure 9: Trends of baseline CD4 at ART initiation, 2016-2020

However, the country is lagging on UNAIDS 90-90-90 and 90-81-73 treatment targets to be reached by 2020. As of December 2020, an estimated 3719 people are living with HIV. Out of these nearly 2612 have been diagnosed with HIV, a total of 2167 patients have been started on ART and 53% of these are virally suppressed as per GAM guidance (2021) (Figure 10). However, viral suppression extrapolated to estimated PLHIV is around 27%.

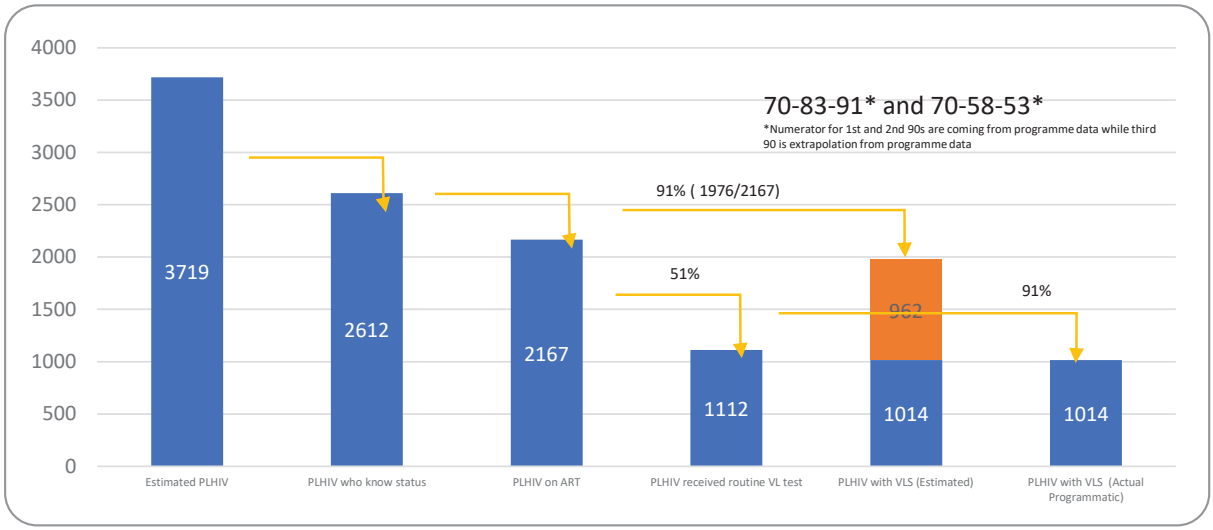


Figure 10: Cumulative cascade of HIV diagnosis and Care 2020

Source: Analysis based on data provided by SI unit, NSACP

Some of these gaps can be attributed to travel-related restrictions during COVID in 2020, which could have hampered registration in care or reduced viral load testing. However longitudinal cascade analysis for the year 2019 also showed that retention in care at 12 months was only 69%. Out of 439 diagnosed in 2019, almost 22% were not enrolled on ART. Out of those enrolled in care, another 11% were not retained in care. Of all retained in care, 70% received viral load test and 88% of those who

received viral load were virally suppressed as per GAM guidance and 43% as per programmatic point of view with those on ART as the denominator[19] (Figure 11).

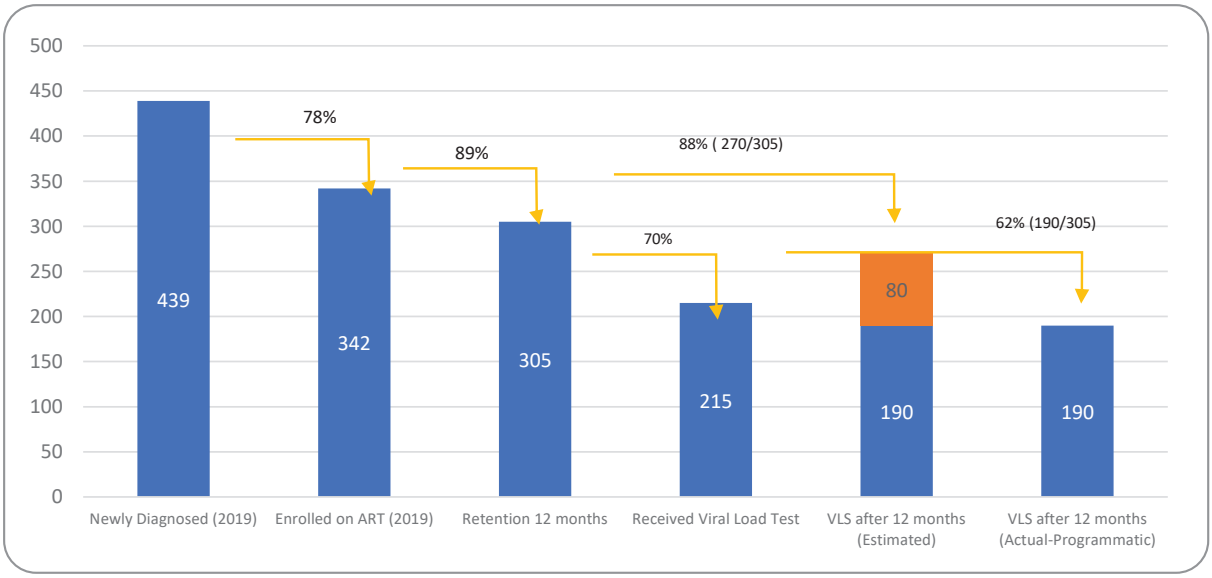


Figure 11: Longitudinal cascade of HIV diagnosis and Care 2020, Source: Analysis based on data provided by SI unit, NSACP

It is also noted that there is a significant discrepancy in the number of viral load tests reported from the SI unit viz a viz interaction with medical officers at two ART centers and NSCAP treatment coordinator, who is quite emphatic that all PLHIV on ART undergoes annual viral load as per national guidelines.

On the first 90 targets, during the COVID 19 pandemic, the number of hospital-based HIV testing was reduced, with priority shifted only to provide essential services such as for COVID. The entry to prisons during COVID 19 pandemic by STD clinic staff was restricted, therefore prison testing was hindered. Movement restrictions, lockdown and restrictions for gatherings were a challenge for outreach HIV testing during the COVID 19 pandemic. The programme had planned a pilot study to introduce a routine opt-out screening of medical inward patients for HIV at NHSL in 2019 with an aim to introduce HIV RDT to medical inward patients at NHS. They were unable to introduce it as routine care due to inadequate nursing staff and the unwillingness of staff to take the extra burden of HIV testing.

On second 90, the linkage from diagnosis to enrolment in ART has been inadequate. Even before COVID, nearly 22% of 439 diagnosed positive in 2019 were not enrolled in care. The reasons for these need to be looked into, including assigning a unique identification code at the testing site and a line listing in the new EIMS.

[19] It is important to understand that GAM reporting guidelines on viral suppression facilitates population-level estimation/ projections based on those who underwent viral load testing for the purpose of a broad picture for global reporting. However for programmatic reviews, analysing data for indicators using programme-based denominators (either all those on ART or all estimated PLHIV) helps in better understanding of how programmes are planned and resourced, and also by assessing how well programmes are able to provide services to people who receiving it, and/or the number of beneficiaries for whom resources have been budgeted. This will be important as country undertakes viral load testing for all those on ART.

CD4 testing has been decentralized to all 9 provinces (from 3 in 2017) and a linkage mechanism has been developed for the transport of samples from 30 ART sites to these 9 facilities and this is sufficient given new guidance that CD4 testing can be stopped once the PLHIV on ART is virally suppressed.

On third 90, just 70% on ART received viral load test in 2019 and 51% in 2020 (may be due to COVID related restrictions in 2020) though the guidelines recommend viral load test every year for all those on ART. The 2017 recommendation on the use of GenXpert for VL testing has not been implemented so far.

Operational aspects

The ART centers are managed by the consultant venereologist as head of the center. The centers also have assistant consultants, a senior registrar and one or two medical officers depending on the patient load. In addition, the staff includes staff nurses and Public Health Inspectors (PHI) but there are no dedicated counsellors even at high volume centers like Colombo. The Colombo ART center otherwise has more registrars, diploma trainees besides nurses and PHI. Doctors and nurses although trained in counselling may not be enough for high ART load clinics. This along with an expansion of infrastructure is essential for providing quality services in a confidential manner.

An interaction was held with the treatment coordinator at NSACP, ART center medical officer at Colombo and consultant venereologist at Galle STD clinic. During the review, it was observed that both ART sites were well aware of the patient flow/SOP once a person with HIV reactive test presents at the center. All those with positive reactive tests undergo HIV confirmation with a Western Blot test, for which result is obtained the same day at the Colombo site but may take 2-3 days for other sites. It was informed that the testing algorithm is being changed to three rapid test algorithms in the near future and validation process for the same has been initiated with support from WHO.

It was informed that the space is a big constraint at the Colombo Center, which has more than 690 patients on ART. There has been no change since 2017 in terms of space, but some crowding issues have been taken care of by Multi-Month Dispensing (MMD) of ARV drugs. There is a need for more rooms at the HIV clinic at NSACP as well as other district STD clinics for consultation, record keeping and counselling to maintain confidentiality. This issue was raised by the PLHIV network as well during interaction later. Human resources are also an issue as there is a lack of staff in all categories (medical officers, public health, nurses etc.).

Standard operational plan

The centers interviewed are well aware of the SOP for patients registered at the ART center. The person after HIV status confirmation is registered in the HIV care services by the public health inspector (PHI) and evaluated by the medical officer. All PLHIV undergo a baseline clinical and biochemical assessment that includes routine hemogram, blood sugar, renal functions, liver functions, hepatitis markers for B and C, sputum for AFB, X-ray chest and GeneXpert test for TB. These tests are carried out at district hospitals. A baseline CD4 count and a viral load test are done before the initiation of therapy.

Laboratory services have been decentralized to some extent. There are 9 CD4 machines- one in each province. VL is available in three places (Kandy, Galle and Anuradapura). Samples for viral load

are sent to NRL and results are available in one day for the Colombo site but may take 2-3 weeks for sites outside Colombo. However, the medical officer and treatment coordinator informed that ART initiation is done after sample collection without waiting for results of viral load. The purpose of doing a baseline viral load is not clear as this is not decisive for the choice of ART regimen. It is carried out as it is part of the national ART guidelines. WHO guidelines do not recommend a baseline viral load. The recommendation from the last review to use GeneXpert machines as a point-of-care test for VL has not been implemented so far. The program has procured 3 GeneXpert machines for doing viral load testing and some testing was done on these machines but currently, there are no kits, so these machines are being utilized for COVID work.

The PLHIV are provided adherence counselling by the medical officer and are offered a linkage to one of the four NGOs working for PLHIV, though this is not essential. The medical officers and PHI as well as staff nurses are trained for counselling on adherence and other related aspects of HIV care. There are no dedicated counsellors at the ART centers. Considering the load, this may not be required for most centers, but it is felt the high load ART sites should have a dedicated trained counsellor.

All PLHIV with CD-4 less than 100 undergoes a cryptococcal antigen test and other tests to rule out TB and other opportunistic infections. The ART initiation happens in most cases in 7-10 days, and same-day initiation has not been adopted so far as a practice except at NSCAP main clinic. Some OI diagnostics are not constantly available (CMV PCR, cryptococcal antigen) from NSCAP.

The ART guidelines are revised by the technical subcommittee of NSCAP. The last revision was in 2020 and WHO SEARO had supported this revision.

Drug regimen

Sri Lanka is in a transition phase, from using separate pills of Tenofovir plus emtricitabine and Dolutegravir to a fixed drug combination, that requires follow up for early implementation.

All patients failing on first-line treatment diagnosed by unsuppressed viral load undergo a drug resistance testing by sending samples to NARI Pune India and a second-line regimen is initiated based on the drug resistance report. Although drug resistance is low both for the first and second line of ART (86 patients are on second-line ART and 6 patients are on the third line), disaggregation as KP is not clear. Recently Sri Lanka has completed a pre-treatment drug resistance (PDR) surveillance to see the prevalence of drug resistance in the country. The results are likely to be available shortly. The lag time between sending samples to Pune, India and receiving results and alternate options of quicker results needs consideration. Individual VL tests can improve the situation locally and make the process faster.

Around 38 children are on ART and the supply of certain pediatric ARVs remains a challenge due to very low volumes. All STI, ARV and OI drugs are dispensed from a single window, common pharmacy which is a good practice.

Adherence mechanism

The adherence mechanism adopted at the ART center includes counselling by the medical officer and staff nurse. On every follow-up visit, there is a check on pills left with the patient. However, patients are not asked to bring back the pill bottles, so it is not sure how adherence is checked. The alternative mechanism adopted is six-monthly viral loads to check adherence. Viral load is repeated

at 6 months after ART initiation but sometimes at 3-4 months also. For pregnant women, this is done every trimester.

The patients are linked to some NGO if they are willing. To prevent patients from being lost to follow up, there is a mechanism to note the next appointment date in a diary at the ART site. If the patient does not turn up within seven days of the appointment, a phone call is made to the patient's registered mobile number. If required PHI, along with a doctor, visits the patient's residence. As informed by the ART medical officer, confidentiality issues are taken care of while visiting patients at home. However, at low load centers, where there is no dedicated PHI for ART, the tracking is mainly done through telephone calls and not home visits. Sometimes PLHIV do not provide the correct address, or telephone numbers, therefore, it can be difficult to find them. The EIMS defaulter tracing mechanism needs further improvement for online tracking of all patients from diagnosis all through the treatment cascade.

Training of ART staff

Lack of regular training was a major issue observed during the 2017 review and decentralization of training and use of distance learning methods was recommended. It was informed during interaction with the training coordinator, that during the year 2019, refresher training was done covering all nine provinces in Sri Lanka. This was physically held in 2019. During the COVID period, virtual training was organized by NSACP as well as from district STD clinics on STIs/HIV and stigma and discrimination. There are annual training plans drawn up. As per guidelines, all cadre of ART staff must undergo training within 6 months of joining and a refresher training thereafter. Training on counselling is done twice a year and sometimes in-service workshops are conducted on stigma and discrimination. A distance learning platform proposal has been prepared and given to the WHO for support. It is likely to be in place within next 2 years. Moreover, monthly webinars are arranged with the collaboration of HIV care services to update the knowledge of health care workers. The programme needs to continuously monitor training needs and re-training to maintain the quality of HTS and train those who are newly enrolled, as there is always staff turnover.

Other issues in HIV care

The facilities for diagnosis of opportunistic infections are available and drugs for most opportunistic infections are available in the pharmacy. Candidiasis is the most common OI followed by TB and PCP. The diagnostic facilities for infections like CMV, toxoplasmosis and other investigations are available at Medical Research Institute (MRI). The complicated cases are managed at National Hospital or at IDH, which has got a designated ward for PLHIV.

Procurement related issues

All ARV drugs are procured using government funds, which need sto be appreciated as a step towards ownership of the programme and long-term sustainability. The forecasting/ drug quantification committee of NSACP meets twice a year and recommends the requirement to medical supplies division (MSD), which in turn procures the drugs through the State Pharmaceuticals Corporation (SPC). The suppliers send the drugs to MSD, which in turn sends these to NSCAP for distribution to centers.

leading to a long turnaround time for drug procurement. In addition, there are issues with the availability of pediatric ARV drugs sometimes due to low volumes. The manufacturers do not want to register these drugs with NMRA as the registration process is time consuming and there is a fee of USD 3000. It seems that the recommendations made in the last review that the NMRA should give a waiver of the registration fee for such low volume drugs like paediatric ARV has been implemented.

Monitoring and reporting formats

This component could not be reviewed virtually as it is difficult to go through these tools via a video call and on-site assessment is needed. But it was informed that an electronic Information management system has been developed , which is now being implemented for ART services also.

Advance HIV disease (AHD) management

The persons interviewed at the ART centers did mention about screening for cryptococcal antigen, pap smear and fundus examination for those with CD-4 less than 100 and TB screening for all PLHIV. Fluconazole prophylaxis is provided for those crypto antigen positive. But the overall concept of a package for advance disease management (ADM) as a step towards reducing AIDS-related mortality was not clear, though it is part of the 2020 ART guidelines. There is a need to train ART centers on the full framework of the ADM package.

Community engagement

There are three PLHIV organizations, which are part of national AIDS committee and ART subcommittee. These are Positive Women's Network, Positive Hopes Alliance and Lanka Plus. PLHIV registering at ART center are given the option of becoming members of these with a view to access peer counselling and support. These organizations also help in monitoring adherence of PLHIV registered with them. Resource persons from NSACP have conducted virtual programmes on positive living for PLHIV with the help of PLHIV support groups.

A good practice has been the development of a differentiated HIV care model for PLHIV for the community networks. This includes training of PLHIV on modes of HIV transmission, availability of antiretroviral treatment, drug adherence, importance of viral suppression, family planning methods, issues related to loss during follow up, measures of HIV prevention and nutrition which are considered as important areas to be highlighted among PLHIV. Empowering PLHIV to maintain responsible behaviours is expected to lead to low community viral load in the country, which is timely and could have an enormous impact on the goal of ending AIDS in 2025 in Sri Lanka. Virtual meetings were carried out for PLHIV organizations with the aim to spread the message to the rest of the membership through the participants.

CSDF, an organization that has been working with FSW for last 20 years. They are a sub-recipient of GF grant . They have almost 6000 SWs registered with them and work with them on various HIV prevention activities like condom promotion, distribution of condoms and other IEC activities. They have a DIC and around 90 outreach workers in Colombo district, which is divided into 4 areas. Each outreach worker is responsible for follow up of 200 persons. They help in case finding, linking them to HIV testing and to HIV care for those conformed HIV positive. They also help perform saliva-based HIV self-test as part of their activities. The outreach workers are involved in tracking of patients based on information from NSACP, if they miss their appointment. Tracking is done through phone

calls as well as home visits if their phones are not reachable. In last one year 4 SWs defaulted on ART and were tracked. Two died and two others were brought back to care through home visits.

The main challenge faced by the NGO is that due to economic reasons (loss of clients) the sex workers found positive do not want to disclose their occupation to health care providers. They also do not want to go to the NSACP hospital for aa similar reason. The NGO provides them with livelihood linkages where possible. A suggestion from the NGO was that NSCAP should help to link these positive SWs with government schemes. It was also felt that the atmosphere should be made more supportive/friendly at NSCAP as stigma is still prevalent, especially from minor support staff. The space at Colombo center is not enough to maintain confidentiality.

It was informed that the PLHIV network also works for enhancing adherence counselling through their peers to take drugs at the right time, not to miss any dose , possible side effects and follow NSCAP doctors' advice strictly. Around 600 PLHIV are linked to this network. NSCAP informs the network when some of their clients do not turn up for their scheduled appointment. Being PLHIV friendly, they have some additional phone numbers also to reach them. In 2021 they were able to track 6 out of 8 patients lost to follow up while two refused to rstart ART despite counselling. One challenge raised by network was shortage of some ARV drugs because of which the ARV regimen are often changed and it makes it difficult for patient to follow that change.

HIV/TB coordination mechanism

It was informed that there are 26 district chest clinics that provide TB care services . All cases with presumptive TB are offered HIV testing. The samples are collected at the chest clinic and sent to STD clinics which are generally in the same premises or nearby. However, distance between chest clinic and HIV testing site is 2 kms. It is suggested that the lab technician at the chest clinic can be trained for performing the HIV screening test and those found reactive can be referred to ART centers for confirmation using the three test algorithm. The number of those testing HIV positive is quite low as out of 7000 TB patients screened for HIV, only 10 were found to be HIV positive.

The national manual for TB control (2015) is currently being revised. It has some guidance on HIV TB collaboration but there is is no separate document available for HIV TB collaborative activities

There are bi-annual meetings between HIV and TV program for review. At the district level the District Tuberculosis Control Officer (DTCO) reviews and monitors the HIV TB activities. In terms of documentation, the HIV status of the TB patient is entered in the district TB register, but this is not documented in the TB card available at the facility.

All PLHIV undergo 4 symptoms screening for TB at the time of registration and also during visit to the facility. Isoniazid (INH) is provided for those among whom TB has been excluded. A chest physician visits the ART center every Wednesday but is available on other days at the chest clinic, nearly 2 km away.

It was informed by ART medical officers at ART centers that the ART is initiated for all HIV TB coinfected persons after two weeks of ATT in HIV TB co-infected patients. However, available data reveals that out of 36 HIV TB co-infected persons in 2019, only 15 got ART and only one got CPT. Similar pattern was seen in 2020 also (Figure 12).

TB/ HIV Coinfected Cases By District - 2019				
District	No. screened for HIV From TB Patients (B)	Summary		
		TB/ HIV Coinfected Cases (A+C)	ART	CPT
Ampara	92	0	0	0
Anuradhapura	242	0	0	0
Badulla	265	1	0	0
Batticaloa	145	0	0	0
Colombo	1846	8	6	0
Galle	369	2	1	0
Gampaha	833	6	0	0
Hambantota	130	6	6	0
Jaffna	251	0	0	0
Kalmunai	158	0	0	0
Kalutara	481	1	0	0
Kandy	455	3	1	0
Kegalle	325	0	0	0
Killinochchi	53	0	0	0
Kurunegala	443	3	1	0
Mannar	21	0	0	0
Matale	145	2	0	0
Matara	176	0	0	0
Monaragala	130	1	0	0
Mullaitivu	23	0	0	0
Nuwara Eliya	200	0	0	0
Polonnaruwa	163	1	0	1
Puttalum	173	1	1	0
Trincomalee	118	1	1	0
Ratnapura	402	0	0	0
Vavuniya	51	0	0	0
Total	**7690**	**36**	**15**	**1**

* Data from Quarterly Reports of Case Finding (TB 08) from districts.

TB/ HIV Coinfected Cases By District - 2020				
District	No. screened for HIV From TB Patients (B)	Summary		
		TB/ HIV Coinfected Cases (A+C)	ART	CPT
Ampara	70	0	0	0
Anuradhapura	226	1	1	0
Badulla	230	0	0	0
Batticaloa	123	1	0	0
Colombo	1709	5	5	0
Galle	353	1	0	0
Gampaha	508	9	2	0
Hambantota	148	2	1	0
Jaffna	212	1	0	0
Kalmunai	129	0	0	0
Kalutara	449	1	0	0
Kandy	478	0	0	0
Kegalle	253	1	1	0
Killinochchi	29	0	0	0
Kurunegala	341	1	1	0
Mannar	8	0	0	0
Matale	141	0	0	0
Matara	152	0	0	0
Monaragala	150	1	0	0
Mullaitivu	24	0	0	0
Nuwara Eliya	168	3	0	0
Polonnaruwa	125	1	0	1
Puttalum	156	3	2	1
Trincomalee	118	1	0	0
Ratnapura	332	1	0	0
Vavuniya	47	0	0	0
Total	**6679**	**33**	**13**	**2**

* Data from Quarterly Reports of Case Finding (TB 08) from districts.

Figure 12: HIV TB coinfection at a glance

Source: Analysis of Data provided by SI unit, NSACP

COVID and PLHIV

Based on a SEARO advisory, PLHIV were provided information on protection from COVID-19. Multi month dispensing of ART was put into practice and other efforts including sending drugs through peers and courier were also adopted. Around 20 PLHIV got COVID and 2 died of COVID. PLHIV are identified as a priority population for vaccination and almost 500 PLHIV have been vaccinated for COVID.

Recommendations

Highest priority

- The country has introduced dolutegravir based regimen for ART naive patients. The country should procure fixed dose combination (FDC) of Tenofovir, emtricitabine/Lamivudine and Dolutegravir in one tablet in the next procurement cycle for better adherence. In view of immense benefits of dolutegravir, it is recommended that the patients currently on other regimen should be transitioned to DTG based regimen at the earliest once the currently available stocks of FDC of Tenofovir emtricitabine and efavirenz are utilized. The procurement should start as soon as possible for the same.

- As per national guidelines, all patients undergo a baseline viral load prior to initiating ART. A baseline viral load does not provide any additional information in terms of starting ART or on choice of regimen. If capacity of viral load testing is limited , the practice of baseline viral load may be stopped..
- The viral load testing needs to be scaled up significantly to provide at least one viral load per year to all patients on ART. The national guidelines mention this as standard of care, but this is not happening in practice as seen from data made available.
- To reach the first 90 target, there is a need to increase HCT sites to improve the access for HTS, especially in western provinces with high HIV burden in the country. The country must quickly scale up community led testing services and HIV self-testing. The self-testing kits needs to be registered in the country for ease of procurement and scale up. There is also a need to social market the available HCT sites in the province to maximize the utilization of diversified HTS including evening clinic, outreach clinics, Community Based Testing, online outreach, HIV self-testing etc.
- In view of very high linkage losses in the treatment cascade it is recommended to decentralize ART services in high load districts and also assign unique identifier code to all those found positive at testing site itself and track them through the treatment cascade.
- A differentiated and decentralized service delivery model needs to be put in place including task shifting and greater role for community led services.

High priority

- For pediatric drugs with low volumes, it is recommended that NMRA should give waiver of registration fee for such low volume drugs to pharmaceutical companies, and also explore option to procure these through Global Fund procurement mechanism, WAMBO or other pooled procurement mechanisms..
- WHO recommends a point-of-care viral load such as GeneXpert as a preferred approach . This was recommended in 2017 review also but has not happened so far. It is recommended to utilize the spare capacity of GeneXpert machines procured by the TB programme for point-of-care viral load testing.
- There is a need to train ART centers on the full framework of ADM package as a step towards reducing AIDS related mortality (though it is part of the 2020 ART guidelines, but field people are not fully aware of the same).
- In view of a new DTG based robust ARV regimen, it is recommended to expand/ decentralize ART services (STD clinics) to all base A and B hospitals, especially in the western province, for purpose of provision of drugs nearer to patients residence to increase adherence and reduce chances of loss to follow up.
- To improve HIV testing among TB patients, the lab technician at the chest clinic can be trained to do the HIV test at the facility itself rather than sending sample to the HIV testing site especially in clinics with significant load of TB patients.
- There are significant gaps in 90-90-90 and 90-81-73 cascade and understanding of programme on viral suppression for reporting purpose and for patient care. The leakages in cascade at various steps need to be plugged.

- 95-95-95 cascade need to be brought in at the national level as well as high load ART sites. Data should be available disaggregated by key population typology. A fully functional EMIS can be very useful for such an analysis.
- It is recommended that all HIV /TB co infected persons must get ART and CPT as per guidelines (there is a significant gap in 2019 as well as 2020).

Moderate priority

- The multi-month dispensing of ARVs that was introduced during the COVID pandemic needs to continue.
- The linkage to various social support system schemes of the government must be strengthened for PLHIV to avail these services with ease.
- The issue of space constraints which hamper quality counselling in a confidential manner must be addressed , especially at high load centers. There are no proper counselling rooms at NSACP. The issues about shortages of HR at ART sites was also raised by the programme.
- Though it is beyond the scope of this review, it is strongly recommended that next national action plan be an integrated plan for HIV STI and hepatitis. Sri Lanka has been validated for EMTCT of HIV and syphilis and now must strive for triple elimination of HIV syphilis and Hepatitis.

SD 2.3 : Quality and Coverage of STI Services

Sri Lanka's exemplary public health record includes historical success in STI control, achieving more than 90% reductions in gonorrhoea and syphilis incidence between 1975 and 2000 (Figure 13). This helped the country avoid a major AIDS epidemic when HIV first appeared in the 1980s. More recently, the country achieved elimination of mother-to-child transmission of syphilis and HIV.

Excellent STD clinic services have been central to these successes and recognised as regional best practice[20]. In general, programme approaches to STI prevention, case management and strategic information are appropriate, well monitored and have generally seen increasing attendance in recent years (pre-COVID years 2019 compared to 2017). Increasing numbers of STI patients may indicate rising STI transmission and/or improved access to services (Figure 14). Increases in screening have also been reported although this is limited to HIV and syphilis and largely driven by HIV case finding targets. Aside from pregnant women and STI patients, however, STI screening is not routinely carried out. There are no screening targets, no prevalence data for gonorrhoea, and few data on syphilis and viral hepatitis among KP (2018 IBBS). A study conducted in 2015 reported 20.6% chlamydia prevalence among female sex workers where only one in five was symptomatic.

In the previous NSP, several priority actions were identified, such as expanding STD clinic services, strengthening STI surveillance and antimicrobial sensitivity testing, and monitoring waste management procedures. These limited actions have been largely achieved. However, it is clear from desk review and interviews with programme staff and community representatives that more fundamental changes are needed to strengthen STI prevention and control if global elimination targets[21] are to be reached.

[20] Mukta Sharma et al., "Control of Sexually Transmitted Infections and Global Elimination Targets, South-East Asia Region," *Bulletin of the World Health Organization* 99, no. 4 (April 1, 2021): 304–11, https://doi.org/10.2471/BLT.20.254003.
[21] 90% reductions of gonorrhea and syphilis prevalence from 2018 baseline

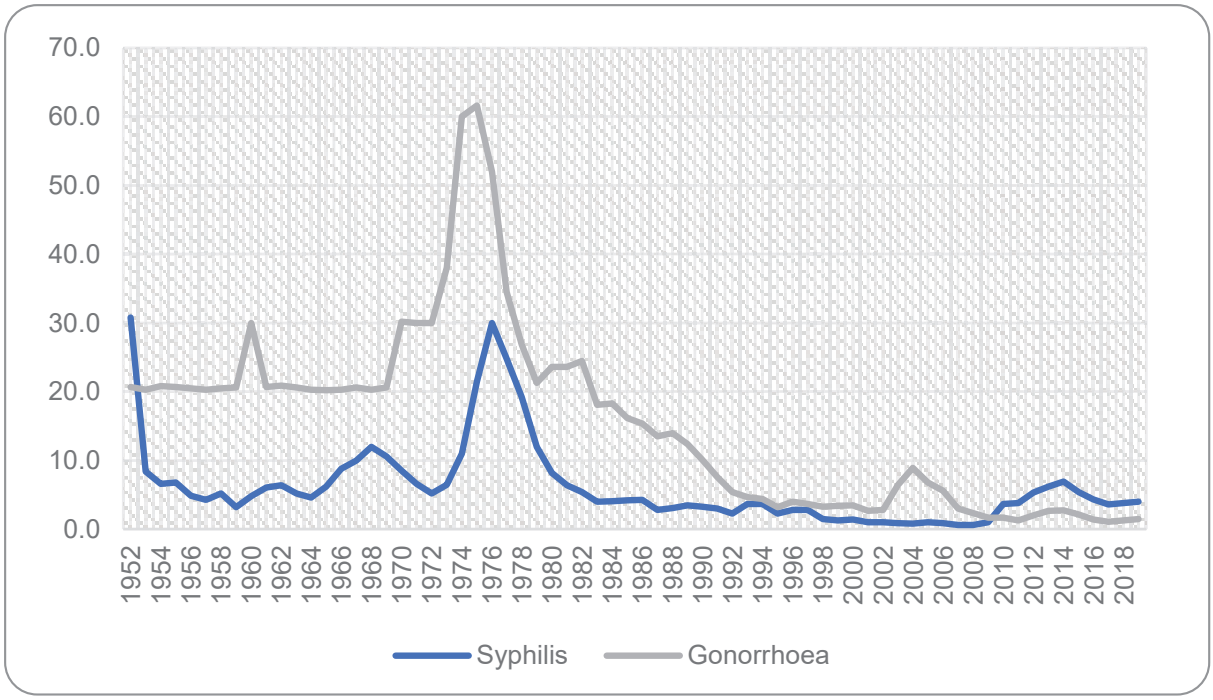


Figure 13: Trends of STI infections in Sri Lanka (1952-2019), Source: NSACP data

A major gap to address is the low reach and uptake of STI services by key populations. Figure 17 summarises available data showing current programme reach with prevention support is less than 25% of KP, while linkage to STI/HIV services (beyond HIV rapid testing) is less than 10%.

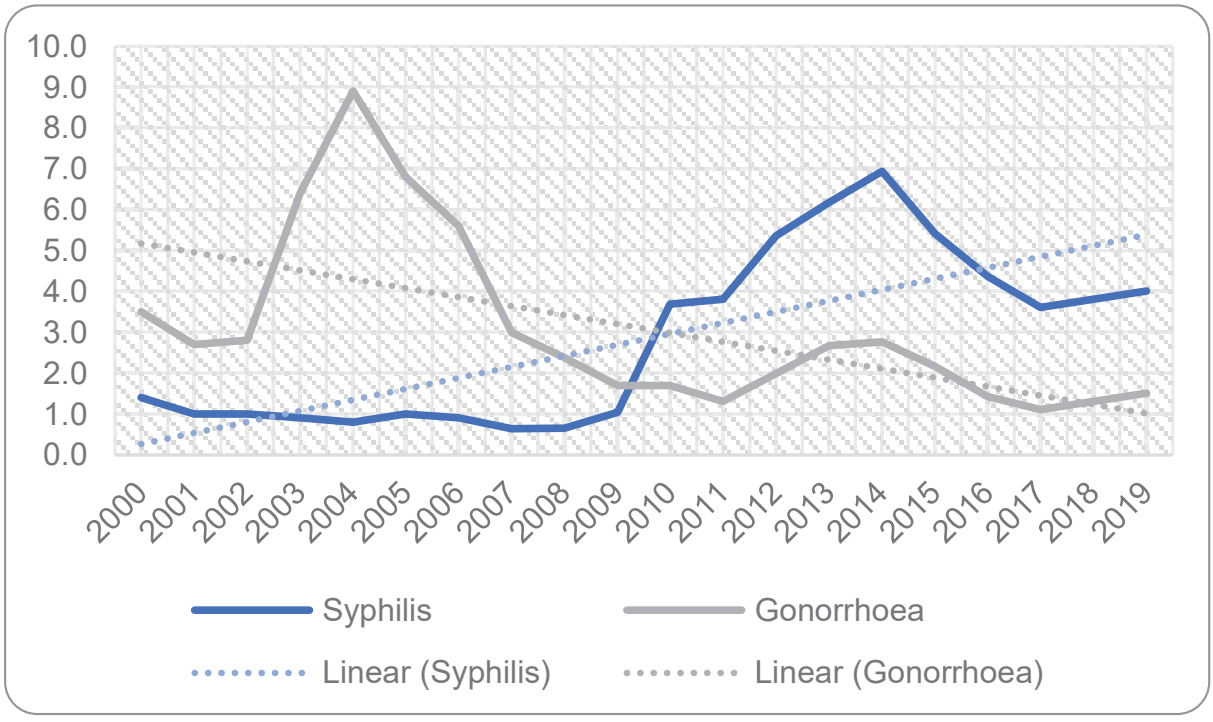


Figure 14: Trends in STI since 2000, show increasing trend for syphilis

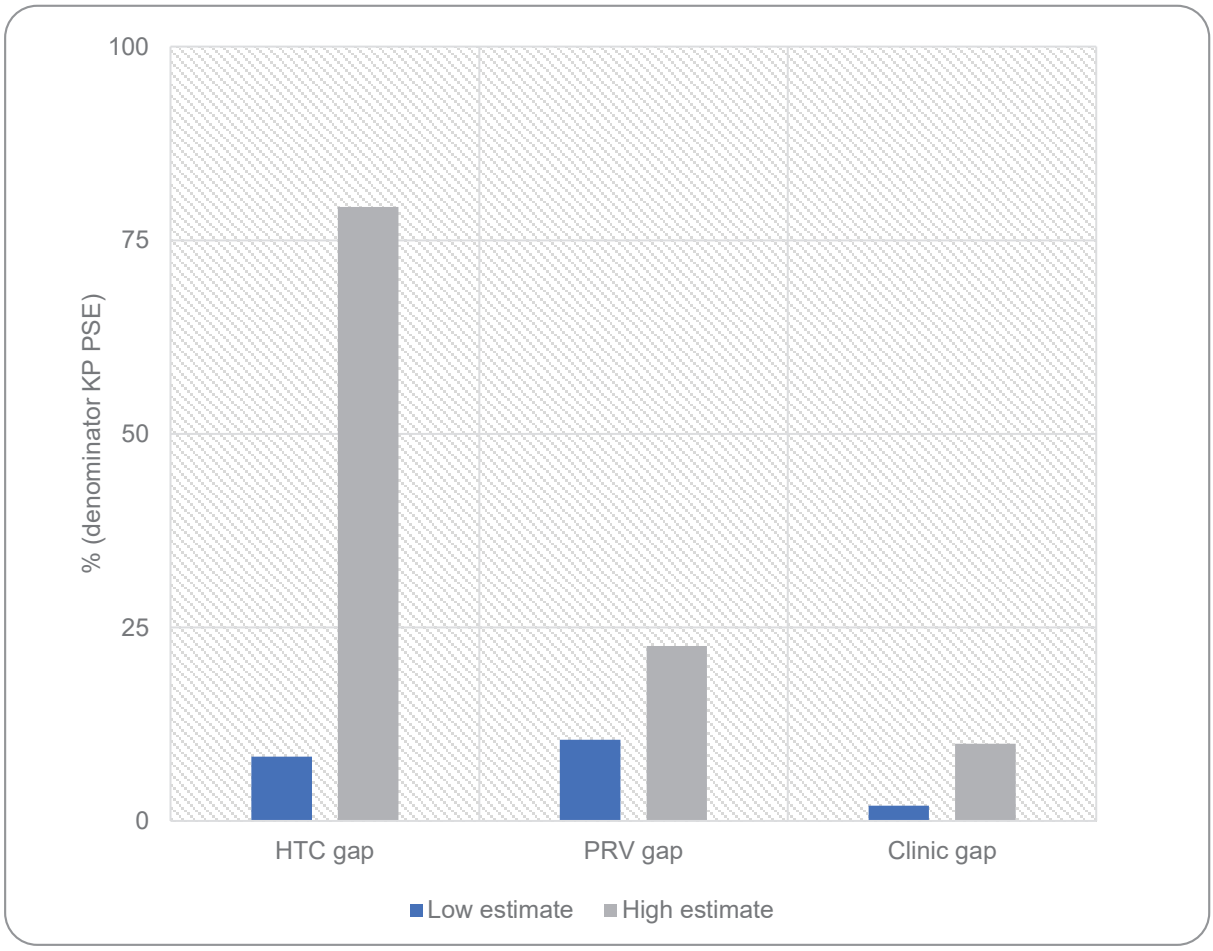


Figure 15: Estimated reach of community-based and clinic services to key populations

In strong KP programmes elsewhere, 'saturation' targets (>90%) are set for KP reach and linkage to clinical services. Setting saturation targets recognises that all KP need peer support for prevention as well as access to appropriate clinic services regardless of HIV status or symptoms.

This 'status-neutral' approach builds on positive concepts of staying healthy, combining prevention, screening and immunization services offered as regular medical checkups (RMC), and promoted in the community through strong peer outreach. During the review, KP and organizations working with them indicated that STIs including syphilis, gonorrhea and genital warts are common concerns, and that KP would attend STD clinics for screening, treatment and related services if such services were convenient and offered in ways that minimized waiting times, stigma and discrimination.

Satisfaction with STD clinic services was reportedly higher in areas with many KP where programmes have established working relationships with FPA, CBOs and NGOs in the community. These areas also have highest transmission potential and overlapping risk patterns. Improving access and increasing utilization of services in these area will likely have the largest impact on STI/HIV transmission.

Several KP outreach models have been used over the past decade and informants mentioned advantages and disadvantages for each approach (see also SD1). Previously, outreach to high-risk venues or hotspots – with prevention information, condom distribution and promotion of clinic services – was done by public health inspectors (PHI) attached to each STD clinic. This was strengthened in some districts by introducing a peer model implemented by NGOs and managed by FPA. Notably, as reported by key informants from community and programme, this peer model was well designed (following international practice recommendations on peer educator ratios,

supervision etc) and worked well. To some extent, efforts were made to coordinate this work with PHI staff.

More recent changes to KP outreach have had negative or mixed results, mainly because numbers of peer workers were reduced significantly (and well below levels and ratios recommended for effective KP outreach). A case-finder model replaced part-time peer educators working continuously in hotspots with a few full-time (HIV) case finders who cover much larger areas with 'real-time mapping' and network approaches. While this approach has been effective in identifying new HIV-positives, it has diluted the peer component, weakened prevention and reduced STD clinic attendance and STI screening. The other change which has weakened the peer model is seen in districts transitioning from NGO to direct STD clinic management, where a fixed number of PE (3 or 4) is supported regardless of the KP population size. In both cases, peer educator ratios have increased from one to 30 or 40 KP to one to several hundred, making it impractical to maintain contact, support prevention and promote access to clinical services. As a result, community outreach work has narrowed considerably in scope, and is mainly driven by targets for HIV rapid testing.

In summary, despite a number of initiatives implemented under the previous NSP, overall outreach coverage among KP remains too low to interrupt transmission, while most of those reached receive only limited services focused mainly on HIV case finding. Of particular concern is the apparent weakening of peer-based outreach in some areas recently, resulting in reduced numbers of peer educators and outreach staff and a further narrowing of focus on HIV testing over more comprehensive STD/HIV services.

A framework for recommendations

The remainder of this section focuses on this main gap – low reach and uptake of STI services by key populations. Table 9 shows how both outreach and clinical services could be strengthened, with the highest intensity outreach and services developed in a few districts with most KP (data on KP population sizes from PSE 2018 are used to guide district prioritisation).

Options for 1) providing, 2) promoting and 3) monitoring effective STI/HIV services for KP in different areas of the country forms a flexible and adaptable framework for recommendations which follow.

Table 9: District-level focus for outreach and clinical services

Intensity	District	FSW	MSM	MSW	TG	PWID	BB	Outreach	Clinic
High	**Colombo**	**5112**	**5714**	**1174**	**388**	**677**		Peer model, case finding, virtual outreach FPA + STD KPU/PHI	Full RMC @ STD clinic + DIC/branch/mobile clinics
	Gampaha	4262	**5747**	**1181**	245	38	446		
	Galle	1785	**2516**	**517**	107	16	**2639**		
	Kandy	2258	2657	393	142				
Medium	Anuradhapura	1579	1737	257				Peer model with adequate ratios STD clinic KPU/PHI with NGO partners Virtual outreach to hidden KP	RMC @ STD clinic, branch/mobile clinics
	Ratnapura	1960	2099						
	Kaluthara		2328	344	124		572		
	Kurunegala		3117	461					
	Puttalam		1496	221			145		
	Hambantota			169					
	Nuwara			200					
	Jaffna		1157						
	Kegalle		1577						
	Matara		1531						
	Polonnaruwa		807						
	Trincomalee						72		
Low	Other districts							STD clinic / PHI Virtual outreach	RMC @ STD clinic

Providing STI services

STD clinics currently provide a number of services that would be of interest and benefit to KP, and would likely attract many to attend RMC regularly (see Table 10) Most of these services are already available at STD clinics and could be standardised as an SOP for KP RMC visits. Some services are not available at all clinics but could be reviewed as part of district prioritisation, and expanded or decentralised. Importantly, high uptake of these services by KP is also critical step to reaching STI/HIV elimination targets.

Table 10: General example of clinical service package for RMC

Screen		
	syphilis	6mo
	HIV	6mo
	GC	3mo
	HBV	12mo
	HCV (PWID)	12mo
	HPV (MSM/TG)	Once
	Pap	2-3y (♀)
Immunization		
	HBV (after screen)	If HBsAg neg
	HPV	MSM/TG <45y?
Other		
	PrEP provision/monitoring	3mo
	Harm reduction / OST (or referral)	
	Violence screening/management	

Laboratory capacity should also be expanded to permit more widespread KP screening for at least gonorrhoea, syphilis and HBV (see Table 11). This is covered in more detail in the SD2 Laboratory strengthening section of this review.

Table 11: Laboratory Strengthening to support STI screening

Intensity	District	FSW	MSM	MSW	TG	PWID	BB	Clinic	VDRL/TPPA	GC culture	ELISA
High	**Colombo**	**H**	**H**	**H**	**H**	**H**		Full RMC @ STD clinic + DIC/branch/mobile clinics	√	√	√
	Gampaha	M	**H**	**H**	M	M	M		√	(Ragama)	√
	Galle	M	**H**	**H**	M	M	**H**		√		√
	Kandy	M	M	M	M				√		√
Medium	Anuradhapura	M	M	M				RMC @ STD clinic, branch/mobile clinics	√	√	√
	Ratnapura	M	M						√	√	√
	Kaluthara		M	M	M		M		√		√
	Kurunegala		M	M					√	√	√
	Puttalam		M	M			M				
	Hambantota			M					√		√
	Nuwara			M					√		√
	Jaffna		M						√		√
	Kegalle		M						√		√
	Matara		M						√		√
	Polonnaruwa		M						√		√
	Trincomalee						M		√		√
Low	Other districts							RMC @ STD clinic			

Most importantly, structural issues at STD clinics require attention. Limited space, lack of privacy and confidentiality, and staff attitudes and have all been flagged as factors that discourage KP from attending STD clinics. Solutions to these problems would need to found in order to accommodate larger numbers of KP coming to STD clinic services for regular checkups. This may require expanding space at STD clinics themselves as well as providing more complete services through branch clinics, evening and weekend hours, mobile services, DIC, etc.

Regional and global experience have shown benefits of offering clinical services at DIC and other community sites, if supported by strong peer-based outreach and including a full range of STI/HIV services similar to those provided at STD clinics.

Promoting clinical services for all KP 'to stay healthy' also improves confidentiality and reduces stigma and discrimination. Specific services are determined in confidentiality with a trained medical provider, not assessed by peers in busy high-risk venue environments. Growing interest in PrEP also provides opportunities to promote RMC, which fits well with quarterly PrEP monitoring and STI screening, and has shown excellent PrEP outcomes.[22]

Promoting regular checkups

Key populations will not likely use STD clinic services unless trust and confidence in those services are built. In addition to addressing infrastructure issues mentioned above, STD clinic services should be actively promoted through strong peer-based outreach. Again, models for outreach may well be more intensive in high priority districts with many KP.

Promoting checkups rather than specific services safeguards medical confidentiality, builds trust among peers, and simplifies PE training – PEs don't need to know anyone's HIV status or confidential health details to encourage clinic visits. Specific services are determined in confidentiality with a trained medical provider, not assessed by peers in busy high-risk venue environments.

In high priority districts, every effort should be made to strengthen outreach in collaboration with FPA and community partners, and to find innovative solutions to increase access to comprehensive STD clinic services. This will likely require both expanding space at STD clinics themselves as well as providing more complete services through branch clinics, evening and weekend hours, mobile services, DIC, etc.

Beyond the four highest priority districts (in terms of KP numbers), from 5-12 additional districts can be seen as second priority based medium (M) numbers of one or more KP groups. Outreach in such areas should at a minimum include a strong peer model with adequate PE:KP ratio (1:100). Involvement of any local CBO/NGOs should be encouraged to work in collaboration with public health staff. STD clinics should offer RMC services at fixed, branch and mobile venues. More hidden KP may be reached through virtual outreach with facilitated access to HIV testing or appointments for more comprehensive STI services.

In more remote areas with smaller STD clinics, lower KP numbers and little CBO/NGO presence, barriers to access such as stigma and discrimination are reportedly higher, while many KP may be

[22] Sushena Reza-Paul et al., "The Ashodaya PrEP Project: Lessons and Implications for Scaling up PrEP from a Community-Led Demonstration Project among Female Sex Workers in Mysore, India," *Global Public Health* 15, no. 6 (June 2, 2020): 889–904, https://doi.org/10.1080/17441692.2020.1724316.

hidden and more difficult to reach. Despite more limited resources in such areas, STD clinics can still do several things to improve KP access including basic attention to space and staff attitudes. Public health staff should maintain contact with any KP community groups and find ways to improve reach, prevention support and clinic access. Virtual outreach is a particularly promising way to reach more hidden KP and facilitate access to HIV testing as well as appointments for more comprehensive STI services.

Monitoring STI trends and uptake of services

In order to strengthen STI programming and achieve elimination targets, reliable data are needed on STI prevalence and utilization of STI services. Three identified gaps are absence/infrequency of 1) prevalence data for KP, particularly for gonorrhoea, syphilis and HBV/HCV, 2) programmatic data on uptake and continued utilization of clinical services, measured against KP PSE and numbers of KP reached by peer educators, and 3) community feedback on quality of and satisfaction with services.

STI prevalence can be measured through periodic surveys (such as IBBS) and/or through routine programme data, as is currently done for ANC screening. In the same way, positivity rates from KP screening at RMC provides prevalence estimates. The reliability of such programme data will improve as more KP attend RMC for screening. Ideally, these data would be verified with population-based surveys such as IBBS every few years.

Microplanning permits routine programme monitoring of uptake and regular utilization of community-based and clinical services, to strengthen implementation at local levels. Specific targets for outreach (example: >70-80% of PSE), clinic uptake (example: >70-80% of those reached) with regular attendance for checkups are proposed as medium-term targets. Current baseline for these indicators are in 10-30% range.

Monitoring community experience and satisfaction with STD clinic services is an important process for guiding strengthening of both community-based and clinical services.

Recommendations

Highest priority

Close main gap – low reach and uptake of STI services by key populations – by[23]:

- Providing comprehensive STI services for KP to detect both asymptomatic and symptomatic STIs and support prevention, with decentralised laboratory capacity to support more complete STI screening, PrEP monitoring, etc;
- Promoting regular medical checkups for KP 'to stay healthy' – strengthen outreach with continuous hotspot presence, adapt face-to-face and virtual strategies to districts with different needs;
- Monitoring key programme indicators – adapt EIMS and PMIS to track priority indicators and guide programme towards 'saturation' targets.

[23] Microplanning and trusted access platform guidance provide a framework and examples for how this works elsewhere HIV Prevention Coalition, "Key Population Trusted Access Platforms," April 2020, https://hivpreventioncoalition.unaids.org/wp-content/uploads/2020/04/Budget-Considerations-for-KP-Trusted-Access-Platforms-April-2-2020-Final-V-1.1a-no-TCs-1.pdf.

High priority

- Structural issues at STD clinics require attention. Limited space, lack of privacy and confidentiality, and staff attitudes and have all been flagged as factors that discourage KP from attending STD clinics. Solutions to these problems would need to found in order to accommodate larger numbers of KP coming to STD clinic services for regular checkups. This may require expanding space at STD clinics themselves as well as providing more complete services through branch clinics, evening and weekend hours, mobile services, DIC, etc.
- Key populations will not likely use STD clinic services unless trust and confidence in those services are built. In addition to addressing infrastructure issues mentioned above, STD clinic services should be actively promoted through strong peer-based outreach (see framework for range of district-prioritised options).

Strengthen monitoring to inform programming and support progress towards elimination targets, with attention to improving:

- Prevalence data for KP, particularly for gonorrhea, syphilis and HBV/HCV
- Programmatic data on uptake and continued utilization of clinical services, measured against KP PSE and numbers of KP reached by peer educators
- Community feedback on quality of and satisfaction with services
- Monthly review of priority indicators to assess progress towards targets

Medium priority recommendations

- Expand laboratory capacity to permit more widespread KP screening for at least gonorrhoea, syphilis and HBV, and to support decentralised provision of PrEP and other services;
- Promote clinical services for all KP 'to stay healthy' as a way to improve confidentiality, reduce stigma and discrimination and increase access to enhanced prevention methods including PrEP, harm reduction and OST.

Strategic Direction 3 (SD3): Strategic Information Management System

Strategic information on HIV and STIs in Sri Lanka will play an increasingly important role in NSACP programmes as the country pushes to reach HIV and STI elimination goals in 2030. Good data and good use of data are particularly important in the HIV response as undiagnosed cases become more difficult to find, as prevention to avert infections becomes a higher priority and as rapid initiation and long-term retention on ART by PLHIV becomes standard practice.

As is stated in the current National HIV Monitoring and Evaluation Plan, "Evidence will guide the design of the programs, prioritization of strategies and approaches, as well as monitoring of the program…." The challenge is to ensure: 1) that the right data are collected, 2) that it is analyzed thoughtfully, objectively and transparently and 3) that findings truly do guide the design, implementation and monitoring of strategies and approaches.

Key Observations

Sri Lanka has a longstanding commitment to strategic information and monitoring and evaluation (M&E) related to STIs and HIV. Historically, strong systems and protocols have been in place to support the key components of a robust SI/M&E programme, including consistent data collection (e.g., routine, surveillance, surveys), relevant research, sound data analysis, timely dissemination of data, data quality assurance, data security, regular use of data for decision-making and ongoing training. As is the case with every SI/M&E programme around the world, there is always room for improvement, but the programme in Sri Lanka has the benefit of having a solid foundation and a willingness to improve.

The very capable Strategic Information Management (SIM) unit within NSACP oversees and implements the overall programme. One of the hallmarks of the SIM unit is its own strong commitment to learn from its experiences in the country as well as from broader international experience to continuously strengthen its approach to SI and M&E. NSACP generally, and the SIM unit specifically, have also taken advantage of multiple opportunities available through international partners to strengthen the capacity of its strategic information infrastructure.

The Electronic Information Management System (EIMS) is tentatively scheduled to be completed at the end of 2021. While the development of EIMS has been an extended process — due partly to COVID-related delays, it will be a critical addition to the strategic information systems within NSACP. The shift away from paper-based reporting to a fully electronic system will significantly enhance the country's capacity to collect, manage and use clinical data in ways that will benefit patient experiences and outcomes as well as clinic operations. One of the strengths of EIMS is its broadly integrated functionality, which will enhance the ability to bring more continuity the clinic operations, including the ability to bring together the historically siloed HIV and STI programmes.

The Prevention Information Management System (PIMS) is also tentatively scheduled to be completed at the end of 2021. As is the case with EIMS, the development of PIMS faced COVID-related delays, but when it is completed and rolled out, it will be another important source of

strategic information for NSACP. If it is successful, it will provide information on the full range of outreach activities (e.g., HIV/STI prevention, HIV/STI testing, community-based services, mobile clinics, drop-in centers and prison programmes), which has been a long-standing and significant data gap within NSACP. However, there are concerns about the system's reliance on generating unique identifier codes (UIC) for KP who are included in the system. While the use of unique identifier codes helps with tracking client interactions, it could be a disincentive for KP who prefer to remain completely anonymous when interacting with outreach workers. However, PIMS does try to minimize the disclosure required by clients. For example, it is not compulsory to provide one's full name; clients can opt to only provide the first letter of their first name and the first letter of their second name. Since PIMS is drawing on lessons learned from the data system developed and used by FPA to track outreach activities — and will ultimately replace that system — it is likely that possible disincentives such as a UIC can be addressed as the system is rolled out.

Strategic information systems in Sri Lanka currently collect a significant amount of data, with the expectation that the amount will increase in the future. For example, as EIMS and PIMS are brought fully online, there will be additional data as well as new tools to manage and analyze these data. However, there are concerns about gaps in the data being collected with the most significant gap being local and hyper-local data that can be used by STD clinics and CBO partners to better understand the situation and context in their area. A good example of this type of data are local population size estimates of KP; similarly, local knowledge is essential to understand the perspectives of hidden, unreached and/or reluctant populations and how their issues can be addressed to better connect with and provide services to them.

The use of local data is not new in Sri Lanka; for example, in the pre-COVID era, local knowledge about KP communities was useful to determine where and when to operate mobile clinics. In addition, there are reports that the next application to the Global Fund will include support for local population size estimates and local IBBS. Much of these local data are qualitative and collecting and analysing it can be challenging, which raises questions about how it should best be done. However, local data are invaluable because they can help implementers identify ways to adjust and/or customize activities and approaches to ensure they are effectively reaching people in the catchment communities with vital services.

There is a corresponding lack of data about outreach activities, including data on the uptake, use and effectiveness of these activities. There does appear to be better data on the performance of Case Finder Model than Peer Educator Model. And PIMS should provide some additional data on outreach activities when it is fully operational. However, the importance of outreach in strengthening and sustaining effective HIV/STI prevention, testing and treatment warrants a focused effort to collect, analyze and use of data on outreach activities for both programme monitoring and programme improvement.

As mentioned above, understanding the perspective of hidden, unreached and/or reluctant populations is vital if more people in these categories are going to use HIV/STI services. There are some useful data available on different KP; for example, the 2021 article on transgender women "HIV,

syphilis and hepatitis B prevalence, related risk behaviours and correlates of condom use among transgender women in two cities in Sri Lanka: findings from respondent-driven sampling surveys"[24] as well as 2020 articles on beach boys and female sex workers[25]. However, the overall amount of data and the use of that data to improve HIV/STI programmes is limited. As Sri Lanka continues its efforts to reach HIV and STI elimination targets by 2030, it will be important to have a better understanding of these populations, including their motivations, their fears, their risks, their behaviours and their decision-making processes.

There is limited data on the client experience at STD clinics, either positive or negative. The SIM unit is working to collect some client feedback, which could be an important step in building a the systems to collect, analyze and use this type of data to improve clinic operations. Anecdotal findings from multiple sources suggests that poor experiences at clinics deter clients from seeking services at these facilities; conversely, similar data suggests that positive experiences at clinics reinforce better health and health-seeking behaviours as well as better health outcomes. Having more data on client experience (e.g., through the use community-based monitoring and research) would help ensure the client perspective is reflected in the approach to service delivery. For example, more and better data on the client experience in high-performing, well-regarded clinics could help understand and identify lessons/actions that could be implemented in lower-performing clinics.

There are concerns about the limited use of data, particularly by staff at the STD clinics and CBO partners working in communities. Data use by these frontline organizations should be a routine part of their operation, influencing a wide range of short, medium and long-term decisions, ranging from resource allocation to performance reviews and from service availability to hours of operation. Even with the abovementioned gap in local and hyper-local data, there are multiple data points that frontline organizations should understand and use on a regular basis to guide programme implementation and improvements.

There appear to be two main reasons why data are not being widely used by clinics and community partners. First, they do not have sufficient knowledge, skills or support to understand and analyze the data in ways that will benefit them and/or their patients or clients. Second, many of the organizations are highly stressed and they struggle to complete their core tasks, leaving them little time or energy to do useful data analysis.

One of the key challenges with collecting new and/or different types of data at the district level is the need for NSACP/SIM to engage with the Provincial Health Authorities and STD clinic directors to get their support and participation in the exercise. Making the case for additional attention and investment in data is not easy because of concerns about resources, including both time and funds. It is also more difficult when there is not a culture or history of using good data to improve decision-making and programme performance.

HIV- and KP-related stigma and discrimination is a serious problem in Sri Lanka that broadly affects the uptake and delivery of HIV/STI services. For example, the 2018 IBBS survey included multiple

[24] Jelena Barbaric et al., "HIV, Syphilis and Hepatitis B Prevalence, Related Risk Behaviours and Correlates of Condom Use among Transgender Women in Two Cities in Sri Lanka: Findings from Respondent-Driven Sampling Surveys," *Sexual Health* 18, no. 4 (September 2021): 311–18, https://doi.org/10.1071/SH21061.which included 254 TGW in Colombo and 252 in Jaffna, for structured questionnaire interviews and biological testing. We performed multivariable logistic regression analysis to explore factors associated with condom use.\nRESULTS: We found low HIV prevalence in Colombo (0.6%

[25] Ivana Bozicevic et al., "Beach Boys in Galle, Sri Lanka: Multiple HIV Risk Behaviours and Potential for HIV Bridging," *BMC Public Health* 20, no. 1 (October 23, 2020): 1604, https://doi.org/10.1186/s12889-020-09699-x.

findings showing the breadth and depth of the problem: 56.6% of FSW, 38.1% of MSM, 30.4% of TGW and 53.6% of PWID felt there were discriminatory attitudes towards HIV; 42.4% of FSW, 31.7% of MSM, 47.4% of TGW and 56.4% of PWID avoid HIV services because of discrimination.

Despite the longstanding issues with stigma and discrimination in the country, there is limited data and understanding of its drivers in the areas where NSACP would affect change (e.g., in STD clinics, among health care workers, among outreach workers) or the interventions that could be put in place to improve the situation. NSACP does work with clinics on stigma and discrimination (e.g., optional trainings), but the effectiveness of its efforts is not consistently monitored, and their value appears to be limited.

The existing M&E plan includes a large number of indicators (e.g., output indicators, outcome indicators, impact indicators, UNAIDS GAM indicators and outreach indicators) and it is very time consuming at all levels to collect, analyze and report on them. A critical concern is that the lack of prioritization of indicators dilutes the ability to identify and focus on the data with the greatest value/utility. While the fundamental role of SI is data management, it is unrealistic and unproductive to burden integrated data systems — ranging from data entry at STD clinics to data analysis in the SIM unit — with demands for more data without also understanding if or why it is useful and how it will be used. One of the reasons there are data gaps in Sri Lanka, particularly in topic areas that require the use of qualitative methods, is because of the significant resources that must be allocated to collecting, analysing and reporting data that has limited value to the performance of HIV/STI programmes.

Recommendations

Highest priority

- Use of data at clinic and community level. The better use of data — particularly at the clinic and community level — must be a priority for NSACP. Essentially, the commitment to strategic information that is clear at the national level, including the capacity of the SIM unit, must be appropriately translated to the district level, so that STD clinics and CBO partners regularly and consistently use data to understand the local context and to implement effective programmes and activities. While building the capacity to make better use of data is not a simple task, it has the potential to transform how HIV/STI services are delivered and to dramatically improve performance in areas where it has chronically lagged (e.g., coverage, retention). Better use of data is also closely linked ensuring that the collection and analysis of the most important and most relevant data is a priority.
- Data on STD clinic operations. More and better data on STD clinic operations, including the client perspective on their experiences, must be collected, analyzed and used if coverage and effectiveness of HIV and STI prevention, diagnosis and treatment is going to improved. Qualitative data, including inputs from management, staff, clients and partners, should be an integral part of this process. Data from currently high-performing STD clinics have the potential to provide valuable insights on critical issues, which can be used identify opportunities for improvements at clinics across the country.
- Collection, analysis and use of local data. NSACP should lead an initiative to build a consensus across stakeholders (e.g., Provincial Health Authorities, STD clinics, CBO partners) about how to collect, analyze and use local data to strengthen local programmes. The goal of this initiative

should be to ensure active participation and support for local data programmes that will benefit both the local and national programmes. Achieving this goal will require the development of straightforward tools, guidance materials and support activities that give stakeholders the capacity to work with relevant and useful local data. The development process should leverage existing resources that are being implemented in different countries and contexts around the world.

- Indicator review. NSACP should review the wide range of HIV and STI indicators that it uses for data collection and reporting to assess the importance and utility of each one, including rationales for why it is important, how/if it is used and whether it can be dropped or de-emphasized. This review should also be an opportunity to explore gaps in indicator sets where additional and/or better data should be collected, including a broader use of frontline indicators to track performance at the clinic and community level that can be used for programme improvement. As Sri Lanka moves towards the elimination of HIV and STIs, it becomes increasingly important to focus its strategic information resources in the areas where they will make the greatest difference. Prioritizing indicators is a practical way to identify areas where these resources can be the most useful.

High priority

- Research to improve frontline HIV/STI programmes. NSACP should carefully review its plans and priorities with an eye toward more research on critical issues and activities that have the potential to improve frontline HIV/STI programmes that will complement its other ongoing work (e.g., programme monitoring, surveillance, estimations). This exercise should explore ways to accelerate key research activities (e.g., operational research, targeted mini-surveys) as well as make them more inclusive (e.g., community-based research). The exercise should also carefully consider areas where significant gaps in knowledge may require more qualitative research (e.g., hidden populations, risk factors, risk behaviours, stigma and discrimination).
- EIMS and PIMS. It is important to underscore the importance of NSACP and the SIM unit's plans and efforts to monitor and assess the use of EIMS and PIMS. This process should include not only the technical operations of the systems (which are critically important), but also the broader implications of their use, ranging from how they affect the duties of clinic staff and outreach workers to how they affect relationships with patients/clients to how data are analyzed and used. These systems have the potential to improve the overall SI system in Sri Lanka, but it will be important to understand their strengths and weaknesses in real-world use and address them accordingly.
- Virtual Combination HIV Services. The potentially transformative role of Sri Lanka's new strategy for 'Virtual Combination HIV Services' warrants a close and comprehensive monitoring and assessment of its performance during rollout and scale-up. In addition, this data should be correlated with data on the performance of other outreach approaches (CFM, PEM) to determine how the different approaches are working collectively. (There may be a need to collect additional performance data on CFM and PEM to properly assess their contributions to the HIV/STI response.) Key findings should be regularly and carefully reviewed to determine if and when adjustments to the virtual strategy and/or the other strategies should be made to maximize their effectiveness.
- KP involvement in monitoring and research. NSACP should explore ways to formally engage KP communities in monitoring and research (e.g., a structured community-based monitoring programmes) to ensure their knowledge and perspectives are reflected in the national and sub-national SI activities and outputs.

Strategic Direction 4 (SD4): Health Systems Strengthening

The Sri Lankan health system has been a shining example for the rest of the world, and especially for countries of the Global South, due to its success in providing universal health coverage to its population. While economically, the country is classified as lower-middle-income (having changed its upper-middle-income status in 2020) its achievements in healthcare outcomes are in line with the most developed countries in the world. Sri Lanka's effective maternal and child health system yielded significant gains in terms of maternal mortality rate (MMR) and under-5 mortality rate, as well as the infant mortality rate, which is used globally as a proxy for institutional quality and development.

Despite the aforementioned improvements in MMR and IMR, the indicators for SDG 3.3, including the incidence of new HIV infections and the incidence of tuberculosis, have not shown major improvements over the last few years.

Specific projections show that targets set in the NSP (2018-2022) of the NSACP may also remain unachieved. In addition, the post-Covid health system may face other challenges to catch up with the faltered services and resources may not remain the same.

A review of the progress against the output indicators in the NSP against HSS shows that the government has been able to establish STD clinics in each district, ART centers in the districts have been supervised as planned, training has been conducted digitally during the Covid pandemic period and the National AIDS Committee has met regularly.

Another major problem is poor financing of the programme particularly of the KP programmes and utilization of the allocated resources from international agencies like the Global Fund. The resource need estimation has shown lower resource need for KP compared to the international established bench mark (say per capita 7 to 10 USD in the resource need estimation for MSM prevention programme compared to 100 USD or so in the resource need exercise conducted by UNAIDS for Asia). In addition, the main source of funding has been left to the Global Fund (GF). Relative poor utilization of GF resources also makes these programmes underfunded.

Political Commitment and Multisectoral Response

There is a need for political attention to the fact that Sri Lanka, otherwise well-positioned to meet SDG indicators, is likely to fail to meet SGD 3.3 indicators, mainly due to a lack of progress on HIV and TB.

The National AIDS Council (NAC), which was recommended in the last two strategic plans to be headed by the Head of State or His (her) representative, has not yet been institutionalised. Though the idea of a National AIDS Council, recommended globally in the first-generation national AIDS programmes, has lost its popularity a body that can coordinate across different sectors is still needed to stimulate a multisectoral response or a multi-ministerial programme. There is a need for a high-level body with representative Heads of State and several ministries like finance, home, education etc. Any existing multi-ministerial body can also play this role and this review recommends the formation of such a group to replace the National AIDS Council.

National and Provincial AIDS committee meetings, led by senior secretaries of the MoH, are well attended by multisectoral partners and conducted with regularity.

Finance and programme sustainability

High-level political commitment is yet to be translated into financial commitment and availability of resources.

Coupled with lack of release of funds and poor utilization of the GF resources KP funding has suffered. While this has resulted in an increased proportion of government funding (90 per cent instead of 60 per cent originally planned) overall utilized resources are less than what was planned. The main resource has gone to pay for government salaries and facilities, thus weakening the outreach part of the programme both in government and NGO settings.

There is a need for a framework for HIV that provides denominators and monitoring indicators for estimating resource need and output and outcome at a local level. This needs to be synchronized with similar frameworks of other communicable diseases.

Standard package for KP interventions

There is a need for a standard activity or intervention list, dose frequency which can be scaled up to according to low medium and high-intensity zone that can be costed per 100 population. Local best practices based on prevention outreach and case detection activities can be adjusted based on WHO standard packages for differentiated service delivery model (2016 version – 2021 expected soon)

Establishing best practices and plan for scaling up: Based on the typology of the KP and size, there is a need to develop an operational plan for scaling up and best practice sites can be used for training purposes

Technical support facilities for mentoring KP program based on evidence: Transforming training and capacity building into an ongoing mentoring programme has been identified as a need that can be affiliated with the national program.

PWID focus: Services for a marginalised population like PWID needs to be established.

Human resources

There has been significant progress in 100 per cent recruitment of consultant community physicians and venereologists. Unfortunately, the ratio of part-time or full-time service providers (CBOs or in the government) has not been estimated based on need or according to the local context. There is a great need for standardization.

Some skilled personnel are missing in facilities e.g. counsellors. One type of skill has often been chosen over another instead of recruiting a mix of skills for KP. Capacity building has often been through training than handholding or mentoring.

Recruitments to be adjusted and tailored to provincial needs while ensuring that funding is sustained from the provincial and or central government.

Community Systems Strengthening

Community System Strengthening (CSS) is a Global Fund championed concept to reach the unreached and KPs. CSS has not been a significant part of the current NSP and the transitional plan. Given the key significance of the KP programme in reaching the target for ending AIDS, it needs to be revisited. Indeed, marginalization and social stigma vary between different settings and according to the population group involved. A combination of these two factors may be considered. Additionally, the specific interventions targeting KP needs to be evidence-based, locally relevant and acceptable. Recent UNAIDS and HLM strategy has advocated for community-led interventions, which need to be adapted to the country situation.

Enabling environment

Enabling environment interventions advocated by UNAIDS describe a range of interventions that facilitate or remove barriers towards acceptance of medical interventions. Belonging to a network through group formation, or collectivization, decriminalization, violence reduction, literacy programs, a creche for children of sex workers, de-addiction program for DUs, primary health care or reproductive healthcare, escorted referral services in hospitals or presence of CBOs in hospital settings, provision of transport costs are many such examples of enabling interventions that have not been appropriately funded to be standardised in Sri Lankan settings.

Strategic Direction 5 (SD5): Supportive Environment

Capacity building of health care workers to minimize stigma and discrimination in health care settings

NSP 2018-2022 recommends to reduce stigma and discrimination at service delivery sites and to ensure all health professional training modules address issues on human rights, stigma and discrimination.

HIV/AIDS and stigma and discrimination are addressed in basic training of health care professionals, specifically undergraduate medical training and nursing. Allied health professionals also have inputs on HIV/AIDS in their training curricula, however, the extent to which stigma and discrimination is specifically addressed, is not documented.

There are several pre-service training programmes targeting STD clinic staff. All categories of healthcare workers of STD clinics should undergo a mandatory training within the period of six months of enrolment to the clinics. Medical officers attached to the STD clinic should undergo compulsory two months of theory and practical training at NSACP, Colombo. Other major heath staff such as nursing officers, public health sisters, matrons, medical laboratory technicians, pharmacists, public health laboratory technicians, dispensers and public health inspectors need to undergo two weeks of training while minor are also given one-week training which provides relevant theory and hands on experience. Stigma and discrimination on key populations and PLHIV is specifically addressed in all these programmes and relevant training modules have been updated. In addition, there are in-service trainings on counselling and social behavioural change for STD clinic staff and refresher training conducted to improve attitudes related to patient care in STD clinic staff.

Training programmes specifically addressing stigma and discrimination (as recommended in the NSP) have been planned for STD clinic staff in 2020 and were conducted in some districts. However, this programme was interrupted due to Covid-19 pandemic.

For hospital staff other than those of the STD clinics, private practitioners and physicians there are training programmes on HIV/AIDS including stigma and discrimination. In the year 2017 and 2018 training programmes were conducted for health care workers in 13 tertiary care hospitals in the country to introduce comprehensive care services for PLHIV and to address the issue of stigma and discrimination.

In addition to these, postgraduate training curricula of several disciplines include training of HIV/AIDS and during these programmes also stigma and discrimination reduction is stressed upon.

Gaps identified

The main barrier that has affected the capacity building programmes is the Covid-19 pandemic. Some of the training programmes have been shifted to an online platform due to this situation. However, online training is not feasible for all staff categories due to lack of equipment and connectivity. Furthermore, limitation of staff and facilities at the Training Unit of NSACP has also become a challenge.

Accessibility and responsiveness of STD services

Stigma and discrimination status in STD clinic services is perceived as improved by PLHIV and KP attendees. However, all the services are not free of stigma and discrimination because some instances of discriminatory treatment are mentioned. NSP 2018-2022 specifies as an outcome, a 20% reduction in the percentage of KPs who avoided seeking HIV testing because of fear of stigma, fear or experienced violence, and/or fear or experienced police harassment or arrest. According to the Integrated Biological and Behavioural Surveillance- 2018[26] the stigma index reported in KPs is as shown in Table 12.

Furthermore, according to the findings of the IBBS, it is evident that there is stigma and discrimination persisting in the health services. Seventeen percent of the FSWs, 15% of the MSMs, 8% of the PWIDs and 8.5% of the TG populations have reported that they have been refused health care due to being a KP member.

Table 12: Stigma Index in key populations according to the IBBS 2018

Key Population	Stigma Index
Female sex workers	22.6% - 48.2%
Men having sex with men	26.8% - 33.1%
Persons who inject drugs	56.4%
Beach boys	0.9%
Transgender persons	49.3%

There are other issues related to the environment and responsiveness of the health care services, as expressed by the KP members. High waiting time, lack of space and having to wait outside, poor privacy due to lack of space, transport difficulties to reach some clinics and difficulties experienced in reaching the services during the allocated time are some of the issues mentioned.

SRH education in the school curriculum

Introducing comprehensive SRH education including STD/HIV prevention to the school curriculum has been a recommendation of the previous programme reviews and the NSP 2018-2022. Comprehensive SRH education at school level will equip the future youth with knowledge and skills to protect themselves from STD/HIV while it will also create an enabling environment free of stigma and discrimination for the key populations and PLHIV in the long term. Introducing a comprehensive SRH education to school curriculum is not fully achieved yet, however, some positive steps have been taken in this regard. Comprehensive SRH curriculum including STD/HIV has been developed for Grade 12, before the students start their different study streams. This SRH curriculum has been pilot tested in 2019, and it is currently ready to be introduced to all schools. Teacher training has been conducted for the new SRH curriculum. National Institute of Education (NIE) conducts training programmes on SRH for In-Service Advisors (ISA) who are in charge of Health and Physical Education as trainers. The NSACP is also involved in training of master trainers. The ISA are supposed to train Health and Physical Education teachers at the zonal level.

[26] National STD/AIDS Prevention Programme, Integrated Biological and Behavioural Surveillance 2018

Revisions to the overall school curriculum is also currently underway, and it is planned to deliver simple, age-appropriate SRH education along with life skills for Grades 6 – 11.

Challenges identified

SRH education in schools is a highly controversial topic in the Sri Lankan education sector, therefore, sudden, major changes are not feasible. School teachers' skills in delivering the SRH content is a crucial factor for the effectiveness of the SRH education.

PLHIV and KP networks and support services

There are three PLHIV networks in Sri Lanka - Lanka Plus, Positive Women's Network and Positive Hopes Alliance that are primarily based in Colombo and provide services throughout the country. The services include, counselling and psychological support services, maintaining drop-in centers, self-employment and financial support and advocacy and awareness. PLHIV networks work closely with the NSACP and are represented in all relevant subcommittees. They generally feel that their views are heard in these subcommittees.

Members of PLHIV networks highlight that the clinic infrastructure have not been developed to cater to the increasing numbers of HIV patients. With the current Covid-19 pandemic situation and lock-down, PLHIV networks have been actively engaged in delivering medicines to the members, providing financial support and food to needy members. They feel that the regular treatment and investigations have got disrupted in some members and feel that there should be better mechanism to reach them during the pandemic situation.

Stigma and discrimination in the STD/HIV clinics are much less according to the PLHIV networks. Stigma in other health care settings are lesser than previous times but still exist. However, there are positive trends like treating the HIV patients in the 'normal' ward settings. Stigma and discrimination in other facets of life remain unsatisfactory. Although non-discriminatory policies exist, the peoples' awareness and attitudes regarding implementing them remains poor.

PLHIV networks in Sri Lanka are largely funded by the GFATM. There are concerns about their financial viability in the situation GFATM withdraws from the funding process. The different networks do not have much collaborations between each other, hence lack a collective voice and strength in appearing for policy matters.

There are support organizations like the AIDS Foundation Lanka, which rely in their own funding and provide support for PLHIV. Their support services include training, economic support, subsidies, self-employment support and support during situations of discrimination. The collaborations with the NSACP have been good, however depends largely on personal relationships.

Legislation, policies and law enforcement

The Constitution of the Democratic Socialist Republic of Sri Lanka 1978, recognizes equal fundamental human rights for all, and no citizen shall be discriminated against on the grounds of race, religion, language, caste, sex, political opinion, place of birth or any such grounds.

Sri Lanka is a signatory to the international conventions and treaties relevant to the human rights of PLHIV, MSM and transgender individuals - the International Covenant on Civil and Political Rights (ICCPR), the International Covenant on Economic, Social and Cultural Rights (ICESCR), the Convention for the Elimination of All Forms of Discrimination against Women (CEDAW), and the Convention on the Rights of the Child (Children's Rights Convention). National HIV/AIDS Policy of 2011 recognizes the rights of the PLHIV and specifies promotion, protection, respect and measures to be taken to eliminate discrimination and combat stigma to provide an enabling environment to seek relevant services.

Several other policies like the National Policy on HIV/AIDS in the World of Work, Policy on Prison HIV Prevention, National Maternal and Child Health Policy (2009), National Youth Policy (2014), National Policy and Strategy on Health of Young Persons, Sri Lanka National Migration Health Policy (2012) also identify the rights to work and health for different population groups including PLHIV.

There are some laws in Sri Lanka that adversely affect key populations. Section 365 and 365 A of the Penal code, Vagrants ordinance, Brothel ordinance and section 399 of the Penal code are some of the laws that negatively affect HIV prevention among key populations in the country. Brothel's Ordinance of 1889 identifies owning, managing, being the occupier of a brothel or assisting thereof as an offence.

As a result, the provision of preventive and testing services related to HIV to this affected key population is hindered. In the Vagrants Ordinance, sections 3, 4, 7, 9 and 11 are relevant to the offences of commercial sex workers and if found wandering in the streets they can be considered as guilty of soliciting sex. Sections 365 and 365A of the Penal Code deals with unnatural offences and acts of gross indecency between persons and thereby criminalizes homosexual behaviour, which would discourage MSMs from reaching for HIV prevention services.

According to Section 399 of the Penal code, 'cheating by personation' is identified as a criminal offence, and this law is misinterpreted by some law-enforcement officers to criminalize transgender individuals, due to their poor understanding of the medical background of transgenderism. This could lead to stigmatization of transgender population and distance them from HIV prevention services.

NSP 2018-2022 gives the following recommendations with regard to legislation, policy and law-enforcement as a supportive environment for HIV prevention:

- Issue a specific guideline to the education sector for protection of human rights of children affected by and infected with HIV and enhance awareness of laws and policies that promote human rights of all people including of KPs and PLHIV
- Conduct advocacy activities for an enabling environment for KPs and PLHIV in order to reduce stigma and discrimination and address violence against KPs
- Develop a policy for ethical reporting on HIV/AIDS/STI by the media
- Advocate with the media on responsible reporting on HIV/AIDS/STI
- Enhance training of law enforcement officers to sensitise them on human rights and fundamental freedom for all which is essential for building a supportive environment

- Reconstitute the legal and ethical subcommittee of the NAC so that it can advocate with policy makers to strengthen the supportive environment for KPs and PLHIV
- Revisit and repeal laws that criminalise KPs specifically the vagrancy act and 365a and amend the brothel ordinance
- Instances where children of HIV positive parents were discriminated in school setting were reported previously and court decisions have been given in favour of the child in such instances. A circular has been issued by the Ministry of Education ensuring the right of children and that they should not be discriminated due to HIV status, pregnancy or any such situation.

The Legal and Ethical subcommittee of the NAC has been functional and having regular meetings prior to the Covid pandemic situation. There is limited progress with regard to amendments to the existing punitive laws that adversely influence HIV control. There is no strong action seen from the side of NSACP or the community organizations to implement activities to address these legal barriers. However, the strategy of minimizing the harm from these laws at the level of law-enforcement, has been implemented.

Advocacy programmes have been conducted for higher officials in the police regarding the laws that adversely affect HIV prevention in key populations. TOT programmes have been conducted for police officers on HIV/STD prevention, human rights and the laws that adversely influence KPs. A research study has been conducted among police officers to identify the effect of such training and advocacy programmes and to identify further training needs. The report of this study is being finalized and will reveal evidence on the strategy of minimizing the adverse effects of the laws at the level of law enforcement.

Advocacy programmes have been conducted for media personnel also on HIV AIDS and on responsible reporting of HIV/AIDS/STI by the media. A specific policy on ethical reporting STI/HIV/AIDS by the media has not been developed.

A reporting format has been developed and distributed to STD clinics, peer educators and other settings related to KPs, for reporting of any discrimination they have experiences, and the committee acts on to rectify them as much as possible.

Condom accessibility

Availability of good quality condoms in an affordable manner is a key factor in HIV/STD prevention. Condoms are listed under the medical device category in the essential drug list of the MoH. Government sector provides condoms free of charge. Condoms are distributed through the network of STD clinics, family planning clinics under Medical Officers of Health and through the principal recipient two under the GFATM round nine for KPs in intervention districts.

The network of STD clinics distributes condoms to their usual clients, as well as to the other vulnerable groups. The Family Health Bureau is the national focal point of the family health programme, and supplies free condoms to the community for family planning through 1800 island-wide family planning clinics and through grass root level Public Health Midwives, based on the cafeteria method.

The two NGOs in Sri Lanka (Family Planning Association of Sri Lanka & Population Services Lanka) offer Sexual and Reproductive Health services, contraceptives and condoms free of charge through a limited number of centers. The commercial sector supplies condoms to the pharmacies, supermarkets, grocery shops, private hospitals and other retail places at a varying price range based on the quality of the condoms.

There is no legal restriction to keep condoms. Using possession of condoms as evidence of sex work, has largely reduced over the recent years with the advocacy and training of law enforcement officers. However, myths and poor attitudes towards condom use still persist in the society, and may hinder their use.

National Condom strategy has been developed in 2015, with the aim of ensuring the availability of quality condoms of choice, either free of charge or at an affordable price, through an effective and responsive service delivery system, in order to provide quality SRH services to the entire country.

NSP 2018-2022 recommends to widely disseminate the National Condom Strategy and make all aware of the legal status of condoms. IEC sub-committee of the NAC is responsible for the planning and monitoring of implementation of the Condom Strategy and this committee was convened 3-4 times a year. In addition to the condom distribution through STD clinics and KP interventions, condom dispensers have been distributed through peripheral STD clinics and located in hospitals, RDHS offices, MOH office, tri-force camps, police stations, supermarkets, filling stations, construction sites, hotels, SPAs, economic centers and public toilets. Although the Policy on Prison HIV Prevention states that all preventive measures available for HIV prevention in the population should be made available in the prisons, there are no provisions to make condoms available in the prisons.

Recommendations

Highest priority

- Continue and scale up advocacy and training for the police officers emphasizing the importance of creating a supportive legal environment for HIV prevention in key populations.
- Capacity building programmes for health care staff, specifically addressing stigma and discrimination, should be continued according to an annual plan. Obtaining feedback, periodic review of the training curricula and updating them should be in-built into the annual plan of the training unit. To effectively conduct these, the training unit of the NSACP should be strengthened with human resources and facilities to conduct training, specifically online programmes.
- Training programmes planned for the STD clinic staff on stigma and discrimination should be conducted and strengthened further.
- Advocate officials of the Prisons Department for making condoms available in prison settings.

High priority

- Strengthen and continue advocacy activities to different non-health government and non-government institutions to create an enabling legal and social environment environment for KPs and PLHIV by reducing stigma and discrimination in non-health settings

- Collaborate with the Ministry of Mass Media and review the existing media ethics guidelines and ensure ethical reporting of HIV/STI is incorporated. Continue advocacy and training for media personnel to sensitize them on ethical reporting.
- Review the earlier attempts to amend the laws that criminalise KPs specifically the vagrancy act and Penal Code 365a and the brothel ordinance, and collaborate with civil society organizations to develop and implement a plan to address the opposing forces to the process of change.

Medium priority

- Conduct a facility survey of the STD clinics and identify and correct the structural limitations of the STD clinics.
- Teachers delivering SRH education should be given comprehensive training with adequate hands-on sessions that need to be incorporated into the teacher training, along with a mechanism to certify their competence. NSACP, School Health Unit of Family Health Bureau and NSACP should work collaboratively to achieve this.
- Continue the strong relationship between NSACP/STD clinics and PLHIV organizations.
- Collaborate more with the PLHIV networks to identify the barriers for care-seeking among PLHIV during the current pandemic situation and develop a collaborative plan to reach them and ensure their care and follow up.
- Strengthen the formal collaborations with HIV support organizations.
- Strengthen the discrimination reporting system for KPs and PLHIV and collaborate with the Human Rights Commissions, Child Protection Authority and Legal Aids Commission to provide legal support to the victims.
- Strengthen the condom distribution by collaborating with work and educational settings frequented by young people and making condoms freely available to them.

Conclusion and Overarching Recommendations

In conclusion, this NSP has taken an overall evidence-based approach to lay the foundation for a robust national program, though one that is yet to be scaled up towards Ending AIDS. That task can be taken up now in partnership with people infected and affected by HIV, the government, healthcare providers and others, in collaboration with international and UN agencies. Other than following recommendations made during validation of the EMTCT programme to consolidate the past gains, a few overarching recommendations that would help Sri Lanka achieve the goal of Ending AIDS by 2030, are highlighted below:

1. Consolidate earlier gains in Prevention:

Continue best practices mentioned by Global Validation Advisory Committee and address recommendations on the expansion of EQA and develop a plan for sustainability beyond the GFATM grant period.

2. Build on previous evidence-based NSP and make Interim adjustments within NSP to align with the new Global AIDS strategy

For the last 5 years, the Global AIDS strategy[27] has led to more focus on the Test-and-Treat mechanism, which was aimed at reducing the burden of the epidemic, by reducing the infection potential of people who have already tested positive for HIV. The new Global AIDS strategy[28] analyzes the shortcomings of the previous approach in its ability to reduce the new infection by 75 % by 2020, a concomitant target associated with treatment based approaches of 90-90-90 by 2020. The new strategy calls for an updated target of 95-95-95 by 2025, an increase over the last target. In addition, targets include 95% coverage to combination prevention(both for HIV positive and negative individuals), 95% of women access HIV and sexual and reproductive health services, and 95% coverage of services for eliminating vertical transmission. A few of the key strategies that NSACP should make interim strategic adjustments, and which should be included in the future NSP - are optimization of approaches for combination prevention and adaption of community-led interventions by KP members in the Sri Lankan context. It also calls for qualitative change in services for sexual and reproductive where 95 % of women would access sexual and RHS which in the Sri Lankan context would mean elevating current STI service for the General population to a newer height.

3. Subnational Framework for the elimination of HIV/STI - improved surveillance at the Core

To develop and implement an effective response to the HIV/STI epidemic, it is important to have a scientific understanding of the patterns and burden of the diseases, especially at a disaggregated level by geographic location and population groups. Sri Lanka has been one of the first three countries in the region to achieve EMTCT of AIDS and Congenital Syphilis. To continue this strong performance in the epidemic response, we recommend adopting a subnational framework for Ending

[27] UNAIDS, "UNAIDS Strategy 2016-2021," 2015, https://www.unaids.org/sites/default/files/media_asset/20151027_UNAIDS_PCB37_15_18_EN_rev1.pdf.
[28] UNAIDS, "Global AIDS Strategy 2021-2026," 2021, https://www.unaids.org/en/resources/documents/2021/2021-2026-global-AIDS-strategy.

AIDS and other STIs. A few key activities would be the implementation of recommendations made by the specialists in the areas of surveillance[29] that encourages mapping of the distribution of risk and infection for HIV and STI, estimation of the size of the local key population, conducting local surveillance, both behavioural and biological, at shorter intervals and involving local communities of KP and public health administration in carrying out these activities. More and better data on STD clinic operations, including the client perspective on their experiences, collected, analyzed and used in addition to other programmatic data will help locally tailored programmes for HIV/STI prevention.

4. Drastically increase the budget allocated to HIV/STI spending, while continuing the prioritization of KP interventions and improving fund utilisation from the GFATM.

Revised resource need estimation is necessary to reach the evidence-based targets set up in the current national plan. Resources allocated by the GF for KP needs to be both increased and better utilized and unit cost for different interventions, particularly for KP, should be benchmarked against international and regional standards. Resources need to be earmarked for funding the operations of NGOs/CBOs, KP organizations, PLHIV networks, and STI clinics on evidence-based unit cost

Increased domestic funding of KP remains a key element as currently the KP budget mainly comes from the Global Fund and such dependence creates a bottleneck as seen in the last allocation and utilization of resources. (While the ratio for planned allocation on HIV was 60: 40 by the government: Global Fund, actual resources from KP got skewed towards general population interventions).

Interventions and services (including STI) targeting the KP should be funded by the AIDS budget, while interventions targeted at the general population should be funded through other ministries, with HIV funds acting as synergising resources for such initiatives. Low-impact interventions, an example of which can be the National Communication Strategy developed by the NSACP for increasing awareness through mass media, should also be funded separately, say by the Ministry of information and communications.

5. Sustain interventions for SW, achieve saturation in MSM interventions, initiate harm reduction interventions, and increase uptake of STI services.

Increase the resources allocated to interventions that specifically target MSM and TG populations, since a larger section of new infections are being reported from these KP groups. Sri Lanka has had a significant reduction in HIV infections among FSW and their clients (ref of AEM source of new infection) - such gains need to be sustained and scaled up with quality. Interventions targeting the PWID population have been long-awaited in the country. The rollout of harm reduction interventions like needle exchange programmes and substitution should be prioritized and scaled up for complete coverage beyond pilot activities. Initial work on interventions for the prison population needs to be reinvigorated.

Close the main gap on STI services for KP – low reach and uptake of STI services by key populations by[30] providing comprehensive STI services for KP to detect both asymptomatic and symptomatic STIs and support prevention, with decentralized laboratory capacity to support more complete STI screening, PrEP monitoring, etc. Promote regular medical checkups for KP 'to stay healthy' –

[29] Draft Surveillance Strategy for National HIV/STI Program of Sri Lanka

[30] Microplanning and trusted access platform guidance provide a framework and examples for how this works elsewhere

strengthen outreach with continuous hotspot presence, adapt face-to-face and virtual strategies to districts with different needs.

6. High quality technical and programme support both for the Government and NGOs

Transform training to a process of ongoing mentoring by setting up a Technical Mentoring Unit or programme support unit at the NSACP linked with the SI unit, to develop a more robust approach in developing locally tailored plans and improving the quality of both government and NGO/CBO operations through mentoring and hand-holding. Resources (both national and international) for this would be in addition to the allocations already in place. This unit would be responsible for the overall design, quality control and handholding of the programme from strategy to implementation while actual mentoring can be done through govt institutes for health care providers or facilities, and through umbrella NGOs (eg FPA or similar bodies) for KP, PLHV and CBOs.

7. Prioritize Location

NSACP and the provinces should work together to tailor prevention approaches to districts based on need and capacity. Four districts have been classified as high intensity, due to the size of KP as well as the burden of the HIV/STI epidemic. These districts would have high levels of outreach activities in addition to facility-based services. In the low and medium intensity districts, the extent of outreach activities can be adjusted, if necessary, based on reviewing local data. All districts should have high-quality and accessible services through the STD clinic, including PrEP. PrEP could potentially be used as an example of how to implement interventions well with KP since uptake requires good outreach, and continuation requires regular clinic attendance and STI screening, like Regular Medical Checkups (RMC).

8. Make service delivery package for KP comprehensive, and standard for coverage and quality

Current service packages should be standardized so that they are comprehensive and combine community organisations and govt. facilities, while following international benchmarks[3132] in intervention activities, quality and cost estimation.

9. Strengthen Enabling Environment to address barriers to roll out of and access to services

Current programs for enabling environment program needs to be strengthened and their quality monitored to incorporate feedback from service providers (govt and non-govt) and beneficiaries.

Creating enabling environments are an integral part of any HIV/STI programme. In the presence of different prevention interventions that promote awareness, and peer consciousness, enabling environments are needed to provide marginalized populations with the means to make sustained behavioural change. Some important components of this include:

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[31] World Health Organization, *Consolidated Guidelines on HIV Prevention, Diagnosis, Treatment and Care for Key Populations*.

[32] World Health Organization. Regional Office for South-East Asia, *Are Key Populations Really the "KEY" to Ending AIDS in Asia? Putting Asia's HIV Response Back on Track* (World Health Organization. Regional Office for South-East Asia, 2018), https://apps.who.int/iris/handle/10665/277388.

- Funding for CBO/NGO and PLHIV networks. NSACP should develop and implement a programme to provide the necessary technical and financial support to CBOs for them to play an active and sustained role in HIV/STI activities focused on KP.
- Making services more accessible by creating enabling environments that are
    a. Facility-based
        i. The timing of services can be adjusted to ensure that KP members can access it when most convenient to them.
        ii. Sensitisation training of care providers at facilities
        iii. Maintaining NGO/CBOs and KP organization presence in the facilities - making the access procedure KP-friendly
    b. Outreach based
        i. Leverage Virtual Outreach Strategies that are being rolled out by the NSACP, along with the PIMS to coordinate
        ii. Provide training for counselling to outreach workers, allowing KP to access counselling out of the facility as well.
        iii. Address other needs of beneficiaries – like income support, childcare needs, and socio-economic needs addressing violence, stigma and discrimination for KP based on local feedback.

Improving the quality of the current programme through local surveys and digital monitoring may be integrated into the SI programme. Earmarking of the budget is necessary for local enabling activities.

10. Prioritise ART for KP

- Minimise linkage loss from testing to initiation of treatment.
- Improve the quality of services wherever possible – annual viral load tests for all PLHIV on ART to have complete data on the level of viral load suppression
- Reduction in time required for treatment would underscore the utility of ART as a preventive treatment

11. Programming Targeted at General Population other than the EMTCT programme

a. Blood Safety Practices

Stronger coordination with the NBTS and Private Health Services Regulatory Council to make sure that reporting from private blood banks also maintain stringent testing and reporting standards. This data needs to be made available to the NSACP.

b. Comprehensive STI packages as a part of public health infrastructure

Sri Lanka has a strong public health infrastructure. This should be leveraged to provide strong STI testing and treatment packages to the general population while retaining focus on key and vulnerable populations - migrants, tourist industry workers, prison population and the military personnel. The current STI programme doesn't have screening targets

except for antenatal women which need to be extended to key and vulnerable populations with variable and appropriate frequency. Diseases covered under routine screening need to expand to like Chlamydia that requires PCR based testing in laboratories

c. Programmes targeted at the youth

Awareness programs targeted at the youth should be implemented by the government, beyond the allocations made available to the NSACP. The NSACP funding should synergise the effort rather than the main resource pool for funding these interventions. Utilizing virtual outreach programmes to reach out to the young population can also be an effective strategy to implement.

d. Programme for returning and outgoing migrants, military personnel and peacekeeping forces:

Sri Lanka has established a good programme for migrants both outgoing and returning migrants. While issues related to testing by the employers remains, long-standing issues on data for testing the returning migrants need to be handed over to NSACP and fully funded and remain operational. For sustainability, these programmes need to be funded by the relevant ministries.

12. Strengthen laboratory and public health infrastructure and integrate where possible

- Decentralize HIV testing by the introduction of three rapid tests or one ELISA test, with two rapid tests based on facilities following WHO verification to provide same-day results.
- Implement the plan for expansion of comprehensive STI screening including Gonococci culture in peripheral STD clinic laboratories.
- Increase qualified personnel needed for STI services in type and number. For example, counsellors are not present even in high volume settings, public health posts remain vacant, transport costs are not available.
- Address the issues of need for flexible hours, the big distance between TB and STI/ clinics, task shifting for POCs.
- Establish a drug resistance laboratory for HIV.
- Increase HCT sites to improve the access for HTS, especially in western provinces with a high HIV burden in the country.
- Scale-up community-led testing services and HIV self-testing.

13. Strategic information

- Allow strategic information to lead the response in real-time and based on triangulation of information from multiple sources and methods of data collection.
- Monitor key programme indicators – adapt EIMS and PMIS to track priority indicators and guide programme towards 'saturation' targets.
- Calibrate the SI to initiate and incorporate local data including feedback from providers and KP using other existing digital tools available with the neighbouring countries[33] and WHO regional office,

[33] iMonitor+ that has been implemented in Thailand.

14. International Cooperation and Partnerships

The new strategy of UNAIDS 2021[34] and international best practices[35] for low prevalent countries optimization of prevention efforts both for HIV negatives and positives and advocates for a mix of facility and outreach work linked with variations of community-led interventions.

The evidence-based strategy of prioritization has been of great impact while evidence of clustering of KP for location prioritization and missing framework of local output and impact measurement has been a key weakness of the strategy. Other than academic universities and some national programs, international agencies like USAID and WHO can offer support and collaboration.

Although this is not an easy task, Sri Lanka has used social innovations in the past for service delivery NGOs in conflict areas for malaria elimination. This needs to be attempted in the HIV/STI response as well. UNAIDS and UNDP can be important partners in this effort.

The WHO regional office can support political advocacy. While different models of services in the community and their link with facilities are being explored, training and capacity building needs to transform to mentoring and handholding. A unit that looks after this, as mentioned previously, the Training and Monitoring Unit, can be separately funded over and above grant allocations from the GFATM and or from other sources like the UN agencies and can be affiliated with the national program.

15. Ensure continued political commitment

Political Commitment towards maintaining a strong HIV/STI response in low-prevalence countries like Sri Lanka would have some challenges, especially with regards to resources allocated to such efforts in the long run. It is to deal with this issue that National AIDS Councils headed by the Head of State, were proposed and implemented in countries around the world, especially after a success story of such an effort in Thailand in the early 2000s. However, in reality, these councils have not been active, including the National AIDS Council in Sri Lanka. This requires us to come up with alternate mechanisms of political commitment, to ensure the multisectoral nature of implementation of an effective HIV/STI response. Creating enabling environments requires coordination with other departments, apart from the Health Department, of the government, including Law Enforcement and Education. One way of addressing this need for high-level political action may be through a multisectoral body formed to review progress on the Sustainable Development Goals. Such a body would be led by the Head of State or Senior Ministers of the Government. On reviewing progress made towards SDG 3.3, the need for sustained programming on HIV/STI should be the focus and could help in mobilising sufficient political motivation and commitment are in place to address the needs of the response.

[34] UNAIDS, "Global AIDS Strategy 2021-2026."
[35] World Health Organization. Regional Office for South-East Asia, *Are Key Populations Really the "KEY" to Ending AIDS in Asia?*

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Annexes

Annexure I - Assessment Strategies for STD clinics and specific STI Services

What progress has been made implementing your area of NSP? Coverage, physical infrastructure and staffing

- The number of STD clinics has been increased from 35 to 41, with plans to reach 55. All are led by consultant venereologists. The expansion to grade A base hospital level is based on perceived need guided from district consultation. Seven of ten planned container clinics are operational, with three on hold due to resource constraints.
- In addition, STI services are offered at 24 branch clinics, which are held weekly or biweekly in areas of need.
- Despite this expansion of services, interviews with clinic staff and others reveal continuing constraints of space and privacy.

STI/HIV service provision

- STI diagnostic and treatment services remain essentially the same as earlier. PCR for diagnosis of chlamydia is only intermittently available and chlamydia is mostly identified as non-gonococcal urethritis/cervicitis by algorithm.
- HIV services have received more attention than other STIs under this NSP. After hours and outreach services at KP hotspots (rail stations, bus stands, floating market, etc) can reach 40-50 KP in a 4-hour night session. These services concentrate mainly on HIV testing, along with prevention advice and provision of condoms and lubricant. STI screening is only done for patients who attend STD clinics.
- The role of peer educators in mobilizing KP to attend clinics is less clear (as discussed in KP section) but they appear to be under-utilized, and lack targets and tools to guide their work (see guidance on microplanning / trusted access platform for examples).
- In terms of monitoring KP outreach and linkage to services, some progress has been made in introducing unique identifiers (UIC) and a trackable electronic monitoring system (EIMS).
- Outreach to prisons takes place, in some cases on a weekly basis, again with a narrow HTC focus.
- There are plans to introduce PrEP and expand PEP services. A PrEP pilot study in Colombo has reached 40 MSM/TG.

Have recommendations from last review been addressed or not?

There has been variable progress but progress has been made on most specific recommendations

What are major constraints?

- A narrow focus on the HIV response during the last NSP has led to distortions, with KP receiving only HTC services at outreach/evening clinics.

- Broader STI services are provided when KP attend STD clinics (including escorted visits) but numbers doing this are low.
- Weak KP mobilization is a major constraint. The current peer educator and hybrid systems are weak and concentrate mainly on HTC (including HIV case finding with network contact tracing), education, condoms.

What are remaining gaps or weaknesses that reduce impact?

- STI/HIV sometimes low priority at provincial level (decision making is decentralised)
- Most STD clinics are understaffed
- Space is limited in many places leading to long waiting times and compromised privacy Stock management and equipment maintenance are persistent problems
- COVID-19 restrictions and resource diversions have impacted STD clinics and outreach
- Transport of specimens (for GC culture, HBV screening for example) from STD clinics with limited laboratory capacity is problematic

What are current priority areas for strengthening...?

- Expanding STD clinics with STD services/vehicles more test availability... HPV
- Training capacity
- EIMS...
- NG/CT among...
- Space/privacy/human resource...
- KP reception desk...
- Youth/adolescent clinic... risk mainly MSM, etoh/chemsex
- Virtual outreach, social media... interest in developing an online system with priority appointments...

Ragama STD clinic, Gampaha district (well-performing clinic)

Ragama clinic is one of four STD clinics in Gampaha district. It is located in the teaching hospital and supported by province and hospital. The clinic was expanded in 2015 to provide more space for services. Staff include two consultant venereologists, four medical officers, one public health inspector, one public health nurse, two other nurses, two microscopists and six support staff.

Preventive work is led by MO and consultant... KP outreach, outreach mainly HIV, STI screening only for symptomatic. Outreach clinics are organised two evenings a week and reach about 320 KP per month. Night clinic reaches drug users (25)

Gampaha district has an estimated 6-7 thousand MSM, 4 thousand FSW and less than 50 drug users. MSM and PWID are mostly 20-30 years old while FSW 30-40)

New HIV infections were identified last year through Ragama clinic outreach, which reached 500 MSM, 38 PWID, 28 TG and 306 FSW. Of these, fifteen MSM and one transgender person tested HIV-positive. Of 357 PLHIV identified to date, 270 receive regular follow-up.

What progress has been made in last 5 years?

Progress has been made mainly on HIV services, no significant progress on STI care.

What are major constraints?

Space remains a problem.

Restrictions on school education, talking about condoms and contraception

What are current priority areas for strengthening?

FPA doing well but could probably expand reach

More education in schools

STD clinic, Mana district (less active clinic)

This STD clinic is in a rural area with few KP. In 2018, it was estimated that there were 126 FSW and four PWID but teenage pregnancy, child abuse and drug use are all common. Sex work is low level and largely hidden with no brothels or spas.

The clinic is only partial staffed with 5 of 12 cadre positions filled (consultant venereologist, lab technician, PHI, assistant). There was no consultant until 2019. Space is sufficient especially as there is low demand for services.

Services include STD diagnosis and treatment, related care and treatment of contacts. HIV rapid test is performed. Laboratory services are improving with VDRL on site since 2019,

TPPA, microscopy in development. ANC screening includes syphilis and HIV but no HBV/ HCV.

Outreach screening is on hold. Earlier did HIV rapid testing for road construction workers. There is no KP outreach, no FPA. A few MSM come in on their own. There are no PLHIV managed on ART as they go to Jaffna (117km) for care.

Priority areas for strengthening include more outreach screening, expand services, increase cadre with training, and strengthen laboratory.

Community perspectives on STD clinic services

Representatives from NGOs working with MSM (Heart to Heart) and PLHIV (Langa plus) shared comments on community experience with STD clinic services. Both work with FPA under GFATM support and feel that this work should be expanded. HIV is the main focus and MSM are referred for other STI services are only made if symptomatic. PLHIV on the other hand are recommended to screen for STIs at least once a year.

In general, KP are satisfied with the services but feel these could be improved with expanded space and staffing. Attitudes of STD clinic staff have improved a lot over the years and community is now willing to use services. STD clinic services be improved by extending hours and outreach clinics.

Reasons mentioned why some KP/PLHIV don't visit the STD clinic include lack of knowledge and not wanting to disclose. Some prefer to use private services or seek advice through social media.

Additional input and recommendations from KP regarding peer outreach efforts are included in KP section.

Specific STI services

Interviews were held with programme managers for viral hepatitis and cervical cancer to ascertain role of STD clinics and opportunities for strengthening services in these areas.

In summary, there seems to be good coordination between such vertical programmes and STD clinics which implement screening and vaccination as per national strategies.

The national programme for viral hepatitis is well aligned with global and regional strategies with recommended surveillance, screening, immunisation, and case management for the general population, pregnant women and infants. Communication and coordination with STD clinics is reportedly good and provides an opportunity to strengthen interventions with higher risk populations such as STI patients, injecting drug users and other key populations. The main opportunities in this area include surveillance, screening and immunisation, which would be strengthened by 1) decentralising HBV/HCV screening to all STD clinics, and 2) incorporating hepatitis screening and HBV immunisation as part of RMC package for KP. A current barrier is low STD clinics attendance by KP. If this can be improved, routine KP screening for HBV/HCV can provide useful data for programme monitoring and reduce need for special surveys.

Cervical cancer programme (Dr Janaki / Dr Padmaka) is guided by 70/90 targets and largely implements screening through well-women clinics. Pap smear is the main screening method and limited colposcopy services is the main bottleneck. HPV screening is performed in nine of 27 districts and identifies about 7% positive. HPV immunisation target of 90% has already been reached for young girls.

Pap smears are currently done at 28 of the 41 STD clinics. Issues of space, confidentiality and confidentiality have been raised and STD clinics are working on this. Recommendations include strengthening screening for PLHIV and FSW (any age), and developing a high-risk strategy and targets. HPV PCR is costly but important, and may be requested through MoH.

For KP, particularly MSM and transgender persons, improved services related to prevention, screening and treatment of HPV and anogenital warts would be beneficial and has the potential to attract more KP to STD clinic services. Possible recommendations include expansion of oral/anal HPV testing to these populations as part of RMC, and consideration of offering HPV vaccination (to MSM/TG <45yo as in UK).

KP outreach

The following summarises findings from interviews and desk review. The interviews were with key informants working with MSM, transgender persons, beach boys, and female, male and transgender sex workers. Their organizations have been sub-recipients working with FPA with GFATM support.

Main focus of outreach work is HIV awareness, condoms and HTC including self test. The organizations have also done related work on income generation, social protection and other health services.

When asked to describe outreach work...

- Both NGOs working with sex workers and with MSM/TG/BB mentioned that they have seen a decline in support from FPA in recent years, with a narrowing of focus on HIV testing and reductions in ratios of peer outreach workers to KP. In worst case scenario (hybrid case-finding model) peers have been replaced by field workers....
- Gaps also present in non-GFATM districts, with very poor ratios (1 FW and 3 PE for up to 700 KP) making escorted STD clinic visits unworkable.

When asked whether STIs are a problem in their communities

- Sex workers know about STIs but awareness is generally good and condom use high. Earlier, they brought FSW to STD clinics for checkups, now focus is more narrowly on HIV testing and there is no transport allowance for clinic visits (they reportedly lost ~1500 FSW after shifting from STD clinic to CBD/DIC and unable to offer full service package)
- MSM mention gonorrhoea and genital warts as major STIs of concern, which would motivate clinic attendance if good services accessible.
- About 20% of sex workers in Colombo estimated to have addition problems (heroin, ICE, alcohol etc) requiring additional services.

Recommendations focused on recruiting people for KP unit of STD clinic, addressing limitations of GF (HIV-focus, limited geographies), improving behavioural interventions and M&E, providing guidance, more input and communication from NSACP...

The following interviews were with key informants working as peer educators with MSM, transgender persons, beach boys, and female, male and transgender sex workers. Their organizations are sub-recipients working with FPA with GFATM support.

	SW (Colombo)... CSDS	MSM (Galle)...	MSM (Hombatonta)	BB (Galle)...
PSE		965	Unknown	1400
PE	0 (9 FS)	3 (1 FS)	3 (1 FS)	4 (1 FS)
PE:PSE ratio		1:240-320		1:280-350
RT	Reach target=20/mo RT target=16/mo	Target=588 (RT, awareness, condoms lube), nearly reached this year	198 target, 136 reached, 80 RT	100 (last 6 mo)
STD clinic refer		143 referred to STD clinic... 4 warts, others for STI screening, 2 syphilis	3 referred to STD clinic	30 (last 6 mo)
Mode				Mobile RT clinic
Comments	Follow-up contacts with each for condoms, education... but no transport allowance so may only happen once...	Try to reach twice per month but no transport allowance	Large district, no transport allowance	After education, some complain of warts or UD, others asx, want checkup
Experience at STD clinics	80-85% satisfied... but some street-based have problems keeping registration numbers, some only come accompanied. some minor staff not welcoming... rudeness also towards FS which undermines SW confidence in them... lack of privacy in some places	Sometimes long waiting time (2 hours) discourages visits... both clinics need work on attitudes of minor staff... Doctors good... long waiting time in one clinic (Mahamodara), other OK... asked not to bring after noon		Satisfied but space and delays at Mahamodara...
How could KP be encouraged to checkups and STI services be improved...?	Better reception by security staff... reduce waiting times... improve privacy and confidentiality... doctors good but other staff could improve Strengthen link/coordination between PHI/PHN and peer outreach... All say KP will access STD clinic for checkups if issues addressed (estimated 50% of BB, majority of others)			

Stakeholder interviews

The following summarises findings from interviews with lodge, spa and brothel managers who have close work/business relationships with sex workers. A brothel owner rents out the premises due to covid but has two remaining sex workers who mainly contact clients by telephone. A lodge owner

rents rooms to part-time sex workers and students who meet clients online or through personal contacts. A spa owner works with 10-15 sex workers, many of whom now work independently (some with 3-4 clients per week, others 10-15). Of note, it was estimated that about 500 girls are working in one area about 8km from Colombo with more than 40 spas.

- condoms/info provided (est 85% unaware of risks)
- new SW given awareness through CSDF FS, and referred to STD clinic
- PT SW don't want to waste time or be identified but can access services through CSDF
- appreciate CSDF for confidentiality, have confidence and will access services through them

checkups for KP...

- prefer q 3-6 mo for checkup
- importance of counselling services, mental health, drug addiction...

how could KP be encouraged to checkups and STI services be improved...?

- more condoms, also masks..
- facilitate checkups...
- 'govt' should set rules about education, condoms, checkups...
- look into police harassment in massage parlours etc When asked to describe outreach work...

Annexure II - Centers doing HIV RDT testing and total number of tests done for 2019 and 2020

No	STD CLINICS	2018		2021		Covering up lab
		PHLTS	MLTS	PHLTs	MLTs	
1	NSACP Colombo	7	18	7	18	
2	Anuradhapura	2	1	2	1	
3	Ampara	1	1	1	0	Kalmunai
4	Badulla	1	2	1	2	
5	Balapitiya	1	1	2	1	
6	Chilaw	1	1	1	1	
7	Embilipitiya	0	0	2	0	Rathnapura
8	Gampaha	2	1	2	0	NSACP
9	Jaffna	1	1	1	1	
10	Kalmune	1	1	1	1*	
11	Kalubowila	1	0	1	0	NSACP
12	Kalutara	1	1	1	1	
13	Kandy	2	1	2	1	
14	kegalle					
15	Kilinochchi	1	0	1	1*	
16	Kurunegala	2	1	2	2	
17	Mahamodara	2	2	2	2	
18	Mannar	1	0	1	1	
19	Matara	2	1	2	1	
20	Matale	1	1	1	1	
21	Monaragala	1	1	1	1	
22	Mulaithivu	1	0	1	0	Vavuniya
23	Negombo	1	1	1	0	NSACP
24	Ragama	1	1	2	1	
25	Rathnapura	1	2	1	2	
26	Vavuniya	1	1	1	1	
27	Wathupitiwala	2	0	2*	0	NSACP
28	Awissawella	0	0	1*	0	NSACP
29	Nuwaraeliya	1	1	1	1	
30	Batticaloa	1	1	1	1*	
31	Trincomalee	1	1	1	1	
32	Polonnaruwa	1	1	1	1	
33	Hambanthota	1	1	1	1	
34	Homagama	0	0	3*	0	NSACP
35	Puttalam	0	0	1	0	Chilaw

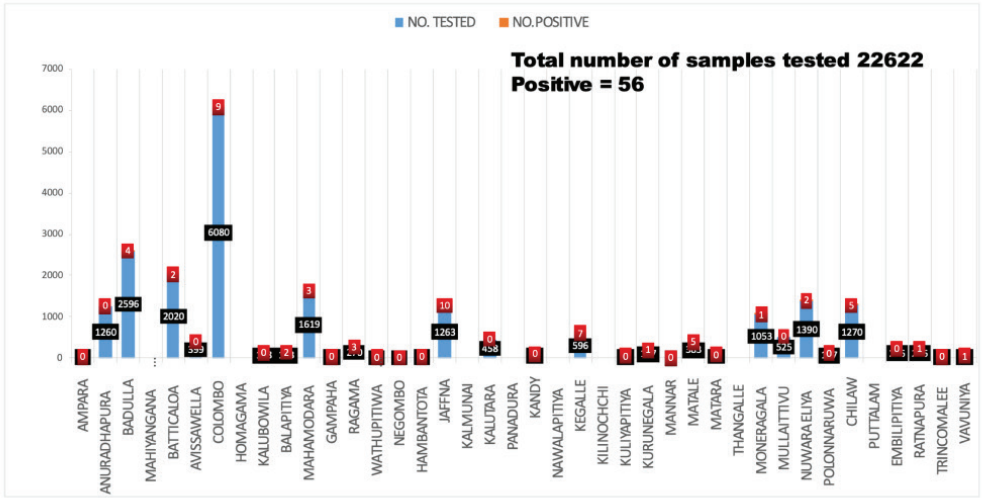
36	Panadura	0	0	2*	0	NSACP
37	Tangalle	0	0	2*	0	Hambanthota
38	Dambulla	0	0	1	0	Mathale
39	Kuliyapitiya	0	0	1	0	NSACP
40	Miyanganaya	0	0	1	1	
41	Nawalapitiya	0	0	1*	0	Kandy
Total NO		44	46	61	46	14 (No MLTs)
				*Covering up		

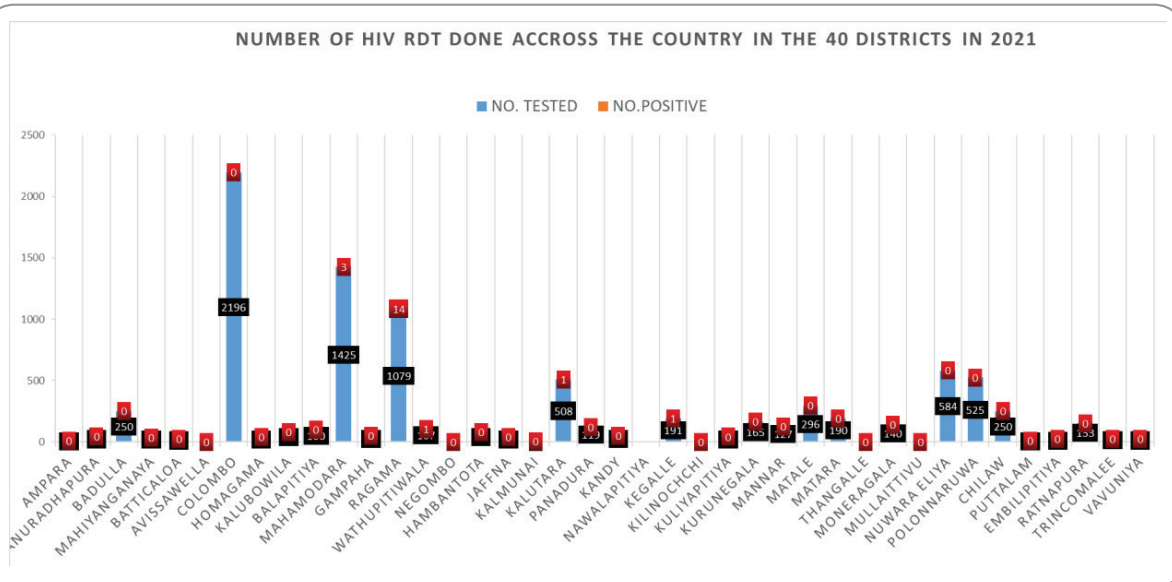
Annexure III- The availability of PHLTs and lack of MLTs in the 41 STD clinics

Number of HIV RDT facitlites accross the country

Type of facilites	Number
National Hospitals	5
Teaching Hospitals	12
General Hospitals	22
Base Hospitals	76
District Hospital	29

Number of HIV RDT done accross the country in the 40 districts in 2019





Annexure IV - Data on 40 STD clinics with different tests available.

CLINIC	SYPHILIS/ VDRL/ TPPA	HIV SCREENING /ELISA/SERODIA	GC CULTURE	VIRAL LOAD	CD4	MICROSCOPY
Anuradhapura	Yes	yes	yes	yes	yes	yes
Ampara	yes	yes				yes
Badulla	yes	yes	yes		yes	yes
Balapitiya	yes	yes				yes
chilaw	yes	yes				yes
Embilipitiya						yes
chilaw	yes	yes				yes
Jaffna	yes	yes			yes	yes
Kalmune	yes	yes				yes
Kalubowila	yes	yes				yes
Kalutara	yes	yes			yes	yes
Kandy	yes	yes			yes	yes
Kegalle	yes	yes				yes
Kilinochchi	yes	yes				yes
Kurunegala	yes	yes	yes		yes	yes
Mahamodara	yes	yes		yes	yes	yes
Mannar	yes	yes				yes
Matara	yes	yes				yes
Matale	yes	yes				yes
Monaragala	yes	yes				yes
Mulaithivu						yes
Negombo	yes	yes				yes
Ragama	yes	yes	yes			yes
Rathnapura	yes	yes	yes		yes	yes
Vavuniya	yes	yes				yes
Wathupitiwala						yes
Awissawella						yes
Nuwaraeliya	yes	yes				yes
Batticaloa	yes	yes			yes	yes
Trincomalee	yes	yes				yes
Polonnaruwa	yes	yes				yes
Hambanthota	yes	yes				yes
Homagama						yes
Puttalam						yes
Panadura						yes
Tangalle						yes
Dambulla						yes
Kuliyapitiya						yes
Miyanganaya	yes	yes				yes
Nawalapitiya						yes
TOTAL NUMBERS	**29**	**29**	**5**	**2**	**9**	**40**

Annexure V – Figure for Number of Donor Blood units Tested and HIV positivity Rate

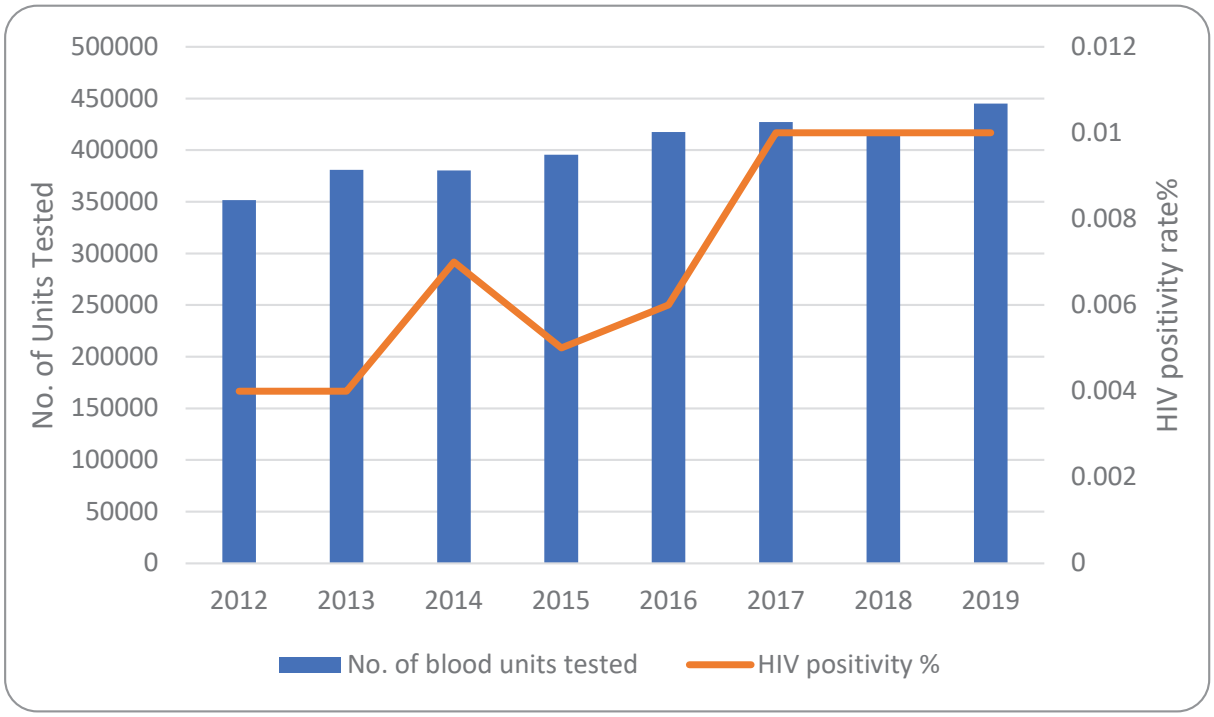


Figure 16: Number of donor blood units tested and HIV positivity rate 2012 – 2019

Annexure VI - Key Informants interviewed for SD 1.2-1.4 and SD 5:

- Programme coordinator of Multi-sectoral unit of NSACP - Dr. Janaka Weragoda
- Programme coordinator for IEC, Advocacy and Condom promotion, NSACP - Dr. Chandrika Jayakody
- Programme Coordinator of Training Unit NSACP - Dr. Himali Perera
- Chairperson of Technical sub-committee on Legislation, Policy, SOP and Guideline development of National AIDS Council - Dr. G. Weerasinghe
- Consultant Community Physician, NSACP – Dr. Sathya Herath
- Consultant Community Physician - National School Health Programme - Dr. Ayesha Lokubalasooriya
- Consultant Community Physician – Youth and Adolescent Health Unit - Dr Chiranthika Vithanage
- Commissioner –Prison (Welfare/ Administration) – Mr. Chandana Ekanayake
- Director, National Blood Transfusion Service - Dr. S. Jayasekera
- Provincial Director of Health Services – Northern Province as a representative of Provincial AIDS Council – Dr. Ketheswarana
- Consultant Venereologist STD Clinic, Hambanthota - Dr.Darshani Mallikarachchi
- Regional Director of Health Services, Hambantota representing District AIDS Committee
- Regional Director of Health Services, Kandy – Dr. Senaka Thalagala
- Focal point for HIV prevention activities in Sri Lanka Army - Dr. Saveen Semage
- Focal point for HIV prevention activities in Sri Lanka Air Force – Dr. Rhuman Booso
- Chief Inspector of Police (Officer in Charge of National Police Academy) – Mr. W.P. Jayanethsiri
- Deputy General Manager - Training - SLBFE - Mr. Mangala Randeniya
- Senior Lecturer in Tourism Management, Sri Lanka Institute of Tourism and Hotel Management – Mr. Mangala Suraweera
- Assistant Director - Training, National Youth Corps – Ms. Jayani Abeysinghe
- National Youth Services Council – Mr. Wasantha Karunathilake
- Director General, Dangerous Drug Control Board - Mrs. Bhadrani Senanayake
- AIDS Foundation Lanka - Dr. Palitha Abeykoon
- Representative from FSW networks – Ms. Kanthi and Ms. Nadeeshani (Community Strength Development Foundation)
- Representative from MSM networks- Mr. Manjula
- Representative from TG population- Ms. Bhoomi Harendra
- Representative from Beach Boy networks – Samadhi Community Development Foundation
- Representative from PWID networks – Mr. Sinha and Mr Athula (Mithuru Mithuro)
- Representatives from PLHIV networks – Mr. Palitha Bandara and Mr. Niroshan (Lanka Plus)

Annexure VII – NSACP Cadre Details

Human Resource Availability at NSACP

Table 13: NSACP Human Resource Cadre, Source: NSACP

Staff Description	Cadre	In Position	Vacancies
Accountant	1	1 (Temporary)	1
Administrative Officer	1	0	1
Medical Administrator (Deputy Grade)	1	1	0
Medical Administrator (Senior Grade)	1	1	0
Medical Consultant	12	9	3
Medical Officer	20	12	8
Special Grade Nursing Officer	2	1	1
Nursing Officer	14	13	1
Pharmacist	5	4	1
Medical Laboratory Technologist	23	18	5
Special Grade MLT	1	0	1
Technical Officer (Civil)	1	1	0
Public Health Laboratory Technician	7	7	0
Public Health Nursing Sister	5	2	3
Health Education Officer	1	0	1
Special Grade PHI	1	0	1
Public Health Inspector	8	6	2
IT Assistant	3	0	3
IT Officer	1	1	0
Medical Supplies Assistant	1	1	0
Development Officer	10	7	3
Planning and Programme Assistant	1	0	1
Public Coordinating Assistant	1	0	1
Public Health Management Assistant	12	6	6
Telephone Operator	1	0	1
Driver	8	5	3
Cinema operator	2	1	1
Attendant	11	7	4
Lab Aid	9	4	5
Saukyaya Karyaya Sahayake (Junior)	12	12	0
Saukyaya Karyaya Sahayaka (Ordinary)	15	13	2
KKS	1	0	1
Lift Operator	1	0	1
	193 (100%)	**132 (68%)**	**61 (32%)**

As shown in the table 13 above the NSACP is providing both curative and preventive care with 2/3 of the staff in place. Amongst the 1/3 of vacancies, as many as half of the approved cadre positions related to programme management support are vacant. This includes the staff categories Development Officers, Planning and Programme Assistants, Public Coordinating Assistant, Public Health Management Assistants.

The NSACP services are provided via the following subunits in the NSACP and are mapped to various different subunits. The table below provides the HR distribution against the various technical subunits at the NSACP.

HR distribution in the technical subunits at the NSACP

Staff category	Consultant	MOs	Nursing Staff	Public Health	Lab staff	IT Staff	Support staff	Minor Staff
Administration/Accounts Main Office	2 Director, Accountant						13	4
NSACP STD Clinic staff	1	7	3	5			4	4
HIV Clinic, EMTCT Unit	1	1	3	1	0	0	0	1
Pharmacy							5	1
SIM Unit	1	2	1	1		1	4	1
KP Programme Unit	1-Act.	1	0	0	0	0	1-temparary	0
National Reference Lab	1	1			25			4
Training, Capacity building unit	1							
Multi Sectoral Unit	1	1					1	1
IEC/Advocacy Unit	1-Act.							
HIV testing	1-Act.							
Epidemiology unit	1							
Total (132)								

Table 3: GF supported Staff

NSACP Unit	Management level		Officer Level	Support Staff
	part time	Full time	Full time	Full Time
HIV PIU at NSACP	2 (Project Manager-PS 3 and 1 GF Activity Coordinator- PS5	1 (Project Accountant- PS4)	3 (Procurement Officer-PS 6, HR Officer-PS6 and Finance Supervisor- PS6)	1 (Finance Assistant-MN2- GRADE III)
GF staff mapped to SIM unit	3 (EIMS Coordinator -PS5, Activity Coordinator- PS5 and ICT Manager-PS 4)	1 (Senior Strategic Information Officer-PS4)	0	1 (ICT/MA Assistant "KP Specific" -MN2-Grade III)
Multisectoral Unit	1 (Activity Coordinator-Prison -PS5)	1 (Assistant Activity Coordinator-PS5)	0	0
HIV Care	1 (Activity Coordinator -PS 5)	0	0	0
PWID Component	0	Nurse is vacant in the PWID subcomponent	1 (Programme Coordinator -PS6)	2 (Assistant to the Lab PL1- Grade III, Office Assistant -PL1- Grade III)
STI care	0	0	0	0
KP Unit	0	0	0	0
NRL	0	0	0	0
Training and Capacity Building Unit	0	0	0	0
IEC/Advocacy /Stigma & Discrimination prevention Unit				
TOTAL	**7**	**3**	**4**	**4**

Annexure VIII - Update on action taken on recommendations from 2017 review

A brief update on action taken on recommendations from last review in 2017 as provided by the NSCAP team is summarized in table 14 below:

Table 14: Action taken on key recommendations from 2017 review

Key recommendations		
S. No.	**Recommendations from 2017 review**	**Action taken / remarks as provided by NSCAP**
1	The human resources at STD/ART sites need to be trained regularly and refresher training needs to be conducted. Trainings needs to be decentralized and other methods like distance learning can be adopted WHO can support this distance learning mechanism through coordination with the I-Tech which has been conducting distance learning seminar very successfully in many countries for HIV programs.	During the year 2019 face to face refresher training was done covering all nine provinces in Sri Lanka. During the COVID period Virtual Training was organized by NSACP as well as from district STD clinics on STIs/ HIV and stigma and discrimination. Distance learning platform proposal has developed and given to WHO, it will be done within next 2 years Moreover, monthly webinars are arranged in the collaboration of HIV care services to update the knowledge of health care workers
2	The CD4 testing needs to be decentralized and the 3 CD4 machines that are available needs to be operationalized urgently with adequate quantity of kits.	CD4 testing has been decentralized to all 9 provinces and a linkage mechanism has been developed for transport of samples from 30 ART sites to these 9 machines
3	The viral load testing also needs to be decentralized and 3 gene expert machines already procured need to be used for HIV viral load testing. These 3 machines and the NHL Roche machine may be sufficient to cater to need of all PLHIV on ART.	VL testing was decentralized to 3 provinces Galle (Southern province) and Anuradupura (North central province) and are also available at NSACP, Colombo. However, gene Xpert has not been utilized for viral load testing so far and has been taken over for COVID testing
4	The technical committee also needs to consider the role of CD 4 testing as the viral load is being done for all PLHIV once a year. The utility of a baseline Viral load test needs to be relooked into as this has not much benefit and delays ART initiation.	A baseline VL is done as this part of national treatment guidelines but the ART initiation does not depend on VL. As soon as the base line tests are available and after exclusion of TB meningitis and cryptococcal meningitis ARV treatment is started. All patients undergo at least one viral load per year

Key recommendations		
S. No.	**Recommendations from 2017 review**	**Action taken / remarks as provided by NSCAP**
5	Since Atazanavir and ritonavir are available as fixed dose combination in market (but not in NSACP), these need to be used as preferred second line regimen rather than Lopinavir/ ritonavir. Also, guidelines need to be updated in near future as newer drug like Dolutegravir is now available and is recommended by WHO in first line ART (July 2017) and others like TAF, and EFV 400 mg and are likely to be available soon.	ART guidelines are being updated in year 2021 according to WHO guidelines. Dolutegravir is now included as first line ART in local guidelines. TAF will be purchased in year 2022. EFV 200mg is available . Presently only new patients are initiated on DTG based first line and there is a plan to transition existing patients on other regimen by 2022 to DTG
6	IPT needs to be provided from STD/ART sites rather than from Chest clinics to have single window dispensing of ARVs. STI drugs, OI drugs, CPT and IPT.	IPT is available at NSACP with ARVs, STI drugs, OI drugs, and CPT . District STD clinics and chest clinics are located at same premises and can obtain IPT easily.
7	The program needs to do baseline surveillance for the pretreatment drug resistance (PDR) to have an idea about the baseline resistance in the country. SEARO has supported some countries in the region on this activity and country needs to add this in the next GF grant application.	PDR survey is completed , results awaited Country is moving towards building in country capacity for DR testing
8	To take care of long travel hours to reach ART centers the drug dispensing can be done for 3 months for “stable patients” keeping in mind the drug stock positions.	For stable patient’s drug dispensing is done for 3 months since March 2020 (COVID time)
9	It is important to have a dedicated software for the STD and ART sites that can provide real time information on the patients’ status including those from Key populations and other subpopulations.	EIMS has already installed at NSACP but needs further improvement and expansion to all sites
10	There is a need to strengthen the mechanism for tracking of patients lost to follow up though the numbers are low. The optimal utilization of network of positive people needs to be done and this requires a proper coordination with the STD /ART clinics for the tracking.	We get support from networks of positive people when tracking lost to follow up of patients
11	The treatment cascade needs to done not only at National level but also at high load facilities at least once in six months. There is need to look into treatment cascade for Key populations and children separately.	It has been done at national level but there are big gaps Disaggregated cascade is recommended for future

Key recommendations		
S. No.	**Recommendations from 2017 review**	**Action taken / remarks as provided by NSCAP**
12	There is a need to have better mechanism for forecasting of drugs as this remains a challenge due to lack of drug toxicity data. Also, the buffer stock needs to be increased from 25% to 50% with a provision in bid document for further increase if required at any time at the same rates. NSACP may consider procuring drugs for 2 years requirement and supplies be taken in 3-4 schedules	Buffer stock has increased by 35%. Local procurement of drugs facility is not available in Sri Lanka. However, need to get small quantities of ART through WHO in next Biennium
13	It is suggested that NSACP need to interact closely with HMRA to ensure that the drugs which are approved by the technical committee for use in the ART national programme are automatically allowed to be imported even if these are not registered. This is important in view of the fact that ARV drug regimen keep on changing	This was not materialized. It is recommended to meet(virtually) NMRA authorities to clarify ART issues
14	The ART clinic at IDH can be considered for upgradation to a Center of excellence (CoE) in HIV care as it has excellent facilities for care and hospitalization of complicated cases. The concept of CoE framework was shared with the programme.	IDH has been recognized as full time COVID center

Annexure IX – Additional Material on SD 2.2 : ART Services

Key actions proposed in National HIV/STI Strategic Plan (2018-2022)

- Expand ART services to all districts
- Consider upgrading the IDH to a Center of Excellence in HIV care
- Closely follow up the treatment cascade to better understand and reduce LFU
- Develop and install an electronic information system that can give instant updates on the status of 90:90:90 at the ART centers as well as at the provincial level
- Operationalize new equipment such as GeneXpert and BD FACS for VL and CD4 count measurements provided in districts and expand to other provinces as needed
- Strengthen capacity to perform pro-viral DNA estimations and HIV drug resistance in Sri Lanka to ensure sustainability

Desk review and interviews

In order to make the review comprehensive, a desk review of various documents and reports was carried out. These included National HIV Strategic Plan, 2018-2022, National Response to HIV/STI review 2017, Updated ART treatment guidelines 2020 , Annual report for 2020, report of National validation team on EMTCT of HIV and syphilis and other documents on website of NSACP. The desk review was followed by virtual interaction with focal persons for ART EMTCT HIV TB at NSACP, one provincial site, representatives of community-based organization, PLHIV network and key agencies involved in procurement of drugs.

Tools used for review/interview

- Annexure 1- Questions for care and treatment
- Annexure 2- National-province level assessment tool
- Annexure 3-Service delivery sites assessment tool

Key People Interviewed

- Dr. Himali Perera - Consultant Venerologist, HIV Care services and Training and capacity building coordinator
- Dr. Kanchana , Medical officer , ART center Colombo
- Dr. Shyama Somawardhana, Consultant Venerologist, ART center, Galle
- Dr. Lilani Rajapaksa, EMTCT coordinator
- Dr. Thakshi, NSCAP
- Dr. Fernadopulle, AD(MSD)
- Dr. Duleepa
- Mr. Saman Munasinghe, SPC
- Mr. Chaturanga, procurement officer for GF goods
- Dr Nirupa Pallewatte , focal point for HIV TB coordination
- Ms. Kanhi, Positive Women's Network , Sri Lanka
- Mr. Nazeer, PLHIV network

Annexure X - Prioritisation Framework for Funding Interventions – Core and Synergising

We recommend that the Core Interventions, that are aimed at the Key and Vulnerable Populations be funded through the HIV/STI spending. The Synergising Interventions should be funded through the broader public health infrastructure and other ministries, with the NSACP's investment acting as a synergiser for these interventions.

Table 15: Proposed Intervention Typology - Core and Synergising Interventions

Strategic Direction	Core Intervention	Synergising Intervention
Prevention	1.1– Prevention of Infections among KP • Peer-led outreach activities • Harm Reduction Interventions for PWID • Needle-exchange Programmes • Drug Substitution Programs • Interventions aimed at SW and Clients of SW • Other prevention interventions targeted at KP	• Prevention of infections among Vulnerable Populations ○ Collaborations with other ministries and agencies concerning migrant labour, armed forces and tourism-industry workers • Prevention of Infection among General Population including Young People ○ National Communication Strategy ○ AIDS Awareness Programmes • Prevention of Infections through Infected Blood ○ Bloody Safety Programmes ○ Universal Precaution Measures
Diagnosis, Treatment and Care	• HIV/STI Testing ○ Self-test Kits for KP ○ Facility-based Testing for KP • ART Treatment including Paediatric ARV • STI Treatment for KP • HIV/TB Coinfection • Creating Enabling Environment in STD Clinics	• PMTCT • Self-Test Kits and Facility-based testing among General and Vulnerable Populations • STI treatment for General and Vulnerable Populations
Strategic Information Management	• Deployment of EIMS and PIMS • Client Feedback Module in EIMS/PIMS • Local IBBS • And KP Audit of facilities	
Health Systems Strengthening	• Programme Management and Resource Allocation • District Level Resource Need Estimation and Gaps • Community Systems Strengthening	• Infrastructure improvement • Advocacy through Multisectoral Input • Impact Mitigation among households affected by AIDS and other STIs

Strategic Direction	Core Intervention	Synergising Intervention
Supportive Environment	• Creating Enabling Environment • Community-level advocacy • Interfacing with local law enforcement to create awareness • Capacity Building of Health Workers to minimise discrimination • Condom accessibility	• Developing Training material on Human Rights, Stigma and Discrimination • SRH education • Condom Availability for General Population • Repealing laws that criminalise KP behaviour • Referral System • NGO, CBO and PLHIV network capacity building and management • Legislation and Policies

In addition to this, we strongly advocate that long term investments in the infrastructure for treatment and care of HIV and other STIs be funded by MoH, with the NSACP financing only the KP intervention strategies in such a framework.

Table 16: Funding Need for the Programme, Source: Funding Landscape Document Presented to GFATM by the NSACP

Module	Funding Need			
	2019	2020	2021	2022
Treatment, care and support - ART	26,93,133	27,13,780	28,91,300	28,79,791
TB/HIV	145	154	163	173
PMTCT	6,60,247	6,94,875	7,13,549	7,51,590
Programs for MSM	62,479	89,880	94,656	99,719.00
Programs for sex workers and their clients				
Programs for people who inject drugs (PWID) and their partners	1,522	1,613	1,709	1,811
Programs for TGs				
Prevention programs for other key and vulnerable populations	18,64,174	20,83,782	22,93,689	9,70,882
Male Circumcision				
Condoms	5,85,043	6,20,146	6,57,354	6,96,796
Other Prevention Programs	7,27,890	7,93,483	8,19,784	7,87,594
Programs to reduce human rights-related barriers to HIV services	3,226	3,226	3,226	3,226
RSSH	2,82,892	2,64,906	4,02,984	7,57,870
Program Management	47,17,043	49,84,934	52,37,198	53,09,149
Other				
Total	**1,15,97,795**	**1,22,50,778**	**1,31,15,612**	**1,22,58,601**

- PSE for KP is around 70,000-80,000 people. For a per capita investment of 100USD, recommended by AIDS Commission[36] (beyond ART expenditure), the budget for KP interventions alone would be 7-8 million USD. Currently the programme is underfunded and requires significant scaling up of investment.

[36] Independent Commission on AIDS in Asia, *Redefining AIDS in Asia: Crafting an Effective Response : Report of the Commission on AIDS in Asia.* (New Delhi: Oxford University Press, 2008).

Annexure XI – Progress against NSP Indicators

Indicator for	Relevant Strategic Direction	Indicator	Numerator	Denominator	Latest Value
Impact	SD1	% sex workers who are living with HIV (entire country)	Total no. positive	Total No. tested	0.24% (IBBS 2018)
Impact	SD1	% MSM who are living with HIV (entire country)	Total no. positive	Total No. tested	0.22%
Impact	SD1	% TG who are living with HIV (entire country)	Total no. positive	Total No. tested	0.48%
Impact	SD1	% BBs who are living with HIV (entire country)	Total no. positive	Total No. tested	0.2%
Impact	SD1	% PWID who are living with HIV (entire country)	Total no. positive	Total No. tested	Nil
Impact	SD1	% sex workers who are living with HIV (Western Province)	Total no. positive	Total No. tested	Data not available
Impact	SD1	% MSM who are living with HIV (Western Province)	Total no. positive	Total No. tested	Data not available
Impact	SD1	% TG who are living with HIV (Western Province)	Total no. positive	Total No. tested	Data not available
Impact	SD1	% PWID who are living with HIV (Western province)	Total no. positive	Total No. tested	Data not available
Impact	SD1	% of prisoners who are living with HIV (entire country)	Total no. positive	Total No. tested	0.01%
Impact	SD1	% sex workers who have active syphilis (entire country)	Total no. positive	Total No. tested	1.7%
Impact	SD1	% MSM who have active syphilis (entire country)	Total no. positive	Total No. tested	1.3%
Impact	SD1	% TG who have active syphilis (entire country)	Total no. positive	Total No. tested	0.24%
Impact	SD1	% BBs who have active syphilis (entire country)	Total no. positive	Total No. tested	0.2%
Impact	SD1	% PWID who have active syphilis (entire country)	Total no. positive	Total No. tested	0.3% in Colombo
Impact	SD1	% sex workers who have active syphilis (Western Province)	Total no. positive	Total No. tested	Data not available

Indicator for	Relevant Strategic Direction	Indicator	Numerator	Denominator	Latest Value
Impact	SD1	% MSM who have active syphilis (Western Province)	Total no. positive	Total No. tested	Data not available
Impact	SD1	% TG who have active syphilis (Western Province)	Total no. positive	Total No. tested	Data not available
Impact	SD1	% PWID who have active syphilis (Western Province)	Total no. positive	Total No. tested	Data not available
Impact	SD1	Gonorrhoea rate among adult males (>15 years)	Number of cases of gonorrhoea reported among adult males within the past 12 months	Number of adult males (>15 years)	Data not available
Impact	SD2	Annual rate of reported cases of congenital syphilis per100,000 live births	Number of reported cases of congenital syphilis (including still births) within past 12 months	Estimated number of live births in the same calendar year	1.7%
Impact	SD2	Annual rate of reported cases of MTCT of HIV per 100,000 live births	Number of children born in a defined calendar year to mothers living with HIV, who were diagnosed as positive	Estimated number of live births in the same calendar year	0
Impact	SD2	Percentage of infants born to mothers living with HIV, who tested positive for HIV (MTCT rate)	Number of infants born to HIVpositive mothers, in a defined calendar year, who were diagnosed as positive	Reported number of infants born to HIV-positive mothers within a defined calendar year, with definitive diagnosis (HIV positive and negative)	0
Outcome	SD1	Percentage of female sex workers reporting the use of a condom with their most recent client	Number who reported that a condom was used with their last client	Number had commercial sex in the last 12 months	83.6%

Indicator for	Relevant Strategic Direction	Indicator	Numerator	Denominator	Latest Value
Outcome	SD1	Percentage of men reporting use of a condom the last time they had anal sex with a male partner	Number who reported that a condom was used last time they had anal sex	Number who reported having anal sex with a male in last 12 months	82.8%
Outcome	SD1	Percentage of TG reporting use of a condom the last time they had anal sex with a male partner	Number who reported that a condom was used last time they had anal sex	Number who reported having anal sex with a male in last 12 months	76.3% (IBBS 2018)
Outcome	SD1	Percentage of beach boys reporting the use of a condom at last sexual intercourse with paying partners	Number who reported that a condom was used last time they had sex with their paying partner	Number who reported having paying sex partners in the last 12 months	75.3%
Outcome	SD1	Percentage of people who inject drugs reporting using sterile injecting equipment the last time they injected in the last month/year (disaggregated)	Number of PWID who reported using sterile injecting equipment the last time they injected drugs	Number who reported injecting drugs in the last month/ year	80.5%
Outcome	SD1	Percentage of young people 15-24 years who know the correct ways of HIV prevention	Number of young people who can identify correct ways of HIV prevention	Number of young people in the country aged 15-24 years	24%, Data from 2016 No recent Data
Outcome	SD1	Percentage of estimated PLHIV who have been tested for HIV, i.e. who know their status	Number of people who have been diagnosed with HIV and know their result	Number of estimated PLHIV	70% (Annual Report 2020)
Outcome	SD2	Percentage of adults and children with HIV known to be on treatment 12 months after initiation of ART	Number of PLHIV started on ART up to 12 months prior to the reporting period who remain on treatment 12 months after initiation (adults and children)	Number of PLHIV started on ART up to 12 months prior to the reporting period	89% (305/342)

Indicator for	Relevant Strategic Direction	Indicator	Numerator	Denominator	Latest Value
Outcome	SD2	Percentage of people living with HIV and on ART who are virologically suppressed	Number of people living with HIV and on ART who have a suppressed viral load (<1000 copies/ml)	Number of PLHIV who are currently receiving ART	43%
Outcome	SD3	Percentage of ART sites implementing a standard protocol for tracking ART patients	Number of ART sites implementing a standard functioning patient tracking system	Number of health facilities dispensing ARVs in the last 12 months	Data not available
Outcome	SD3	Percentage of research studies and special surveys conducted	Number of research studies and special surveys conducted	Number of research studies and special surveys planned	Data not available
Outcome	SD4	Percentage of HIV response financed domestically	Amount of HIV response financed from domestic sources	Total amount of HIV response financed	>90%
Outcome	SD5	Percentage of KPs who avoided seeking HIV testing because of fear of stigma, fear or experienced violence, and/or fear or experienced police harassment or arrest	Number of KPs who reported having avoided seeking HIV testing due to at least one of the following: fear of stigma, fear or experienced violence, fear or experienced police harassment or arrest	Number of KPs who reported never having tested for HIV	FSW–48.2%, 22.6%,41.8% MSM–33.1%, 26.8%,28.4% PWID–56.4% BB–0.9% TG–48.3% (IBBS, 2018)
Outcome	SD5	Percentage of KPs with HIV who avoided receiving HIV medical care because of fear of stigma, fear or experienced violence, and/or fear or experienced police harassment or arrest	Number of KPs living with HIV who reported never having received or having stopped receiving HIV medical care due to at least one of the following: fear of stigma, fear or Experienced violence, fear or experienced police harassment or arrest because of their HIV status	Number of KPs who reported living with HIV and never having received or having stopped receiving HIV medical care	20% (Stigma Index 2017) No data after 2017

Indicator for	Relevant Strategic Direction	Indicator	Numerator	Denominator	Latest Value
Output	SD1	Percentage of FSW reached with HIV prevention programmes Target: 90%	Number of FSW reached with a defined package of services	Size estimation of FSW	12.7%
Output	SD1	Percentage of FSW who have received an HIV test in past 12 months and know results Target: 90%	Number of FSW who have been tested for HIV during the last 12 months and who know the results,	Size estimation of FSW	29.9%
Output	SD1	Percentage of MSM reached with HIV prevention programmes Target: 90%	Number of MSM reached with a defined package of services	Size estimation of MSM	27%
Output	SD1	Percentage of MSM who have received an HIV test in past 12 months and know results Target: 90%	Number of MSM who have been tested for HIV during the last 12 months and who know the results	Size estimation of MSM	40.3%
Output	SD1	Percentage of Beach Boys reached with HIV prevention programmes Target: 90%	Number of Beach Boys reached with a defined package of services	Size estimation of beach boys	14.7%
Output	SD1	Percentage of Beach Boys who have received an HIV test in past 12 months and know results Target: 90%	Number of Beach Boys who have been tested for HIV during the last 12 months and who know the results,	Size estimation of Beach Boys	30%
Output	SD1	Percentage of PWUD/ PWID reached with HIV prevention programmes Target: 90%	Number of PWUD/ PWID reached with a defined package of services	Size estimation of PWUD/PWID	2.7%
Output	SD1	Percentage of PWUD/ PWID who have received an HIV test in past 12 months and know results (disaggregated) Target: 90%	Number who have been tested for HIV during the last 12 months and who know the results, (disaggregated by PWUD and PWID)	Size estimation of PWUD/PWID	7.7% in Colombo

Indicator for	Relevant Strategic Direction	Indicator	Numerator	Denominator	Latest Value
Output	SD2	Percentage of pregnant women attended antenatal care service Target: >95 %	Number of mothers who reported to have received ANC	Estimated number of pregnant women	99.70%
Output	SD2	Percentage of pregnant women tested for HIV in last 12 months Target: >95 %	Number of pregnant women who have been screened for HIV in last 12 months	Number of pregnant women seen at ANC services in the last 12 months	96.90%
Output	SD2	Percentage of pregnant women tested for syphilis in last 12 months Target: >95 %	Number of pregnant women who have been screened for syphilis in last 12 months	Number of pregnant women seen at ANC services in the last 12 months	96.90%
Output	SD2	Percentage of HIV positive pregnant women receiving ART Target: >95 %	Number of HIV positive pregnant women on ART and delivered in a year	Number of HIV positive women who delivered during that year	100%
Output	SD2	Percentage of syphilis seropositive pregnant women who were appropriately treated Target: >95 %	Number of syphilis positive pregnant women who were treated for syphilis in a year	Number of syphilis positive pregnant women diagnosed in a given year	97.20%
Output	SD2	Percentage of adults and children currently receiving ART among all adults and children living with HIV Target: >90%	Number receiving ART	Estimated number of PLHIV	58% (2167/3719)
Output	SD2	Percentage adults and children living with HIV and who have been diagnosed who are currently receiving antiretroviral therapy Target: 95%	Number of adults and children living with HIV who have been diagnosed and are currently receiving antiretroviral therapy	Number of adults and children living with HIV who have been diagnosed	83% (2167/2612)
Output	SD2	Percentage of people living with HIV that initiated ART with CD4 count of <200 cells/mm3 Target:<15%	Number of HIV positive adults initiating ART within the past 12 months with a baseline CD4 count =<200 cell/ mm3	Number of HIV positive adults initiating ART within the past 12 months	28%

Indicator for	Relevant Strategic Direction	Indicator	Numerator	Denominator	Latest Value
Output	SD2	Number and percentage of newly diagnosed HIV positive people newly enrolled in and receiving care Target: >90%	Number of people newly (diagnosed and) enrolled in HIV care and received clinical HIV care services in the past 12 months	Number of people newly diagnosed with HIV within the past 12 months	78% (342/439)
Output	SD2	Percentage of HIV exposed infants born within the past 12 months who received a virological HIV test within two months of birth Target: 100%	Number of HIV exposed infants born within the past 12 months who received a virological HIV test within two months of birth	Number of HIV positive women who delivered within the past 12 months	
Output	SD3	EMIS established	Not applicable	Not applicable	Established
Output	SD3	Establishment of case based surveillance system	Not applicable	Not applicable	
Output	SD3	% of nationally defined indicators on HIV/ AIDS/STIs for which information is available Target: 100%	Number of indicators for which information is available	Number of nationally defined indicators on HIV/AIDS/STIs	Data not available on all indicators
Output	SD4	Percentage of districts with government facilities providing ART Target: 100%	Number of districts with at least one government ART facility	Total number of districts	100%
Output	SD4	STD clinics expanded to base hospitals (type A) Target: 90%	Number of base hospitals (type A) have STD clinics	Number of Base hospitals (type A)	32.18%
Output	SD4	Training programmes conducted according to a comprehensive training plan developed annually Target:100%	Number of training programmes conducted (Govt and NGOs)	Number of training events planned	100%
Output	SD4	Initial training of all staff delivering STI care at government STD clinic received within 6 months of appointment Target: 90%	Number of staff received training within 6 months of appointment	Number of staff newly appointed in the STD clinics (within 6 months)	100%

Indicator for	Relevant Strategic Direction	Indicator	Numerator	Denominator	Latest Value
Output	SD4	Percentage of ART sites with at least one supportive supervision visit in the last 12 months Target: 100%	Number of ART sites with at least one supervision visits in the last 12 months	Number of ART sites dispensing ARVs in the last 12 months	100%
Output	SD4	Percentage of units established in NSACP according to a new organogram designed to reach the goal of Ending AIDS by 2025 Target: 100%	Number of units established in the NSACP	Number of units proposed in the new organogram	Data not received
Output	SD4	Percentage of job positions vacant Target <5%	Number of vacant job positions	Number of job positions	>20%
Output	SD4	Percentage of meetings of National AIDS council Target - meetings held at least once/year	Number of meetings held	Number of meetings planned	AIDS council is not a regularly meeting body AIDS committee is
Output	SD4	Percentage of meetings of National AIDS Committee and its subcommittees Target - meetings of NAC and PAC held least every 6 months, and subcommittees every quarter	Number of meetings held	Number of meetings planned	100%
Output	SD5	Vagrancy ordinance and Penal code 365a reviewed and repealed	Not Applicable	Not Applicable	Not Achieved
Output	SD5	Brothel Ordinance amended	Not Applicable	Not Applicable	Not Achieved

Annexure XII – Impact of NSP : A need for consolidation and a way forward through partnerships

The NSP of Sri Lanka has made several impacts both national and international as it is a strong evidence-based plan that builds on both domestic and international experience.

The ability of the country to eliminate MTCT shows that when the program is well defined, the targeted result is spectacular and of global standard. On the other hand, Sri Lanka's inability to achieve 90-90-90 target and 2020 target of 75 per cent reduction of new infection arrives from lack of a robust operational plan with a clear definition of packages and standards units of delivery as well as supporting financial and human resources.

This is particularly in the context of KP services where the role of civil society and their capacity is essential. Despite the apparent failures of reaching targets in time, the HIV/STI programme has been a pathfinder through its integration of nine principles that are unique in HIV like political commitment, human rights, gender, multisectoral approach, coordination and engagement of beneficiaries and quality and evidence,

For programmatic purposes, the population has been stratified into three categories: key population, vulnerable and general population, with calibrated programs and different sets of indicators and five main strategic directions for implementation, with their own sets of indicators to measure progress.

Programmatic Goals and Targets: Overall, the programmatic target of keeping HIV prevalence among KP lower than 1 per cent or 5 per cent (where it has crossed more than 1 per cent like MSM pop) follows international evidence. Outcome indicators set at having 80% per cent of the KP reporting consistent safe behaviour and the treatment indicators of 90 -90- 90 are in line with the global strategy and international evidence base for HIV/AIDS. Reduction of new infection(by 75% from 2010 levels) as an additional outcome indicator was missed and can be reconsidered in line with the new evidence and international strategy.

Evidence-based Prioritisation: The NSP utilizes a framework for population prioritization, with the main focus of interventions remaining on KP. This is an appropriate strategy to be implemented and has been in place for the STI/HIV response in Sri Lanka during all three earlier NSPs as well. Issues related to clustering of KP in specific locations are mentioned, however, there is no prioritization framework for locations in the NSP. The priority for interventions also merits treatment in program design. In the past, intervention priority in Sri Lanka has switched from preventions for negatives through peer outreach education to a test and treat strategy, through the case finder model. These follow international best practices and UN strategies endorsed by the government of Sri Lanka.

The new strategy of UNAIDS 2021[37] and international best practices[38] for low prevalent countries optimization of prevention efforts both for HIV negatives and positives and advocates for a mix of facility and outreach work linked with variations of community-led interventions.

[37] UNAIDS, "Global AIDS Strategy 2021-2026."
[38] World Health Organization. Regional Office for South-East Asia, *Are Key Populations Really the "KEY" to Ending AIDS in Asia?*

Programme implementation and coverage

While the coverage, components and quality of the service packages and service delivery model used for KP like Sex workers, MSM, transgender population and beach boys remains the key issue, PWID interventions have not moved beyond the pilot stage, and still are in the process of being initiated.

Each intervention for KP is yet to develop a standardized dose frequency and denominator-based monitoring plan replacing the current numerator-based monitoring in the local context. A major missing element is a focus on creating enabling environments, which are an essential part of a comprehensive prevention and treatment programme. Infrastructure for ongoing quality control of services and infrastructure for technical mentoring is currently missing.

1. **Strategy based on Evidence:** Evidence-based strategy of prioritisation has been of great impact while evidence of clustering of KP for location prioritisation and missing framework of local output and impact measurement has been a key weakness of the strategy. Other than academic universities and some national programs, international agencies like USAID and WHO can offer support and collaboration.
2. **Human rights and stigma reduction:** While the policy impact of the human rights-based approach has been phenomenal, local methods of measuring stigma, involvement of KP in providing feedback for local services and inadequate programming of use of enabling environment interventions has been key factor for the weakness of the programme. Regional organizations of KPs in Asia and the UNAIDS regional office may offer assistance and partnership in this area.
3. **Gender-sensitive approach:** Women and sexual minorities, access to health care has been revolutionary in the policy statement and impact, it has not been translated in a technically standard package backed by local need estimation and appropriate service delivery methods using KP. UNDP, UNFPA and UNAIDS can be approached for support while WHO can provide the differentiated models of service delivery
4. **PLHIV:** Meaningful involvement of PLHIV has been useful in provincial bodies but has often related to individuals, It can be further strengthened .
5. **Community involvement and engagement:** engagement in decision making bodies:

   While PLHV networks have worked and represented, community organizations need to be empowered and transformed from passive beneficiary groups to partners in decision making bodies at least at the provincial level. Although not an easy task, Srilanka has shown social innovations in the past with a history of service delivery NGOs in conflict areas for malaria elimination, Needs to be tried. UNAIDS and UNDP can be important partners in this
6. **Coordinated approach**: donor, technical agencies, govt and NGO. (other than the mechanism mentioned under several points, and academic technical unit attached to NSACP can be of help, UNAIDS, GF can generate such grant irrespective of eligibility)
7. **Multi-sectoral partnership:** Despite strong leadership, coordination mechanisms that can lead to each ministry owned programme and funding is missing.
8. **Quality improvement and quality assurance:** Quality programme and quality assurance:

   Very strong SI and evidence, well laid out procedures in clinics and STI, Weakest element in the current programme on definitions of service delivery package at community settings, that

should consist of an element of packages., dose frequency of delivery, quality control. This Will dramatically improve when SI shifts to a local framework and weak implementing units and locality can be identified: the WHO can assist.

9. **Broad political commitment:** AIDS has received strong political commitment so far from the political leadership. The revised timeline of 2030 needs renewed commitment and resources. The Head of State-led AIDS council has never been functional. A new instrument needs to be suggested. Stakeholder's workshop can brainstorm such solutions and the WHO regional office can support in political advocacy.

In conclusion, this NSP has taken an overall evidence-based approach to lay the foundation for a robust national program, though one that is yet to be scaled up towards Ending AIDS. That task can be taken up now in partnership with people infected and affected by HIV, government, healthcare providers and others, in collaboration with international and UN agencies.

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