THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF HEALTH AND SOCIAL WELFARE

Tanzania Mainland

National AIDS Control Programme

HIV/AIDS/STI Surveillance Report

Report Number 23

November 2013

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Table of contents

Page

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The Ministry is committed to use this report as evidence base to strengthen delivery of Health Related HIV services in Tanzania.

Dr.Donan W.Mmbando
Chief Medical Officer
Ministry of Health and Social Welfare

Abbreviations/Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Clinics
ARVs	Antiretrovirals
CDC	Center for Disease Control and Prevention
CI	Confidence Interval
CITC	Client Initiated Testing and Counseling
DBS	Dried Blood Spot
DACC	District AIDS Control Coordinator
DRCHCO	District Reproductive and Child Health Coordinator
ELISA	Enzyme Linked Immunosorbent Assay
EPTB	Extra Pulmonary Tuberculosis
EU	European Union
EWI	Early Warning Indicators
FBOs	Faith Based Organizations
EZBTC	Eastern Zone Blood Transfusion Centre
GDS	Genital Discharge Syndrome
GUD	Genital Ulcer Disease
HBV	Hepatitis B Virus
HBHTC	Home Based HIV Testing and Counselling
HIMS	Health Information Management system
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
IBBSS	Integrated Biological and Behaviour Surveillance Survey
IDC	Infectious Diseases Clinic
LD	Labour and Delivery
MTCT	Ending Mother to Child Transmission of HIV
MNCH	Maternal Newborn and Child Health
MOHSW	Ministry of Health of and Social
MUHAS	Muhimbili University of Health and Allied Sciences
NACP	National AIDS Control Programme
NBTS	National Blood Transfusion Services
NGO	Non Governmental Organisations
NIMR	National Institute for Medical Research
PMTCT	Prevention of Mother To Child Transmission
PID	Pelvic Inflammatory Diseases
PITC	Provider –Initiated Testing and Counselling
RPR	Rapid Plasma Reagin

RACC	Regional AIDS Control Coordinator
RRCHCO	Regional Reproductive and Child Health Coordinator
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TNBTS	Tanzania National Blood Transfusion Services
TDHS	Tanzania Demographic and Health Survey
UA	Universal Access
UN	United Nations
UNAIDS	Joint United Nations Programme on AIDS
UNDP	United Nations Development Programme
UNGASS	United Nations General Assembly Session on AIDS
VCT	Voluntary Counseling and Testing
VDRL	Venereal Disease Research Laboratory
VMMC	Voluntary Male Medical Circumcision
WHO	World Health Organisation

Executive summary

This report presents a summary of the activities of the Tanzanian NACP of the MoHSW in dealing with the HIV epidemic as of December 2012. It includes the following interventions: Surveillance of HIV infection, HIV Care and Treatment Services, National HIV/AIDS Estimates and Projections, Prevention of Mother to Child Transmission (PMTCT) of HIV infection, HIV Counselling and Testing (HTC) services, surveillance of other STIs, Voluntary Male Medical Circumssion (VMMC) services, Home Based Care (HBC) services, Integrated Biological and Behaviour Surveillance Survey (IBBSS) among female sex workers, monitoring and reporting of the health response to HIV/AIDS needs. The report also includes highlights of HIV/AIDS research publications in Tanzania.

The following have been achieved regarding the blood transfusions services in the country; i) the number of voluntary donors has increased from 61,954 in 2009 to 74,836 in 2010 to 94,310 in 2011 and to 109,378 as of December 2012 ii) the overall prevalence of some Transfusion Transmissible Infections (TTIs) among voluntary blood donors decreased HIV from 2.6% in 2009 to 1.6% in 2010 to 0.6% in 2011 but increased slightly to 1.1% in 2012 iii) the prevalence of HBV infection decreased from 6.1% in 2009 to 4.9% in 2010 but remained at 5.1% in both 2011 and 2012. The prevalence of HCV infection has increased from 0.6% in 2009 to 1.2% in 2010 and that of syphilis from 1% in 2009 to 1.2% in 2010 and remained at 0.5% in both 2011 and 2012. Notably, the supply of safe blood from zonal centers has not met facility requirements and hence some hospitals continue to collect blood from replacement donors.

Regarding HIV care and treatment services; i) the number of health facilities providing and reporting HIV care and treatment services has increased 825, in 2010 to 1,156 in 2012, ii) The cumulative number of clients enrolled in HIV care and treatment increased from 403,378 in 2008 to 594,651 in 2009 to 740,040 in 2010, to 971,276 and 1,135,390 in 2012 which is 81 % of the 1,400,000 country's estimated PLHIV iii) the cumulative number of clients on ART increased from 202,181 in 2008 to 303,664 in 2009 to 384,816 in 2010 to 527,561 in 2011 and 663,911 in 2012.
The number of HIV infected individuals currently on ART in 2011 was 268,404, which increased to 432,338 in 2012.

Out of these figures, the number of children enrolled was 33,422 in 2008, 47,044 in 2009, 58,245 in 2010, 76,756 in 2011 and 87,232 in 2012, constituting only 8% of enrollees. The cumulative number of children on ART has increased 15,672 in 2008, 22,789 in 2009 to 29,457 in 2010, 41,836 in 2011 and 50,981 in 2012, which only 8% of patients on ART. The number of children currently on ART was 19,697 in 2011 and increased to 32,414 in 2012.
Despite the noted success in the HIV care and treatment services, a number of significant challenges still exists; i) From the national database, the percentage of health facilities that offer ART is only 17% (1,156 out of 6,892) ii) the percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy (**UA**) is only 76% for adults and 81% for children iii) the percentage of persons who attended all clinic appointments for HIV care and treatment services during a year ranges from 27% to 45%.

The continued scaling of PMTCT services, which started in 2003, has resulted in increased number of i) PMTCT implementing sites from 3029 in 2008 to 4301 in 2010 to 4,603 in 2011 and 4,832 in 2012, ii) pregnant women reached at ANC by PMTCT services from 958,103 in 2008 to 1,660,894 in 2010 1,682,886 in 2011 and 1,625, 811 in 2012 iii) pregnant women tested for HIV (ANC+LD) from 919,377 to 1,414,051 in 2010 to 1,381, 022 in 2011 and 1,036, 948 in 2012 is the total number of children on exclusive breastfeeding was 32,774 in 2011 and increased to 65,070 in 2012 v) Proportion of women reached at ANC against total estimated pregnant women in the population was 61 % in 2008, 99.7% in 2010, 95% in 2011 and 87% in 2012. The number of infants were tested for HIV infection increased from 22,033 in 2010 to 27,245 in 2011 but decreased to 26,608 in 2012. and the percentage of HIV infection among the tested infants was 9.8% in 2010, 7.1% in 2011 and 8.7% in 2012.

The total number of clients referred to HTC services from different services was 1,003,918 clients in 2009, 806,113 in 2010, 990,388 in 2011 and 530,914 in 2012 . The major source of clients for HTC services has remained to be self referrals which accounted for 83.2% in 2011 and 68% in 2012, while the remaining sources (TB, STI Clinic, OPD, IPD, BTS, and HBC) accounts for about 16.8% in 2011 and 32% in 2012, with TB clinics contributing only 0.9% in 2011 and 2.6% in 2012. The reduction in clients referred to HTC services in 2012 need to be investigated. Equally, the low percentage of referrals from TB clinics needs to be addressed given the necessity of integrating TB and HIV activities.

During the year 2012, a total of 162,101 STI episodes were reported to NACP by STI clinics countrywide, which is an increase from 99,346 episodes reported in 2011. Of these episodes, genital discharge syndromes increased from 44,153 (44.0 %) in 2011 to 69,985 (43.2%), genital ulcer disease episodes increased from 18,921 (19%) in 2011 to 22, 706 (14.0 %) in 2012, pelvic inflammatory diseases increased from 7,339 (7.0%) to 11,691 (7.2%), while VDLR/RPR positive and the rest increased from 15,348 episodes in 2011 to 26,157 episodes in 2012.

The number of regions reporting on voluntary male medical circumcision (VMMC) has increased from four regions in 2010 to seven regions in 2012. These regoins include Iringa, Kagera, Mbeya, Mwanza, Rukwa, Shinyanga and Tabora. The number of circumcised males has increased from 39,520 in 2010 to 117,196 in 2011 and 183,480 in 2012.

The number of regions reporting HBC services has increased from three regions (Mtwara, Manyara and Morogoro) in 2010 to the entire country, while the cumulative number of clients enrolled in HBC services has increased 96,751 in 2011 to 153,220 in 2012. The number of clients newly enrolled in HBC services rose from 21,822 in 2011 to 33,866 in 2012.

A study conducted In Dar es Salaam in 2011 among female sex workers found the prevalence of HIV infection to be 31.4%, compared with 8.2% among women aged 15-49 years in the same region. The highest prevalence was among those with steady partners (46.9%) The adjusted odds ratio (AOR) of HIV infection among women who suspected that their partners injected drugs was 2.41.

Using estimations and projections package (EPP) and the spectrum model developed by WHO, it is estimated that, in the year 2012, 1,472,418 people were living with HIV (1,241,076 Adult and 231,342 Children) in Tanzania mainland. The number of new HIV infections in 2012 alone is estimated to be 70,747 for adults aged more than 15 years and 14,897 for children aged less than 15 years. The number of HIV infected adults in need of ARVs is estimated to be 716,295, while for children the number is 129,128. The number of HIV-infected pregnant in need of PMTCT services is estimated to be 96,660. Annual AIDS deaths in Tanzania mainland for the year 2012 was 82,462 (67,935 adults and 14,527 children)

Chapter One

SURVEILLANCE OF HIV INFECTION

Surveillance Population: Blood Donors

1.1 Introduction

The demand for blood transfusion services in Tanzania is high due to endemicity of infections causing anemia, malnutrition, surgical and obstetrical emergencies which are associated with blood loss. However, for a long time blood safety has remained an issue of major concern in transfusion medicine in Tanzania due to the fact that national blood transfusion services are still inadequate.
Indeed, although screening of donor blood for HIV infection started in 1987, these services were predominantly hospital-based, reliant on replacement family donations, and were limited to regional and referral hospitals, in additional, there was no systematic screening of donated blood for transfusion-transmissible agents other than HIV.

Taking the above situation into consideration, in 2004, the MOHSW, in collaboration with CDC and other partners established the Tanzania National Blood Transfusion Services (TNBTS), a centralized system of coordinated blood transfusion services. The TNBTS is responsible for collection, processing, storage and distribution of safe blood and blood products to health facilities. The activities of the TNBTS were centralized in 2005 following the World Assembly Resolution (WHA) 28.72 (1972) that called for member states to establish comprehensive and well coordinated blood transfusion services. At the moments TNBTS coordinates seven Zonal blood transfusion centers in the Mainland, namely Lake zone-(LZBTC) in Mwanza, Western-(WZBTC) in Tabora, Northern –(NZBTC) in Kilimanjaro, Eastern-(EZBTC) in Dar es Salaam, Southern Highlands-(SHZBTC)in Mbeya , Southern-(SZBTC) in Mtwara and a military zone- the Tanzania People's Defense Force (TPDF).
TNBTS is responsible for implementing blood transfusion activities according to the national blood transfusion policy guideline. The guideline emphasize voluntary, non-remunerated repeat donations from low risk and well informed donors and does provide a roadmap for standardized efficient and sustainable ways of recruiting and retaining safe blood donors. Since the establishment of TNBTS, donated blood is routinely screened for HIV, Hepatitis B virus (HBV), hepatitis C virus (HCV) and syphilis infections.

This section of the report provides data of voluntary donors who donated blood at seven TNBTS zonal centers between January 2011 and December2012.

1.2 Methods

1.2.1 Voluntary Non – Remunerated Repeat Blood Donors

As stated above, data for voluntary non-remunerated repeat blood donors from TNBTS for the period

of January 2011 to December 2012 were available for inclusion in this report. The TNBTS include voluntary blood donors from its seven centers which covers all regions of Tanzania. During that period a total of 203,688 persons donated blood. All donated blood was screened for selected infections using TNBTS testing algorithms that are based on the National Specific Blood Transfusion Practice Guidelines (MoHSW, 1st Edition, 2006).

HIV was screened using Vironostica HIV 1and 2 Ag/Ab and reactive samples were confirmed using Enzygnost anti-HIV ½ plus (SP2). GENEDIA HBsAg ELISA 3.0 and GENEDIA HCV ELISA 3.0 were used to screen for HBV and HCV, respectively. Reactive samples were retested by repeating the same tests. Screening for syphilis was done using Omega IMMUTREP RPR and positive samples were confirmed by Determine Syphilis TP. For all discordant results the blood donors were asked to come for repeat test after three months. Blood donors found to have any of the screened pathogens were referred to hospitals to care and treatment facilities for further management. Blood donor's demographic information regarding sex, age, place of donation was captured using blood donation register forms. Laboratory test results are recorded in the laboratory register forms, prior to entry in the computer system.

1.3 Results

1.3.1 Voluntary Blood Donors

Between January 2011 and December 2012 a total of 203,688 blood donors, 152,638 (74.9%) males and 51,050 (25.1%) females donated blood voluntarily at the seven TNBTS centres. Table 1.1 below, shows the distribution of the donors by age group and sex. Notably, the number of voluntary donors increased from 94,310 in 2011 to 109,378 in 2012. Notably most of the donors 142,428 (69.9%) were aged between 18 and 25 years.

Table 1.1: Age and sex distribution of voluntary blood donors for the period 2011-2012

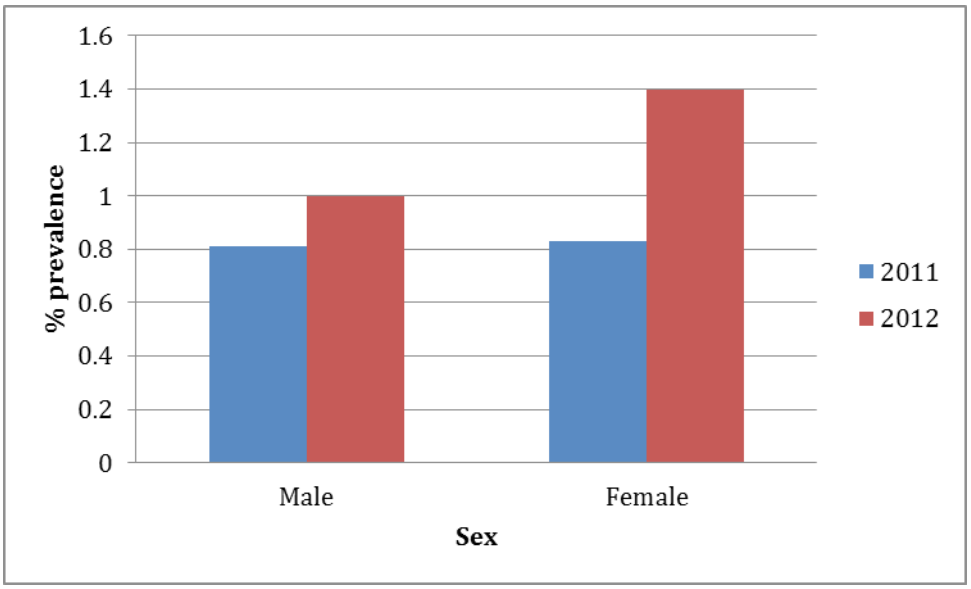
	2011			2012			
Age group	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Grand total**
18-25	49,415	18,831	68,246	56,605	17,577	**74,182**	**142,428**
26-35	11,936	4,069	16,005	18,384	5,019	**23,403**	**39,408**
36-45	5,476	1,668	7,144	6,045	2,198	**8,243**	**15,387**
>45	2,202	713	2,915	2,575	975	**3,550**	**6,465**
Total	**69,029**	**25,281**	**94,310**	**83,609**	**25,769**	**109,378**	**203,688**

As shown in table 1.2 below, the overall prevalence of HIV infection among voluntary blood donors increased slightly from 0.8% in 2011 to 1.1% in 2012. The prevalence of HIV infection among males and females blood donors was 0.81% and 0.83 % in 2011 and 1.0% and 1.4% in 2012, respectively. These figures shows a slight difference in HIV prevalence between males and females blood donors.

Table 1.2 Prevalence of HIV infection among voluntary blood donors by age groups;TNBTS 2011-2012

Age group	2011				2012			
	Males		Females		Males		Females	
	N	%HIV	N	%HIV	N	%HIV	N	%HIV
18-25	49,415	0.4	18,831	0.5	56,605	0.7	17,577	0.9
26-35	11,936	1.3	4,069	1.5	18,384	1.2	5,019	2.2
36-45	5,476	2.5	1,668	2.5	6,045	2.5	2,198	2.8
>45	2,202	2.6	713	2.9	2,575	2.4	975	3.5
Total	**69,029**	**0.81**	**25,281**	**0.83**	**83,609**	1.0	**25,769**	1.4

Fig 1.1: Sex-specific prevalence of HIV infection among voluntary blood donor during the period 2011-2012



As shown in table 1.2 above, the age group with the lowest HIV prevalence was 18-25, while the highest prevalence of HIV infection was among donors aged above 45 years. The overall prevalence of HIV infection in 2012 was not statistically different from that of 2011.

As shown in Table 1.3 below, the prevalence of HBV infection among voluntary blood donors was 5.1% in both 2011 and 2012. Notably the prevalence of HBV infection was higher compared to other Transfusion Transmissible infection diseases (TTIs) (HIV, HCV and Syphilis).

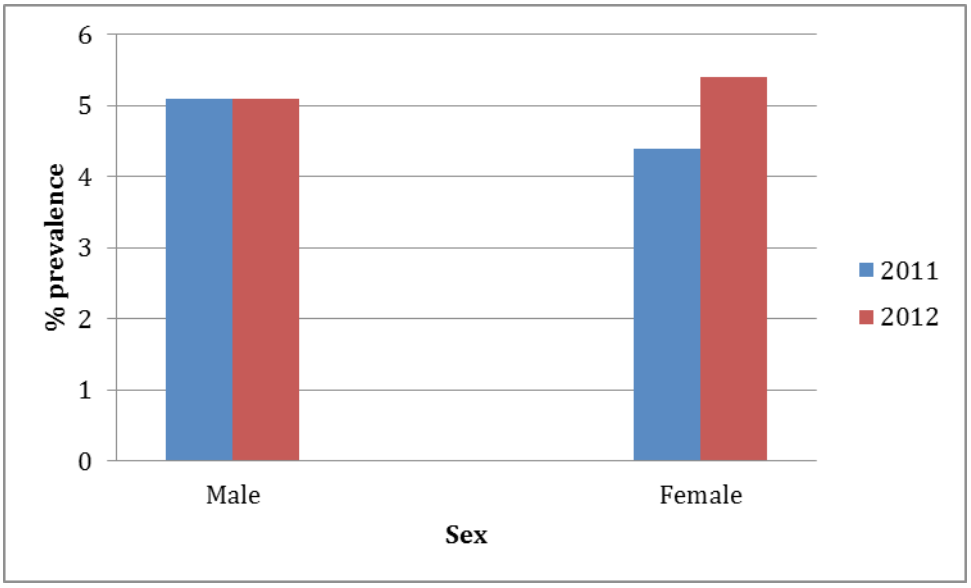
Of particular interest is the fact that the prevalence of HBV infection increased with age in both male and female donors in both 2011 and 2012 (Table 1.3).

Table 1.3: Prevalence of HBV infection among voluntary blood donor by age, TNBTS 2011-2012

Age group	2011				2012			
	Males		Females		Males		Females	
	N	%HBV	N	%HBV	N	%HBV	N	%HBV
18-25	49,415	4.0	18,831	2.9	56,605	4.8	17,577	3.9
26-35	11,936	7.0	4,069	6.2	18,384	4.0	5,019	6.2
36-45	5,476	9.2	1,668	12.8	6,045	9.5	2,198	10.9
>45	2,202	10.2	713	14.4	2,575	7.9	975	16.5
Total	**69,029**	5.1	**25,281**	4.4	**83,609**	5.1	**25,769**	5.4

As shown in Figure 1.3, the prevalence of HBV infection among blood donors remained constant at 5.1%, while that of female donors increased from 4.4% in 2011 to 5.4% in 2012.

Figure 1.3: Trends of HBV infection among Voluntary blood donor by sex, TNBTS 2011-2012



As depicted in Table 1.4, the overall prevalence of HCV infection among voluntary blood donors was in both 0.5% in 2011 and 2012.

The same table shows the prevalence of HCV infection among male and females donors to be 0.6% and 0.3% in 2011 and 0.5% and 0.5% in 2012, respectively. Notably, there were no significant sex differences in HCV prevalence among the donors.

Table 1.4: Prevalence of HCV infection among Voluntary blood donor by age, TNBTS 2011-2012

Age group	2011				2012			
	Males		Females		Males		Females	
	N	%HCV	N	%HCV	N	%HCV	N	%HCV
18-25	49,415	0.4	18,831	0.2	56,605	0.4	17,577	0.4
26-35	11,936	0.6	4,069	0.4	18,384	0.5	5,019	0.7
36-45	5,476	1.2	1,668	0.7	6,045	1.1	2,198	1.2
>45	2,202	1.1	713	1.3	2,575	1.1	975	1.0
Total	**69,029**	0.6	**25,281**	0.3	**83,609**	0.5	**25,769**	0.5

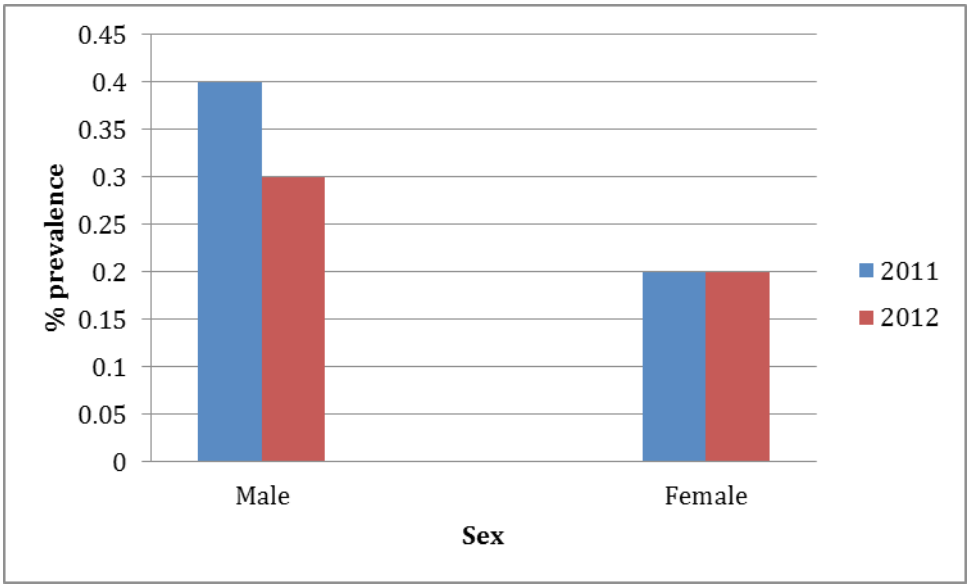
As shown Table 1.5 below the overall prevalence of syphilis infection among the blood donors decreased from 0.4% in 2011 to 0.3% in 2012, indicating a significant decreased compared to previous surveillance report 2009/2012 whereby the prevalence for syphilis was 1% and 1.2%. Age wise, the prevalence of syphilis infection was highest among donors aged more than 36 years in both 2011 and 2012.

Table 1.5: Prevalence of syphilis infection among voluntary blood donor by age, TNBTS 2011-2012

Age group	2011				2012			
	Males		Females		Males		Females	
	N	%Syphilis	N	%Syphilis	N	%Syphilis	N	%Syphilis
18-25	49,415	0.2	18,831	0.1	56,605	0.2	17,577	0.2
26-35	11,936	0.5	4,069	0.2	18,384	0.3	5,019	0.2
36-45	5,476	1.8	1,668	1.0	6,045	0.9	2,198	0.1
>45	2,202	2.7	713	0.0	2,575	1.1	975	0.4
Total	**69,029**	0.4	**25,281**	0.2	**83,609**	0.3	**25,769**	0.2

Figure 1.4 below shows the prevalence of syphilis to be higher among male donors as compared to females in both 2011 and 2012.

Figure 1.4: Prevalence of Syphilis infection among voluntary blood donor by sex, TNBTS 2011-2012



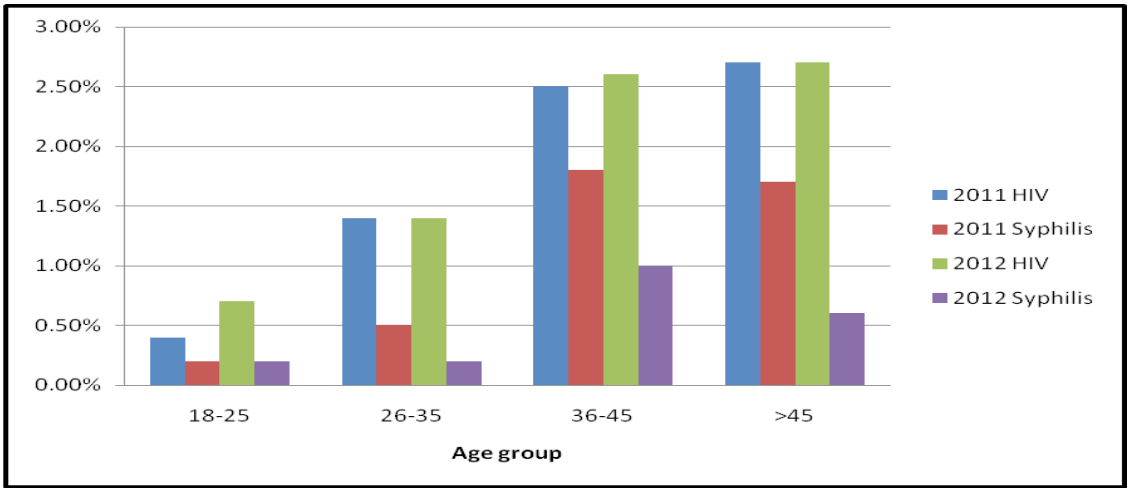
As shown in the table 1.6, the overall prevalence of HIV, HBV, HCV and syphilis infections among voluntary blood donors for the two years period (2011-2012) was 0.97%, 5.1%, 0.5% and 0.3%, respectively. The only co-infections that were noted were those of HIV and HBV (0.1%), HBV and HCV (0.05%). Of particular note is the fact that 6.8% of blood donated by the voluntary donors contained at least one of the screened TT pathogens. None of the donated blood contained all four TT pathogen.

Table 1.6: Co-infections among voluntary blood donor of TNBTS, 2011-2012

Infectious agent(s)	Cases	Percentage(%)
HIV	1965	0.97
HBV	10,288	5.05
HCV	1037	0.51
SYPHILIS	629	0.31
HIV and HBV	203	0.1
HBVand HCV	101	0.05
HIV and Syphilis	3	0.01
HBV,HCV,HIV and Syphilis	0	0
At least one	13,919	6.8

Figure 1.5 below shows the trends of HIV and syphilis infection among voluntary blood donor by age group in both 2011 and 2012

Figure 1.5: Trends of HIV and syphilis infection among voluntary blood donor by age group,TNBTS,2011-2012



Chapter Two

HIV CARE AND TREATMENT SERVICES

2.1.1 Introduction

The National HIV Care and Treatment program is now in its ninth year of implementation since its launch in October 2004. The implementation of the program is guided by the Health Sector HIV Strategic Plan two (HSHSP II) which covers the period between 2008 and 2012.

The main focus of HSHSP II (2008-12) was to scale up HIV care and treatment services, strengthen adherence to ART, integrate various HIV and AIDS interventions with other health services, and link both public and private (for-profit/ non-profit) facilities based interventions with community and home based care services. The HSHSP II has three specific strategic objectives: (i)To strengthen and scale up of implementation of comprehensive HIV care and treatment services in public and private facilities so as to provide ART services to 90% of all PLHIV in need of ART of which 18% will be children by 2012, (ii) To improve the quality of care for both PLHIV as well as TB patients by strengthening the collaboration between TB and HIV program at all levels, and (iii)To provide quality HIV and AIDS care and treatment to PLHIV and improve their quality of life by 2012.

The NACP which is mandated to coordinate the scale up of quality HIV care and treatment services at all health facility levels, has developed i) National Guidelines for management of HIV and AIDS, ii) training curricular for different health cadres, iii) monitoring systems (patients, drugs/ other supplies and epidemic), iv) supportive supervision and v) clinical mentoring guide.

NACP in collaboration with Regional and Council Health Management Teams (R/CHMT) conducts assessment of the health facilities earmarked for initiation of care and treatment services and provides supportive supervision and clinical mentoring to all health facilities that provide HIV care and treatment services. The program in collaboration with stakeholders, coordinates forecasting and quantification of HIV related commodities including ARVs, while the Medical Stores Department (MSD) is responsible for procurement, storage, and distribution of HIV related commodities including antiretroviral medicines.

This chapter provides the following information; (i) population statistics, number of care and treatment facilities, HIV prevalence, number of clients enrolled in HIV care and those on ART by regions up to December 2012 (ii) cumulative number of clients enrolled in HIV care, on ART and Current on ART until end of December 2012 by regions (iii) cumulative number on ART during the eight years reporting periods and number of ART sites (iv) number of HIV infected clients screened for TB in Care and Treatment Clinics by region (2011 and 2012) (iv)proportions of PLHIV screened for TB in Care and Treatment Clinics by region during 2011-2012) and (v) number of TB-HIV co-infected clients initiated TB treatment by region (2011 and 2012).

2.1.2 Data Collection Methods

HIV care and treatment services are monitored using Patient Monitoring System (PMS) which consists of eight tools; five recording and two reporting tools. The recording tools include care and treatment cards (CTC) coded as CTC1 and CTC2, Pre-ART, ART and Cohort analysis registers. Care and treatment cards (CTC1 and CTC2) capture the entire patient's particulars, which are fed into ART and Pre-ART registers for patients on ART and who are not yet on ART respectively. The ART register is used to track patients on ART for the period up to 72 months and provide longitudinal information to be fed into the cohort analysis registers and reports.

On the other hand there are two reporting tools namely cross sectional (quarterly) and cohort analysis (six monthly). The cross sectional reports provide quarterly information on "cumulative numbers in care" and "on ART" and on "current in care" and "current on ARV", disaggregated by age and sex.

Each facility that provides HIV care and treatment services summarizes patient's information from the registers to produce quarterly facility reports, which are shared at the facility level for managing and improving service provision. These facility reports are sent to their respective district medical offices, where they are aggregated to form a district summary report. Eventually, the district summary reports are sent to regional level where aggregation is done to form a regional summary report, which along with other regional reports are sent to NACP for compilation and analysis.

2.1.3 Results

As of December 2012, the number of health facilities providing and reporting HIV care and treatment services were 1,156, compared with 825 facilities reported in December 2010. The cumulative number of clients enrolled in HIV care was 1,135,390 up from 740,040 reported in December 2010. This number of clients accounted for 75.7% of the 1,500,000 country's estimated PLHIV (UNAIDS 2013), which is a significant increase compared with 57% reported in December 2010. The current number of clients on ART as of December 2012 is 432,338, while the cumulative number on ART is 663,911.

Table: 2.1: Population statistics, number of care and treatment facilities, HIV prevalence, number of clients enrolled in HIV care and those on ART by regions up to December 2012

1	2	3	4	5	6	7	8
REGION	Regional Population	HIV prevalence (%) 15 -49 years TMHIS 2011/12	Estimated PLHIV (Based on HIV prevalence rates)	Reporting C&T Facilities	Cumulative Clients enrolled in HIV Care by Dec 2012	Cumulative Clients on ART by Dec 2012	Clients Current on ART by Dec 2012
Arusha	1,694,310	3.2	54,218	45	42,137	25,375	11,283
Dar es salaam	4,364,541	6.9	301,153	100	178,150	117,986	63,628
Dodoma	2,083,588	2.9	60,424	33	28,319	16,413	10,919
Iringa	941,238	9.1	85,653	77	125,038	74,946	46,812
Kagera	2,458,023	4.8	117,985	63	43,809	23,258	15,312
Kigoma	2,127,930	3.4	72,350	29	11,654	6,072	3,771
Kilimanjaro	1,640,087	3.8	62,323	40	37,039	22,589	20,447
Lindi	864,652	2.9	25,075	70	21,194	10,203	6,240
Manyara	1,425,131	1.5	21,377	29	18,610	11,046	4,073
Mara	1,743,830	4.5	78,472	46	38,214	22,517	15,140
Mbeya	2,707,410	9	243,667	51	137,296	76,823	67,568
Morogoro	2,218,492	3.8	84,303	51	44,035	27,318	15,060
Mtwara	1,270,854	4.1	52,105	85	26,594	14,715	8,213
Mwanza	2,772,509	4.2	116,445	90	104,635	55,841	33,972
Pwani	1,098,668	5.9	64,821	39	37,277	19,615	10,910
Rukwa	1,004,539	6.2	62,281	42	32,186	20,590	16,539
Ruvuma	1,376,891	7	96,382	61	34,568	20,275	14,125
Shinyanga	1,534,808	7.4	113,576	77	68,490	38,166	26,396
Singida	1,370,637	3.3	45,231	32	14,663	9,316	5,274
Tabora	2,291,623	5.1	116,873	56	44,882	20,227	19,121
Tanga	2,045,205	2.4	49,085	40	46,600	30,620	17,535
Njombe	702,097	14.8	103,910				
Katavi	564,604	5.9	33,312				
Simiyu	1,584,157	3.6	57,030				
Geita	1,739,530	4.7	81,758				
TOTAL	39,034,966	5.1	2,199,809	1,156	1,135,390	663,911	432,338

There was a significant regional variation in the number of cumulative clients enrolled in HIV care services, ranging 11,654 clients in Kigoma region to 178,150 in Dar-es-Salaam region. By December 2012, a total of 663,911 clients had ever started on ART, representing 58.5% of all clients enrolled in HIV care and treatment services in this period, which is an increase from 51.9% reported in December 2010.

Notably, in Iringa region, the number of patients ever on ART (125,038) is higher than the estimated 85,653 HIV infected persons, which is probably related to under-estimation of either the regional HIV prevalence or regional population.(see table 2.1 above)

2.1. 3 Clients enrolled in HIV care and treatment and those on ART.

Table 2.2 below shows the cumulative number of clients enrolled in HIV care and treatment and those currently on ART as of December 2011 and December 2012. As of December 2011, the cumulative number of clients enrolled on HIV care was 971,276 of whom children were 76,756 (7.9%), where as in December 2012, the cumulative number of clients enrolled on HIV care was 1,135,390 of whom children were 87,232 (7.7%). As of December 2011, the cumulative number of clients on ART was 527,561 of whom children were 41,836 (7.9%), where as in December 2012, the cumulative number of clients on ART was 663,911 of whom children were 50,981 (7.7%). As of December 2011, the number of clients currently on ART was 268,404 of whom children were 19,697 (7.3%) ,where as in December 2012, the number of clients currently on ART was 432,338 of whom children were 32,414 (7.5%).

Table2.2: Cumulative number of clients enrolled in HIV care, on ART and Current on ART as of December 2012 by regions

	Dec-11						Dec-12					
	Cumulative Enrolled in HIV care		Cumulative On ART		Current on ART		Cumulative Enrolled in HIV care		Cumulative On ART		Current on ART	
REGION	Adults	Children	Adults	Children	Adults	Children	Adults	Children	Adults	Children	Adults	Children
Arusha	37602	4145	21996	2314	3720	486	38274	3863	22894	2481	10268	1015
Dar es salaam	139221	11025	84447	7183	43758	3353	165846	12304	109530	8456	59610	4018
Dodoma	21699	2485	14036	1237	7574	788	25567	2752	14905	1508	9977	942
Iringa	98731	9871	55958	5108	32423	2709	114007	11031	68596	6350	42970	3842
Kagera	14565	1193	6935	637	4298	368	40972	2837	21411	1847	14220	1092
Kigoma	11256	1034	3417	456	2027	194	10670	984	5518	554	3456	315
Kilimanjaro	27120	3919	14964	2099	7089	968	32243	4796	19793	2796	17961	2486
Lindi	19064	1558	8920	823	3925	360	19752	1442	9337	866	5770	470
Manyara	13299	1268	7789	689	1516	124	16997	1613	10100	946	3730	343
Mara	46897	2731	25384	1373	6474	343	36052	2162	21313	1204	12868	2272
Mbeya	104727	8176	55028	4163	47847	3228	126686	10610	71916	4907	62976	4592
Morogoro	38340	3282	23093	1858	9468	724	40809	3226	25404	1914	14106	954
Mtwara	20228	1415	10091	744	4431	377	24880	1714	13707	1008	7645	568
Mwanza	81673	6094	41362	3277	20825	1527	98064	6571	52278	3563	32477	1495
Pwani	27354	2819	11867	1177	6176	906	34341	2936	17965	1650	9993	917
Rukwa	17077	1365	8504	740	10615	408	29928	2258	19578	1012	15703	836
Ruvuma	31836	2348	15695	1322	11486	811	31990	2578	18287	1988	13093	1032
Shinyanga	55038	3967	27903	2249	7155	472	64094	4396	35385	2781	24568	1828
Singida	9848	921	6197	484	3350	264	13361	1302	8590	726	4888	386
Tabora	45267	3668	22112	1844	12653	1037	41252	3630	18622	1605	17596	1525
Tanga	33678	3472	20027	2059	1897	250	42373	4227	27801	2819	16049	1486
TOTAL	894520	76756	485725	41836	248707	19697	**1048158**	**87232**	**612930**	**50981**	**399924**	**32414**
GRAND TOTAL	**971276**		**527561**		**268404**		**1135390**		**663911**		**432338**	

Surveillance Report No. 23

Figure 2.1 below illustrates the cumulative number of clients on ART was increased from 16,199 in 2005 to 663,911 in 2012.As of December,the number of clients currently on ART was 244,148,where as of December 2012,the number of clients on ART was 432,338.Similary,number of CTC facilities increased from 96 in 2005 to 1156 in 2012.

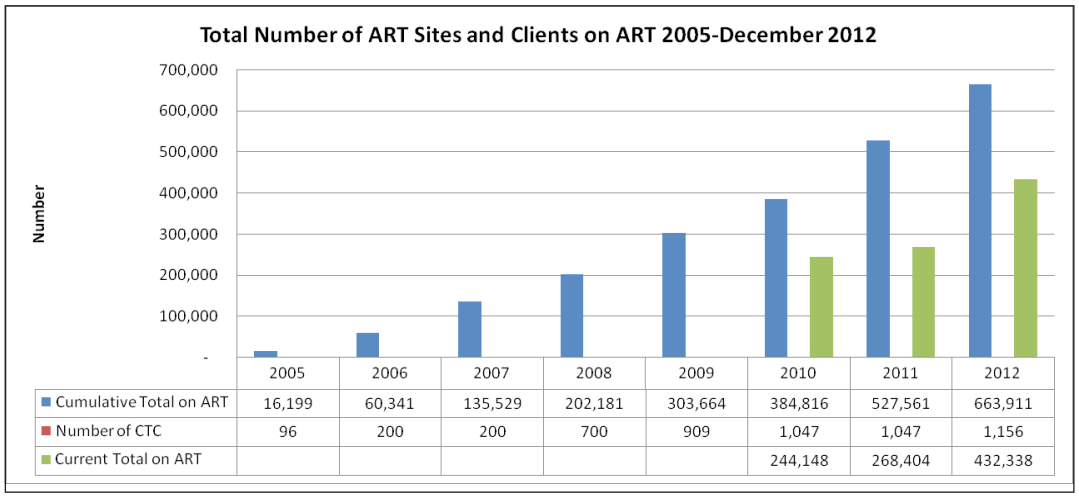


Table2.3: Number of HIV-infected clients screened for TB in Care and Treatment Clinics by Region (2011 and 2012)

REGION	2011				2012			
	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
Arusha	-	-	-	-	9117	9756	8761	10520
Dar es salaam	1030	22239	50387	42473	46082	63469	56261	64020
Dodoma	-	-	-	10042	10489	10717	10960	11454
Iringa	-	-	-	32158	38800	47655	52500	50900
Kagera	-	-	3230	6712	10664	19314	17570	19470
Kigoma	163	-	1548	-	2689	4564	1552	4744
Kilimanjaro	-	-	444	7137	7359	15469	15236	14862
Lindi	-	5774	4851	5704	6528	7201	6881	8743
Manyara	-	-	-	1962	2514	4064	2828	3210
Mara	-	-	593	6189	4236	10762	12064	12516
Mbeya	14907	12277	20744	29707	46204	55031	55512	51616
Morogoro	-	-	9480	11637	10168	13059	12301	16763
Mtwara	918	-	180	4606	7538	8955	6727	7990
Mwanza	2470	631	1367	23495	33755	31243	32414	25595
Pwani	-	101	7902	7919	10660	14839	13171	14256
Rukwa	-	-	-	691	20368	22099	21513	23930
Ruvuma	-	933	10385	7316	18477	20696	18827	17096
Shinyanga	374	-	349	777	25818	20650	16594	25262
Singida	-	-	-	-	4272	4663	5637	5874
Tabora	4747	2606	6131	7172	8524	14788	18252	17081
Tanga	325	2500	1690	9634	14937	13614	15259	15333
Total	24,934	47,061	119,281	215,331	339,199	412,608	400,820	421,235

As shown in table 2.4 below, the proportion of PLHIV screened for TB has risen steadily from 43.2% in the first quarter of 2011 to 88.7% in the fourth quarter of 2012. The relatively low scores observed during the first and second quarters of 2011 is due to the fact that many facilities did not provide reports and some regions, such as Mbeya had low level of reporting. A notable improvement in screening for TB is observed during the fourth quarter of 2012 in which 14 (66.7%) out of 21 regions exceeded a reporting level of 90%.

Table 2.4: Proportion of PLHIV screened for TB in CTC by region during 2011-2012

REGION	2011				2012			
	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
Arusha	-	-	-	-	84.0	84.0	85.2	87.5
Dar es salaam	99.8	98.8	100.0	98.9	98.1	97.2	99.4	98.3
Dodoma	-	-	-	97.7	99.6	99.8	99.8	99.8
Iringa	-	-	-	65.3	86.0	93.3	96.6	96.7
Kagera	-	-	92.6	97.4	81.3	87.0	96.4	97.5
Kigoma	94.2	-	42.3	-	73.5	96.1	34.0	93.7
Kilimanjaro	-	-	99.3	100.9	67.1	96.5	97.8	84.5
Lindi	-	99.3	85.0	89.4	87.7	96.6	95.9	98.4
Manyara	-	-	-	97.3	99.9	100.0	86.6	92.7
Mara	-	-	99.5	80.1	35.7	78.2	70.4	83.8
Mbeya	33.1	27.8	52.3	59.3	71.3	84.4	43.8	78.2
Morogoro	-	-	91.0	87.0	83.1	93.9	78.6	97.4
Mtwara	58.0	-	96.3	88.7	72.6	95.1	65.7	73.6
Mwanza	100.0	23.9	49.4	85.3	89.2	87.7	100.0	93.9
Pwani	-	25.8	89.1	89.9	95.3	79.8	95.5	94.3
Rukwa	-	-	-	100.0	89.3	89.1	87.6	97.5
Ruvuma	-	76.7	90.3	84.2	97.3	89.9	98.6	91.8
Shinyanga	80.6	-	26.3	99.9	90.4	87.9	69.6	59.7
Singida	-	-	-	-	91.1	91.4	92.4	97.9
Tabora	72.0	55.0	99.4	100.0	74.7	51.8	100.0	93.6
Tanga	97.6	88.5	81.5	77.8	96.6	85.4	95.5	87.8
Total	43.2	55.8	81.0	80.6	84.5	87.7	79.4	88.7

Table 2.5 below shows the number of TB-HIV co-infected clients started on TB treatment to have increased from 445 in the first quarter of 2011 to 3,617 in the third quarter of 2012, decreasing slightly to 3,137 in the fourth quarter of 2012. The reason for the low number of clients in the first and second quarters of 2011 appears to be due to lack of reporting by many regions. Overall, Dar es Salaam and Mbeya regions seem to have the highest number of TB-HIV co infected clients started on TB treatment.

Table2.5: Number of TB-HIV co infected clients initiated TB treatment by region (2011 and 2012)

REGION	2011				2012			
	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
Arusha	-	-	-	-	83	69	89	96
Dar es salaam	6	141	242	187	283	421	747	736
Dodoma	-	-	-	80	39	52	29	59
Iringa	-	-	-	614	182	132	155	177
Kagera	-	-	38	60	77	139	106	105
Kigoma	-	-	10	0	11	19	17	12
Kilimanjaro	-	-	1	62	37	55	86	152
Lindi	-	67	95	51	51	58	26	42
Manyara	-	-	-	38	58	104	57	11
Mara	-	-	4	70	56	83	115	139
Mbeya	348	223	199	241	452	273	448	624
Morogoro	-	-	89	62	88	80	230	111
Mtwara	3	-	2	58	666	62	327	48
Mwanza	37	6	31	356	342	346	298	157
Pwani	-	2	419	55	63	79	117	110
Rukwa	-	-	0	0	68	38	98	52
Ruvuma	-	15	111	42	97	188	161	74
Shinyanga	4	-	4	0	436	453	231	245
Singida	-	-	0	0	72	61	65	52
Tabora	40	28	52	59	53	58	122	45
Tanga	7	19	390	71	93	63	93	90
Total	445	501	1687	2106	3307	2833	3617	3137

Table 2..6 below shows the number of PLHIV initiated on IPT in the four quarters of 2012 in 11 Health Facilities implementing IPT. There was a gradual increase in the number of PLHIVs initiated on IPT over the year. The gradual increase is due to increasing understanding of IPT benefits among health providers in providing IPT as well as PLHIV readiness in taking IPT.

Table 2.6: Number PLHIV initiated into IPT (Jan-Dec 2012)

Quarter	Number initiated into IPT
Q1	713
Q2	1354
Q3	1561
Q4	1855
Total	5483

Chapter Three

NATIONAL HIV/AIDS ESTIMATES AND PROJECTIONS

3.1 Introduction

UNAIDS and WHO have developed a new procedure and a computer software for making estimates and projections of HIV/AIDS magnitude and its impact. This endeavor provides a standardized approach to estimations that could be applied in all countries. The models included are of the estimations and projections, which are the outputs of the Estimation and Projection (EPP) and the spectrum. The EPP software fits an epidemic curve on the ANC HIV surveillance data which have been collected over time to generate prevalence estimations both numerically and by curves. These prevalence estimations, together with various additional assumptions are then applied into the second software, the spectrum, to estimate and project impacts of the HIV/AIDS epidemic over time. In order for the model to work and generate plausible output, a number of inputs are required.

Recently, the World Health Organization (WHO), the Joint United Nation programme on HIV/AIDS (UNAIDS) and their partners released an update of Estimations and Projections Package, the EPP 2013.

3.2 Methods

The HIV prevalence dataset from ANC clinics covering the period from 1985 to 2008 was used for estimating and projecting HIV infection burden using EPP/Spectrum 2013 software. The 2011/12 Tanzania Census data for adults and children was applied. This population was divided into urban and rural in the proportions of **70%** for rural and **30%** for urban areas basing on the 2012 national population census.

The HIV prevalence data of ANC attendees were entered into the EPP/Spectrum 2013 urban and rural pages. The 2008 ANC HIV prevalence was calibrated using an average of 4.3% for rural and 7.2% for urban HIV prevalence based on the results of the 2011/12 Tanzania HIV Malaria Indicator Survey (THMIS).
In March 2013, a two days' workshop involving technical partners and policy makers was conducted. The objectives of the workshop were to introduce EPP and Spectrum models, discuss and agree on model inputs and assess the available antenatal clinic (ANC) HIV surveillance data, Care and treatment data and PMTCT data.

During the workshop, origin of estimation and projection package and spectrum models, rationale, inputs and the outputs were presented in a plenary followed by demonstration of necessary steps in the application of the models from inputting data to generating output.

3.3 Model Inputs

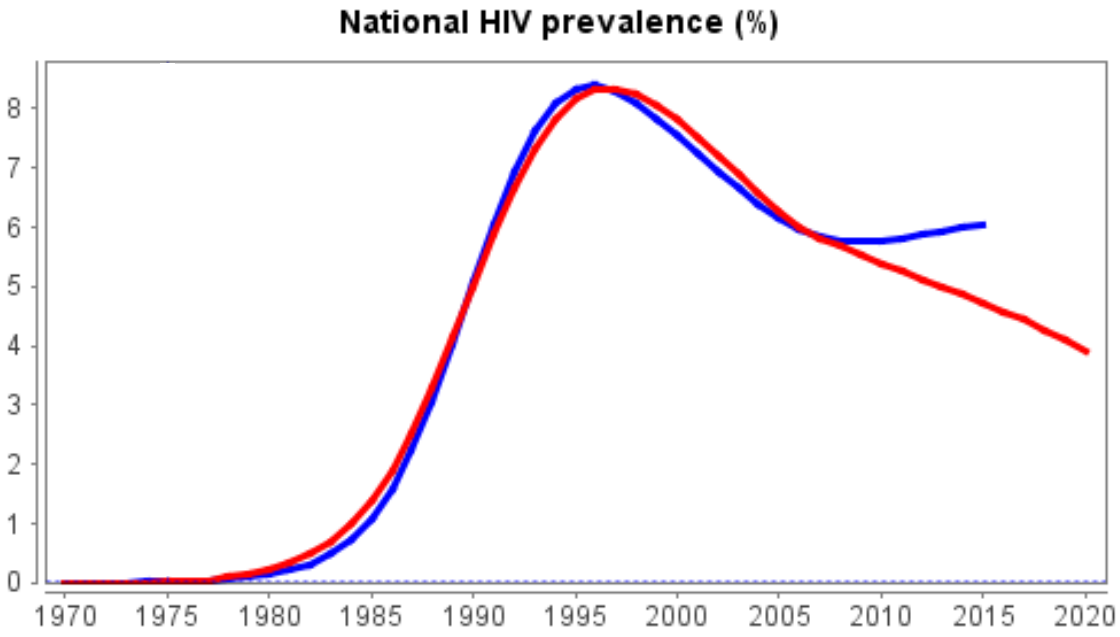
The following data set, with sources in parenthesis, were agreed for input into the spectrum for the generation of impact estimates and projections. As much as possible locally generated data were preferred, and where this was not available UN estimates were used:

- Women receiving antiretroviral medicine to prevent mother to child transmission through 2012(PMTCT,2012)
- Men and women receiving antiretroviral therapy through 2012(NACP,2012)
- Children receiving ART and cotrimoxazole through 2012(PMTCT,2012)
- HIV surveillance data through (ANC SURV.2008)
- Data from household surveys, if available Prevalence, sample size, standard error and non-response rate(THMIS,2012)

3.4 Results

Figure 3.1 below shows estimates and projections of HIV prevalence covering the period from 1980 to 2020. The blue curve shows HIV prevalence estimates and projections using assumptions such as initiation of ART at CD4 count of ≤200 cell/ul, cumulative number on ART, population based on 2007/2008 estimates. The red curve shows HIV prevalence and projections using assumptions of ART initiation at CD4 count of ≤350 cells/ul, current cumulative number on ART and population census estimates of 2012. Both curves show a steady increase in the prevalence of HIV infection between 1980s and early 1990s, peaking in 1995 at around 8%. The blue curve shows a gradual decrease in the prevalence of HIV infection from the peak to around 6% in 2007 and thereafter assuming a stable level at around 6%. The red curve also shows a gradual decrease from the peak to around 6% in 2007. Unlike the blue curve, the HIV prevalence in the red curve shows a decreasing trend to around 4% in 2020.

Figure 3.1: Estimated HIV Prevalence in Tanzania for the period 1980-2020



- Current

- Previous

Figure 3.2 below shows estimated number of new HIV infection covering the period of 1980 to 2020. The blue curve shows new HIV infection estimates and projections using assumptions such as initiation of ART at CD4 count of ≤200 cell/ul, cumulative number on ART, population estimates of 2007/08. The red curve shows new HIV infections estimates and projections using new assumptions of ART initiation at CD4 count of ≤350 cell/ul, current number on ART, census estimates of 2012. Both curves show a steady increase in new HIV infection in 1980s and peaked early 1990s. The blue curve peaked in 1990s at around 1.5%; whereas the red curve peaked at around 1.3% in the same year. Both curves demonstrate a steep decrease in new HIV infection from the peak to around 0.6% in year 2000. After 2000, the blue curve depicts a stable trend up to 2020, whereas the red curve shows a sharp decline to about 0.20% in 2020.

Figure 3.2: Estimated number of new HIV infections in Tanzania for the period 1980-2020

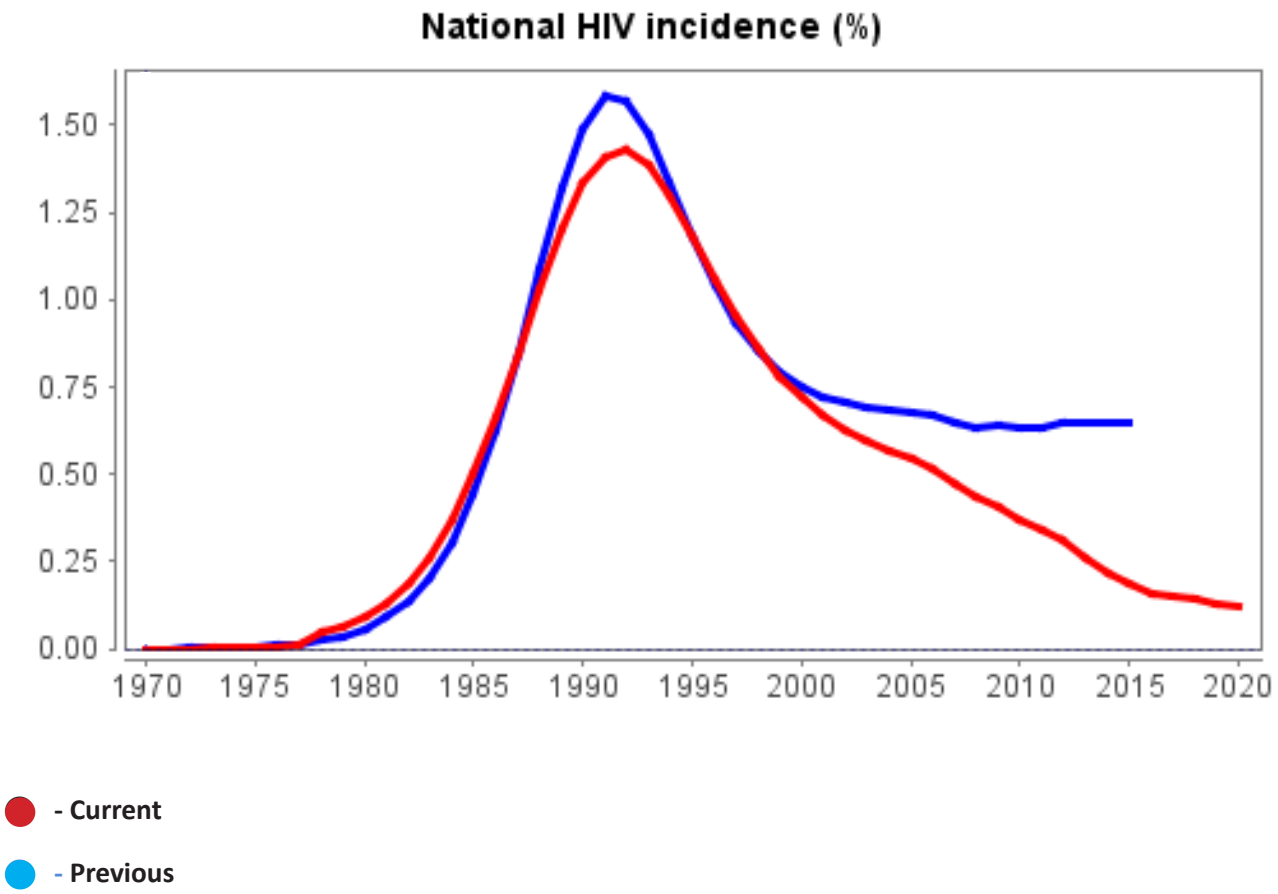


Table 3.1 Summary table of estimated burden of HIV infection for the period 2012 - 2020

NATIONAL ESTIMATES

Population in base year: BASE YEAR 2012

Summary Table	2012	2013	2014	2015	2016	2017	2018	2019	2020
	Median 50%	Median 50%	Median 50%	Median 50%	Median 50%	Median 50%	Median 50%	Median 50%	Median 50%
HIV Adults + Children	1,472,418	1,467,762	1,459,288	1,449,731	1,446,443	1,437,001	1,423,604	1,408,084	1,391,445
HIV Adults 15+	1,241,076	1,246,091	1,246,652	1,246,014	1,245,014	1,238,605	1,228,350	1,216,031	1,202,287
HIV 15+ female	730,604	737,933	742,228	745,713	749,011	748,738	745,874	741,533	736,146
HIV population- Children	231,343	221,671	212,636	203,717	201,429	198,397	195,254	192,053	189,158
Prevalence Adult	5.1	4.93	4.75	4.57	4.38	4.18	3.98	3.77	3.56
Prevalence- Males aged 15 to 24	1.85	1.78	1.7	1.61	1.52	1.43	1.34	1.27	1.2
Prevalence- Females aged 15 to 24	3.66	3.49	3.29	3.07	2.85	2.63	2.43	2.24	2.07
HIV Prevalence- Children	0.98	0.91	0.85	0.79	0.75	0.72	0.69	0.65	0.63
New HIV infections- Adult	70,747	61,424	53,179	46,977	42,122	40,445	39,550	38,627	37,552
New HIV infections- Children	14,897	15,422	14,682	14,118	21,245	20,470	19,449	18,223	17,199
Annual AIDS deaths	82,462	74,684	69,630	64,056	60,123	63,881	66,006	66,073	65,184
Annual AIDS deaths- Adult	67,935	62,157	59,092	54,650	50,400	54,032	56,707	57,492	57,220
Annual AIDS deaths- Children	14,527	12,527	10,538	9,406	9,723	9,848	9,299	8,581	7,964
Need for ART- Adult (Dec 31) (15+)	716,295	841,574	882,825	922,094	943,757	945,801	943,424	938,571	932,263
Need for ART- Children (Dec 31)	129,128	125,308	122,677	122,393	130,089	134,273	133,532	131,745	129,631
Mothers needing PMTCT	96,660	95,338	93,439	91,166	88,692	85,926	82,524	78,663	74,762
AIDS orphans	1,151,356	1,136,488	1,114,337	1,086,123	1,049,617	1,016,665	993,072	974,364	959,401
HIV population (15-49)	1,184,998	1,184,699	1,179,246	1,171,650	1,161,697	1,145,997	1,126,109	1,103,693	1,079,386
Number of new HIV infections	85,644	76,846	67,861	61,095	63,367	60,915	59,000	56,851	54,751
Incidence Adults 15-49	0.32	0.27	0.23	0.19	0.17	0.16	0.15	0.14	0.13
Annual AIDS deaths- Children (1-4)	3,411	3,050	2,032	1,715	1,721	2,470	2,587	2,516	2,357
HIV+ pregnant women with CD4 counts < 350	49,380	55,020	60,525	65,717	30,095	30,226	29,606	28,555	27,343
New HIV infections - Males aged 15 to 24	14,028	12,122	10,453	9,206	8,238	7,900	7,720	7,537	7,326
New HIV infections - Females aged 15 to 24	26,279	22,746	19,645	17,325	15,515	14,885	14,550	14,210	13,819
Annual AIDS deaths - Adults (15-24)	8,246	7,995	7,747	7,437	7,053	7,348	7,719	7,842	7,759

Table 3.2 below shows ART coverage for Adult (15+), children (0-14) and PMTCT services. The coverage for Adult (15+) is 69%, children (0-14) is 25% while PMTCT is 77%.

Table 3.2: ART coverage estimates, including PMTCT services in 2012

Year	Adult (15+) ART Coverage (%)	Child (0-14) ART Coverage (%)	PMTCT Coverage (%)
	Estimate	Estimate	Estimate
2012	69	25	77

Source: UNAIDS (June 2013)

Chapter Four

PREVENTION OF MOTHERS TO CHILD TRANSMISSION OF HIV

1.1 Introduction

Tanzania has been implementing PMTCT services since 2000, and by 2012, 93% (4,832) of all reproductive health services were providing PMTCT services, reaching about 77% of the HIV-infected pregnant women in need for ART prophylaxis. In aligning with the global commitments of virtual elimination of new infections among children and keeping their mothers alive, the Ministry of Health and Social Welfare (MOHSW) recommended the need to develop elimination of mother to child transmission of HIV plan (eMTCT). The plan was launched on AIDS Day by the president of the United Republic of Tanzania, the excellent Jakaya Mrisho Kikwete on December 1st 2012.

The main focus of the plan is to i) increase the coverage and utilization of services, ii) integrate PMTCT services into MNCH platform, iii) improve the quality of ANC services, iv) identify and focus provision of PMTCT services in areas and populations with the highest HIV prevalence and highest numbers of women with unmet need for PMTCT interventions, and v) implement strategic services delivery using community-based approaches, by addressing bottlenecks to access and utilization of ANC/MNCH and PMTCT services.

4.2 Data Collection Methods

The PMTCT programme uses standard HMIS tools such as the PMTCT Mother Child follow-up registers, the CTC2 data base, the ART register, the MTUHA registers, the Mothers Health Cards, the HIV-Exposed Infant Card, the CTC1 and CTC2 cards, the Child Health Cards, and the monthly/quarterly summary reporting forms to collect and document PMTCT monitoring information. Collecting and recording information (data) for programme monitoring is an important responsibility for HCWs.

Supervisors ensure that all HCWs in RCH services know what data needs to be collected, how it should be collected, who is responsible for collecting it, how it should be recorded, and how it should be reviewed and verified. Training, supervision, and support are required to ensure that PMTCT monitoring data are consistently and reliably recorded.

To track the progress of PMTCT activities, health facilities submit monthly or quarterly summary reports to the districts through DRCHCO and DACC who will work in collaboration to send reports to the RRCHCO and RACC at the regional office. The PMTCT program at RCH Section and NACP will then receive compiled reports from RRCHCO and RACC. At the national level, data analysis is done and feedback to the lower levels is provided.

4.3 Results

As shown in table 4.1,in 2011 a total 1,682,886 pregnant women accessed PMTCT services, which is estimated to be 95% of all pregnant women, while in 2012 at total of 1,625,811pregnant women were covered, representing 89% of all pregnant women in that year. The proportional of pregnant women tested for HIV infection among those reached by PMTCT services was, 82% in 2011, decreasing to 64% in 2012.

Over the past two years the trend of HIV testing has been declining in pregnant women, their male partners as well as their infants. These have been attributed by shortage of HIV test kits countrywide. Results showed that table 4.1 below, in 2011 about 1,381,022 (95%) pregnant women were tested for HIV infection, while in 2012 that number dropped to1,036,948 (82%). Likewise, the number of male partners tested for HIV infection decreased from 353, 523 (25%) in 2011 to 219,895 (21%) in 2012.

The coverage of HIV infected pregnant women who received ARV prophylaxis for PMTCT rose from 71% (86,875) in 2011 to 77 % (73,955) in 2012, indicating increased access and uptake of ARV prophylaxis. In addition, coverage of infants who received ARV prophylaxis increased from 56% (68,507) in 2011 to67% (70,571) in 2012.

Counseling on Infant Feeding is crucial to the HIV infected pregnant women. The number of HIV positive pregnant women who opted for exclusive breastfeeding was 65,070 in 2011 decreasing to 62,774 in 2012. On the other end, the number of women who opted for replacement feeding increased from 3,586 in 2011 to 10,936 in 2012.

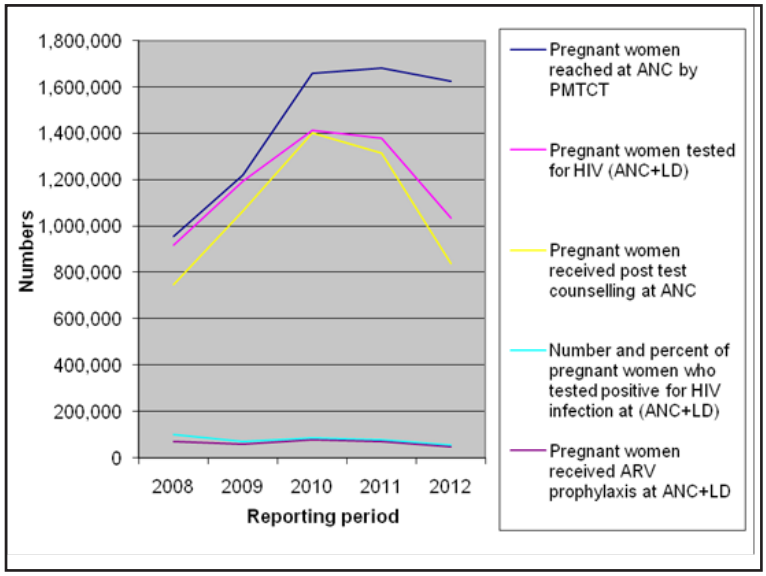
Regarding HIV infants' diagnostic services which were established in 2009, data showed that the number of infants that were tested has increased from 22,033 (25%) in 2010, to 27,245 (29%) in 2011 and 26,608 (32%) in 2012. However, estimates based on spectrum analysis shows that the mother to child HIV infection transmission rate is 18% at 18 months.

Table 4.1: Implementation output of PMTCT programme in Tanzania, 2011 to the end of 2012.

	Indicator	Reporting Years	
		2011	2012
1	Estimated pregnant women annually (Projection from 2002 census)	1,770,235	1,833,930
2	HIV Prevalence in pregnant women attending ANC (ANC Report 2011)	6.9	5.6
3	Estimated HIV + Pregnant women in the population	122,146	96,660
4	Pregnant women reach at ANC by PMTCT services	1,682,886	1,625,811
5	Pregnant women tested for HIV	1,381,022	1,036,948
6	Pregnant women Previously known to be HIV+	14,829	27,833
7	Pregnant women tested HIV positive	78,941	54,978
8	Total Positive	93,770	82,811
9	Pregnant women received post test counseling at ANC	1,314,348	840,536
10	Number of HIV +ve Assessed for ART eligibility	17476	20,892
11	Number of women with unknown HIV status at delivery	132,880	232,218
12	Pregnant women received NVP	15,834	0
13	Pregnant women who received Combined Regimen	54,706	47,799
14	Pregnant women who were on ART	16,335	26,156
15	Total women received ARV	86,875	73,955
16	Infants tested for HIV (DBS) before 2 months of age	27,245	26,608
17	Total number of children on Exclusive breast feeding	32,774	65,070
18	Total number of children on Exclusive replacement feeding	10,936	3,581
19	Infants tested for HIV	27,245	26,608
20	Infants tested positive	1,953	2,328
21	Infant received NVP	24,499	0
22	Infant discharged with AZT	44,008	71,571
23	Total Infants received ARV	68,507	71,571
24	Infants initiated Cotrimxazole by 2 months of age	37,783	48,858
25	Partner Tested for HIV	353,523	219,895
26	Partner tested positive	12,480	34,278
27	Proportion of Infants received ARV Prophylaxis in the program	73%	86%
28	Proportion of Infants received ARV Prophylaxis in the population	56%	67%
29	Proportion of women received ARV Prophylaxis in the programme	83%	89%
30	Proportion of women received ARV Prophylaxis in the population	64%	77%
31	Proportion of women reached at ANC vs total estimated pregnant women in the population	0.95	0.82
36	Total number of PMTCT implementing sites.	4,603	4,832

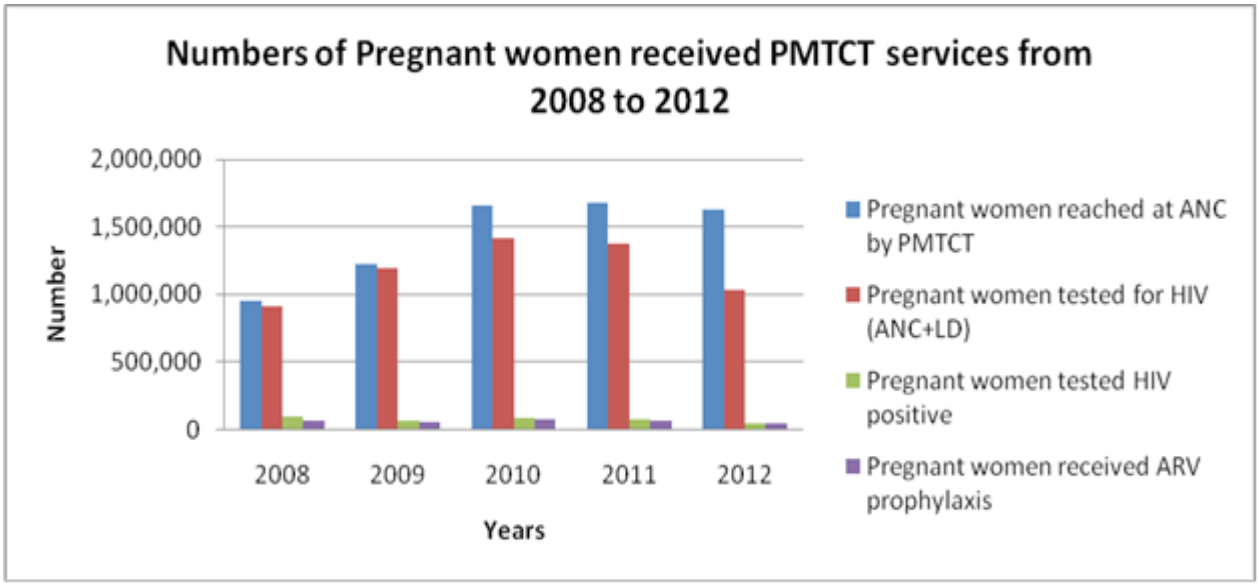
The figure 4.1 below illustrates progressive improvement in programme performance ov various intervention components with pregnant women over a reporting period of 2008 to December 2012.

Fig: 4.1 Trend in performance on PMTCT program Core Indicators



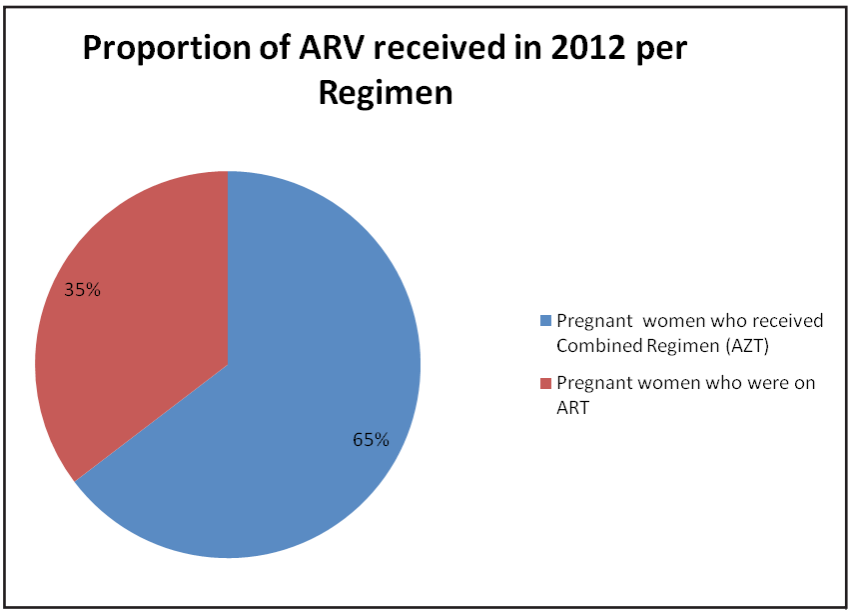
PMTCT services have been provided to all health facilities countrywide as an integral component of comprehensive ANC services. As a consequence, access to PMTCT services has been increased over time. However in 2012 the country experienced shortage of HIV test kits which resulted in the decline of the number of pregnant women counselled and tested for HIV infection. According to MOHSW data, the number of pregnant women counselled and tested for HIV infection decreased from1,381,022 in 2011 to1,036,948 in 2012. (See figure 4.2 below).

Figure 4.2: Number of Pregnant women who received PMTCT services from 2008 to 2012.



In 2011 the country adopted new recommendations from the WHO and scaled up the use of More Efficacious Combined Regimen (Option A) to all the PMTCT providing clinics countrywide. This move represents a change from the use of a single doze Nevirapine regimen. Figure 4.2 below shows the percentage distribution of pregnant women received ARV prophylaxis in 2012.

Figure 4.3:Proportion of ARV dispensed in 2012 per Regimen.



Chapter Five

HIV TESTING AND COUNSELING SERVICES

5.1. Introduction

Currently there is Global and National emphasis to accelerate universal access to HIV prevention, treatment, care and support services for People Living with HIV (PLHIV). To achieve this goal, access to HIV Testing and Counseling services has been expanded through strengthening and scaling up of the existing Client Initiated Testing and Counseling (CITC) as well as introducing other approaches for HIV testing and counseling, namely; Provider-Initiated Testing and Counseling (PITC) in the clinical settings and Home Based HTC (HBHTC) approach in the community settings. These new approaches are complementing the efforts of CITC services, and are aimed at ensuring that more people receive HTC services and know their HIV status. The coverage and utilization of the HIV testing and counselling services have expanded during the implementation of Health Sector HIV and AIDS Strategic Plan II 2008-2012 (HSHSP II). By December 2012, PITC had been rolled out to all hospitals and to at least 50% of health centers and 5% of dispensaries while HBHTC is being implemented in 10 regions.

Results of the THMIS show that, the percentage of women and men aged 15-49 who had ever been tested for HIV infection and received their test results was 62% for women and 47% for men respectively (THMIS 2011-2012). However, in the 12 months before the survey, only 30% of women and 27% of men had been tested and received their results (THIMIS 2012). Another survey that was conducted in 2010 showed that only 39% females and 25% males aged 15-24 years who had sexual intercourse in the past 12 months were tested for HIV in 2010 (TDHS 2010).Furthermore, among the 3,000 couples who were tested for HIV, about 5% were sero discordant meaning that one couple was HIV positive and the other was negative (THMIS 2011-12).

Greater knowledge of HIV status is critical to expanding access to HIV treatment, care and support in a timely manner, and offers opportunity for PLHIVs to receive information and commodities to prevent HIV transmission to others. Despite HTC being integrated in other services, effective referral linkages between the various points of diagnosis (VCT, PITC, PMTCT, EID, TB/HIV, STI, VMMC) with care, treatment and support services need to be strengthened.

5.1.3 Data Collection Methods

The national HIV Testing and Counselling recording and reporting system consists of the following tools; HIV testing and counseling register- “Rejesta ya Ushauri Nasaha na Upimaji wa VVU”.The HTC providers fill each client information in the counselling register routinely during service provision. At the end of each month, the HTC providers summarize the collected information according to the list of indicators in the carbonated site monthly summary form- “Muhtasari wa Mwezi wa Kituo”. The summarized information is disseminated at the site for use to improve HTC service provision. A copy is sent to the office of the District Medical Officer by the 7th day of the following month for compilation.

At district level, summary reports from all the HIV testing facilities/sites are aggregated to develop a district report in the carbonated district monthly summary form- "Muhtasari wa Mwezi wa Wilaya". This report is discussed by the CHMT for HTC services improvement. A copy of the district summary report is sent to the office of the Regional Medical Officer by the 14th day of the following month. At the Regional level, district summary reports from all the respective districts are aggregated using the carbonated regional monthly summary form – "Muhtasari wa Mwezi wa Mkoa" to produce a regional summary report for use in the region. A copy of this report is sent to the NACP by the 21st day of the following month. At the different levels, the reports are generated manually or electronically. At the national level, NACP aggregates regional summaries to produce an annual national report that is disseminated widely for use.

5.1.4 Results:

As summarized in Table 5.1 a total of 1,379,239 clients were provided with HIV testing and counseling services in 2011. Among these clients, 1,071,695 (78%) were new clients (never undergone an HIV test before), of whom 53.5% were contributed by only 3 regions of; Tabora (33%), Dar es Salaam (11.9%) and Kilimanjaro (8.7%). Notably, five regions including Kagera, Rukwa, Iringa, Kigoma and Mara contributed to only 5% of the total number of new clients, with Mara region contributing less than 1%. In all regions, more than half of the new clients were men with a high of 58.2%in Dodoma region and a low of 45.2%in Rukwa

Table 5.1 Total number of client Pre-test counseled and Number of new Clients Post Test-counseled and given HIV test results by region for the period 2011 - 2012

	TOTAL NUMBER OF CLIENTS PRE-TEST COUNSELLED						NUMBER OF NEW CLIENTS POST-TEST COUNSELLED AND GIVEN HIV TEST RESULTS					
	2011			2012			2011			2012		
REGION	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Arusha	10241	15236	25477	-	-	-	8159	10900	19059	-	-	-
Coast	13955	19623	33578	8395	11805	20200	11660	17454	29114	6796	9528	16324
Dar es Salaam	75926	79099	155025	45185	147772	192957	63308	64097	127405	33178	45206	78384
Dodoma	9926	13377	23303	4630	5158	9788	7275	10138	17413	4660	5158	9818
Iringa	9152	10846	19998	30703	17860	48563	6207	6503	12710	30684	17836	48520
Kagera	9471	9484	18955	-	-	-	7519	6924	14443	-	-	-
Kigoma	7036	7910	14946	7873	8420	16293	5825	6609	12434	6688	6900	13588
Kilimanjaro	63516	76529	140045	37423	45529	82952	42221	50677	92898	27322	30270	57592
Lindi	21076	27212	48288	4609	6450	11059	17121	20787	37908	4608	6450	11058
Manyara	35477	37425	72902	14489	14791	29280	27150	30778	57928	14482	14781	29263
Mara	874	933	1807	7322	8299	15621	622	712	1334	6802	7917	14719
Mbeya	24837	32945	57782	15532	19301	34833	20035	26809	46844	15522	19159	34681
Morogoro	25814	35465	61279	24998	32558	57556	20176	27179	47355	20690	26326	47016
Mtwara	10919	13346	24265	-	-	-	8370	10533	18903	-	-	-
Mwanza	46131	54357	100488	31685	33074	64759	34008	42731	76739	22036	19526	41562
Rukwa	7645	6638	14283	12107	11058	23165	7133	5894	13027	17671	11028	28699
Ruvuma	25064	19677	44741	9738	11574	21312	12909	15121	28030	6849	8277	15126
Shinyanga	12815	10943	23758	41037	17506	58543	7721	8477	16198	40087	17325	57412
Singida	15506	22259	37765	-	-	-	14012	16029	30041	8355	9627	17982
Tanga	13103	13851	26954	26442	34990	61432	8595	9877	18472	14509	19022	33531
Tabora	220889	212711	433600	8450	8876	17326	180897	172543	353440	7529	8394	15923
TOTAL	**659,373**	**719,866**	**1,379,239**	**330,618**	**435,021**	**765,639**	**510,923**	**560,772**	**1,071,695**	**288,468**	**282,730**	**571,198**

Notably, the total number of new clients who received HIV Testing and Counselling services decreased by about half (46.7%) from 1,071,695 clients in 2011 to 571,198 in 2012, attributedby sudden the change of the National HIV Testing Algorithm following the delisting of SD Bioline from the WHO-prequalified list of Rapid HIV tests. In addition, there was severe under-reporting observed in some regions, with three regions including; Arusha, Kagera and Mtwara not reporting at all in 2012. Overall, women and men received HIV testing and counseling equally. . However, on further analysis females accounted for more than 50% of new clients in four regions of Shinyanga, Iringa, Rukwa and Mwanza while male clients were dominant in the remaining regions.(See table 5.2)

Table 5.2: Distribution of clients who agreed and tested for HIV with proportions found HIV infected by region during 2011 – 2012

	2011						2012					
REGION	Male	% Positive	Female	% Positive	Total	% Positive	Male	% Positive	Female	% Positive	Total	% Positive
Arusha	8,159	1.7	10,900	2.4	19,059	2.1	0	0	0	0	0	0
Coast	11,660	10.0	17,454	11.6	29,114	11.0	6796	10.3	9528	11.8	16324	11.2
Dar es Salaam	63,308	8.2	64,097	14.5	127,405	11.3	33178	14.3	45206	14.5	78384	14.4
Dodoma	7,275	6.7	10,138	7.7	17,413	7.3	4660	5.0	5158	7.2	9818	6.2
Iringa	6,207	13.4	6,503	18.1	12,710	15.8	30684	8.6	17836	16.1	48520	11.3
Kagera	7,519	7.6	6,924	10.0	14,443	8.8	0	0.0	0	0	0	0
Kigoma	5,825	2.8	6,609	5.6	12,434	4.3	6688	4.1	6900	5.5	13588	4.8
Kilimanjaro	42,221	1.1	50,677	1.3	92,898	1.2	27322	1.9	30270	3.2	57592	2.6
Lindi	17,121	3.2	20,787	5.1	37,908	4.3	4608	8.4	6450	9.2	11058	8.9
Manyara	27,150	2.1	30,778	3.1	57,928	2.6	14482	2.4	14781	2.3	29263	2.3
Mara	622	7.6	712	11.5	1,334	9.7	6802	7.3	7917	11.0	14719	9.3
Mbeya	20,035	18.5	26,809	20.4	46,844	19.6	15522	14.0	19159	15.6	34681	14.9
Morogoro	20,176	8.4	27,179	11.1	47,355	10.0	20690	8.0	26326	10.6	47016	9.5
Mtwara	8,370	10.3	10,533	14.0	18,903	12.4	-	0.0	0	0.0	0	0.0
Mwanza	34008	9.2	42731	10.0	76,739	9.6	22036	15.0	19526	20.2	41562	17.5
Rukwa	7,133	7.7	5,894	11.6	13,027	9.5	17671	7.6	11028	15.6	28699	10.7
Ruvuma	12,909	4.9	15,121	6.7	28,030	5.9	6849	7.5	8277	8.7	15126	8.2
Shinyanga	7,721	8.7	8,477	10.6	16,198	9.7	40087	6.5	17325	13.6	57412	8.6
Singida	14,012	3.6	16,029	4.7	30,041	4.2	8355	4.1	9627	4.7	17982	4.4
Tanga	8,595	5.5	9,877	7.8	18,472	6.7	14509	61.3	19022	27.6	33531	42.2
Tabora	180,897	5.9	172,543	7.1	353,440	6.5	7529	7.2	8394	8.3	15923	7.8
TOTAL	**510,923**	**6.5**	**560,772**	**8.5**	**1,071,695**	**7.6**	**288,468**	**11.0**	**282,730**	**12.4**	**571,198**	**11.7**

5.1.5 Sources of clients to HTC services

As detailed in Table 5.3, in 2011, a total of 990,388 clients were referred to HTC services from different services. The main source of referral was self-referrals which accounted for 83.2% of all clients. The remaining sources of HTC clients were TB, STI Clinic, OPD, IPD, BTS, and HBC, which together accounted for 16% while STI services accounting for only 0.8% of clients.

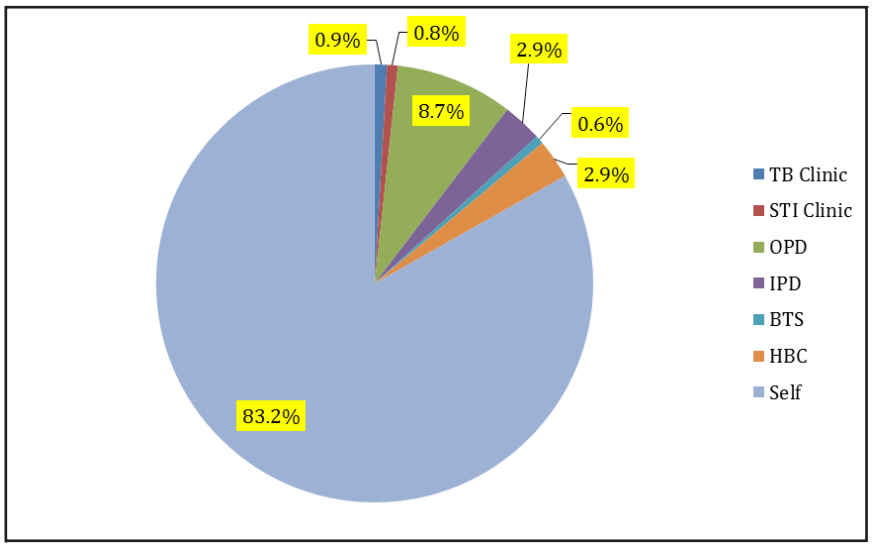
In 2012 self-referrals contributed to the majority (68%) of the 530,914 clients who received HTC services, while clients from TB, STI and BTS services contributed to 32% of all HTC clients.

Table 5.3: Source of referrals of clients attending HTC services; Tanzania 2011 – 2012

	2011								2012							
REGION	TB Clinic	STI Clinic	OPD	IPD	BTS	HBC	Self	Total	TB Clinic	STI Clinic	OPD	IPD	BTS	HBC	Self	Total
Arusha	42	1847	8069	385	32	4496	7129	22,000	0	0	0	0	0	0	0	0
Coast	255	830	3616	3817	340	289	25905	35,052	121	256	1298	128	197	55	16798	18853
Dar es Salaam	1299	588	6608	1082	213	999	113909	124,698	593	547	3259	633	373	1183	28001	34589
Dodoma	73	339	542	368	177	509	13661	15,669	424	299	2304	806	458	266	7210	11767
Iringa	5	29	457	154	1	87	16940	17,673	300	1383	11712	2900	965	1230	35579	54069
Kagera	359	51	2686	1686	849	573	10870	17,074	0	0	0	0	0	0	0	0
Kigoma	0	0	0	0	69	35	14004	14,108	160	0	2613	2260	132	64	3052	8281
Kilimanjaro	676	512	25367	5247	0	3237	94496	129,535	450	408	2131	215	7	112	56908	60231
Lindi	123	202	2594	411	6	74	43192	46,602	234	232	4491	1117	410	67	8006	14557
Manyara	1507	1326	6646	2569	401	413	46878	59,740	417	731	1972	1182	360	1017	13492	19171
Mara	0	0	33	0	0	0	1746	1,779	237	409	1518	1692	526	132	7256	11770
Mbeya	234	181	2897	1093	2	542	41659	46,608	88	150	4832	705	23	1091	33444	40333
Morogoro	1127	961	9978	1719	1472	1849	18688	35,794	836	1279	4512	1002	598	2451	9397	20075
Mtwara	52	346	638	438	46	187	17032	18,739	0	0	0	0	0	0	0	0
Mwanza	992	190	8574	6652	1787	1537	53456	73,188	591	33	3195	4579	455	134	45205	54192
Rukwa	103	67	2001	2825	18	97	6304	11,415	162	250	3447	673	467	3435	16875	25309
Ruvuma	265	7	364	10	0	18	27663	28,327	142	27	1572	362	54	8	14801	16966
Shinyanga	33	62	256	14	0	134	17632	18,131	1180	2513	12886	3678	4154	2606	20824	47841
Singida	776	203	340	152	83	4709	15016	21,279	4	154	406	72	255	18	15299	16208
Tanga	159	67	2580	62	550	8976	13378	25,772	6487	2112	4152	1086	5986	22091	18478	60392
Tabora	899	64	1789	190	77	99	224087	227,205	1779	152	215	119	0	3433	10612	16310
TOTAL	8,979	7,872	86,035	28,874	6,123	28,860	823,645	990,388	14,205	10,935	66,515	23,209	15,420	39,393	361,237	530,914

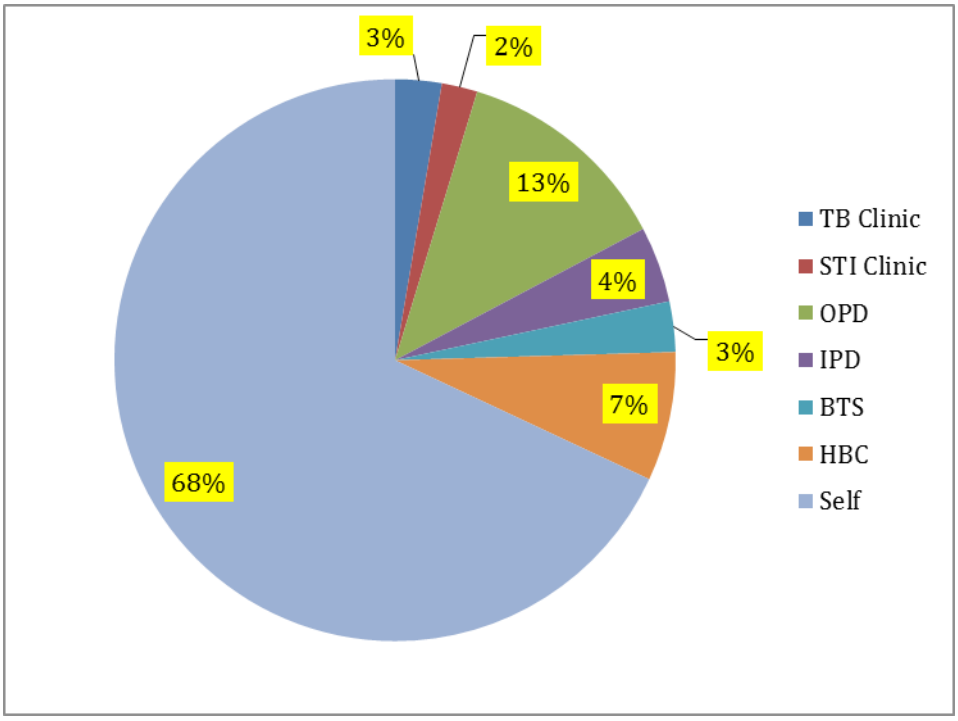
As figure 5.1 shown below, in 2011 the main source of referral was self-referrals which accounted for 83.2% of all clients. The remaining sources of HTC clients were TB, STI Clinic, OPD, IPD, BTS, and HBC, which together accounted for 16% while STI services accounting for only 0.8% of clients.

Figure 5.1 Sources of HIV testing and counseling clients in 2011



As figure 5.2 shown below, in 2012 self-referrals contributed to the majority (68%) of the 530,914 clients who received HTC services, while clients from TB, STI and BTS services contributed to 32% of all HTC clients.

Figure 5.2: Sources of HIV Testing and Counseling clients in 2012



5.1.6 REFERALS OF HTC CLIENTS TO OTHER SERVICES

During the year 2011, a total of 80,633 were referred from HTC services to various services, with majority of them 62,479 (77.1 %) being referred to HIV care and treatment services and fewer for TB services 3,212 (4%). The remaining clients were referred to PMTCT 7,507 (9.3 %) and other services 7435 (9.2%) such as legal support and post-test clubs (Table 5.4 below).

In 2012, a total of 79,433 HTC clients were referred to various follow up services, of whom majority 48,785 (61.4%) were referred to HIV care and treatment services. There was a noticeable increase of referrals to PMTCT 3,105(30.2%) while referrals to other services decreased to 23,976(3.9%) and referrals to TB services remained at 3567(4.5%).

Early identification of HIV positive clients and connecting client through referrals to Care Treatment and Support services is one of the principles of HIV Testing and Counseling services. In 2011, a total of 80,559 HIV positive clients were referred to the Care and treatment services, of which 77.1% were received in the Care and treatment Clinics. In 2012, that number decreased to 66,694 HIV positive clients, with73.1% received in Care and treatment clinics.

Table 5.4 Number of HTC Clients referred for other services in 2011 and 2012

	CARE AND TREATMENT SERVICES		PMTCT SERVICES		TB SERVICES		OTHER SERVICES	
REGION	**2011**	**2012**	**2011**	**2012**	**2011**	**2012**	**2011**	**2012**
Arusha	464	0	23	0	10	0	51	0
Coast	2908	1719	314	154	41	18	258	273
Dar es Salaam	11,990	6639	987	1172	436	519	1266	1188
Dodoma	1355	776	229	59	236	459	238	37
Iringa	2275	7182	84	168	34	200	368	521
Kagera	1577	0	417	0	154	0	82	0
Kigoma	342	379	36	6	0	29	0	1798
Kilimanjaro	1036	817	29	18	371	11	125	0
Lindi	2046	1096	172	61	47	12	268	8961
Manyara	5397	693	177	89	300	84	272	57
Mara	603	1136	1	39	0	169	0	1374
Mbeya	8618	5308	273	30	580	237	471	1061
Morogoro	4424	6076	154	675	360	260	583	594
Mtwara	1788	0	80	0	40	0	81	0
Mwanza	5234	5654	312	306	103	287	100	330
Rukwa	1297	2525	44	32	2	664	0	41
Ruvuma	1957	1253	3	17	226	27	0	99
Shinyanga	1257	3968	400	198	235	421	3150	7632
Singida	3,531	890	343	42	36	8	93	0
Tanga	1396	1339	15	37	1	144	8	0
Tabora	2984	1335	3414	2	0	18	21	10
TOTAL	**62,479**	**48,785**	**7,507**	**3,105**	**3,212**	**3,567**	**7,435**	**23,976**

Chapter Six

SURVEILLANCE OF OTHER SEXUALLY TRANSMITTED INFECTIONS

6.1 Introduction

Infections with Sexually Transmitted pathogens other than HIV imposes enormous burden on morbidity and mortality. This can be directly through their impact on quality of life, reproductive and child health or indirectly through their role in facilitating the sexual transmission of HIV and their impact on national and individual economy. The occurrence of HIV and AIDS has made it more crucial to strengthen prevention and control of Sexually Transmitted Infections (STIs) due to the strong evidence of association between classical STIs and HIV infections.

There has been an increase in the number of facilities providing STIs services from 53 facilities in 12 regions in 1995 to over 3,679 (53%) of all 6,892 public facilities in 2012. The STIs case management services are currently available in all public hospitals and health centers and in 72% of all dispensaries. The coverage of STI services in the facilities owned by the private sector remains low. However, more efforts are directed on improving the situation through public-private partnership initiative.

According to Tanzania HIV/AIDS and Malaria Indicator Survey (THMIS, 2012[1]) , 3.1% and 4.3% of women and men respectively reported to have had STI. Significant regional variations are notable, with STI incidence as high as 14% among women in Kigoma region. Health seeking behaviors among persons reporting to have had STI/STI symptoms stand out. Only 50% and 62% of women and men respectively had sought care/advice from proper health care sources as compared to 7%, 16% and 5%, 9% who sought care/advise or self medicated from pharmacies and other sources respectively. Nevertheless, an outstanding 34% of women and 17% of men neither sought advice nor treatment from any source.

Condom programming is another key strategy for prevention of sexual transmission of HIV and other STIs. Among young persons aged 15-24, 49% of girls and 54% of boys had used condoms at last premarital sexual intercourse (TDHS, 2010[2]).These results point toward a slight increase in condom use among youth as compared to those of previous survey in where 46% of girls and 49% of boys of the same age group had used condoms at last premarital sexual intercourse; Recent report indicate that among persons of reproductive age (15-49); 53% of men who bought sex and 27.3% and 26.8% of women and men respectively who had multiple partners; reported to have used condoms at last sex (THMIS, 2011-2).

Through the existing national guidelines for the management of STIs/RTIs; the country has contributed towards global strategy for the prevention and control of STIs, 2006/17. Inherent to this, a total of 9,688 Health Care Providers (HCP) have been trained in STI/Reproductive Tract Infections and over 913 HCP were trained in focused antenatal care including management of syphilis in pregnancy. Moreover, a total of 571 HCW have been trained in adolescent sexual reproductive health friendly services (NACP, 2011/2[3]).

[1] Tanzania HIV/AIDS and malaria Indicators Survey
[2] Tanzania Demographic and Households Survey, 2010
[3] Ministry of Health and Social Welfare (MOHSW), National AIDS Control Program (NACP), Technical Reports on Regional Trainings on STI/RTIs Case Management, Focused Antenatal care, and Adolescents and Sexual reproductive Health friendly Services; 2011-2

Despite notable progress made, challenges exist that faces the STI programme, some of which are;
STI Partner notification is low in Tanzania. A person who is successfully treated for an STI will experience relief of symptoms, but return later with re-infection if sexual contact(s) is not treated. Evidence indicates that mainly index STI cases turn up for treatment. During this reporting period, only 27% (27,247/99,346) and 33% (53,299/162,101) of partners (through assumption that each index case had only one partner) received treatment in 2011 and 2012 respectively. In this view, it is certain that partners are either characterized by; self medication, denial of the infection, or unfaithfulness which leads to re-infection and further spread of STIs in the community.

Poor data quality emanating from faulty data management aspects has been observed in various health facilities throughout the country. Several factors are lined up in the causative pathways including; shortage of skilled staffs resulting into heavy workload among existing few, irregular supportive supervision and mentorships and poorly motivated staffs who aren't committed as a result. Moreover, improper documentation of patients' information, inter-facilities staff movements, and unreliable enabling rural-infrastructures such as roads are hampering quality service provision.
There has been both low coverage of trainings and shortage of human resources for health in STI case management. The situation is thought to be attributed by increased numbers of HIV interventions that have resulted into displacement of previously trained health care workers from the STI clinics to other HIV services such as PMTCT, Care and Treatment and VCT.

Inherent to this, the national guideline for STI case management is overdue for review. Technical and financial support is urgently needed conduct microbial sensitivity surveys. The WHO requires nationally representative survey(s) be conducted in order to provide evidence based data required for the review of STI/RTIs case management guideline (WHO, 1999[4]).

We report challenges related to incomplete clinical history taking and physical examinations done to STI/RTI clients. Nonetheless, STIs clients are similarly reported to be reluctant to provide straight forward information regarding the symptoms they experience. Patients hesitate revealing their sexual life histories for the reasons yet to be established.

The program is operating under extremely unpredictable *commodities supply chain management* for STI case management. The system is formed by complex structures and procedures operating under diverse and less-coordinated autonomies. In this view, facilities have been experiencing frequent stock-outs of essential commodities for STI case management, especially in rural health care settings. Moreover, STIs/RTIS services are limited among other sub-populations such as; Commercial Sex Workers (CSW), Injecting Drug Users (IDU), Armed forces, miners, youths and prisoners.

6.4 Data Collection

Health facilities (sites) include; hospitals, health centers and dispensaries that provide comprehensive STI care and treatment in Tanzania mainland. Methods of surveillance have involved the development

[4] World Health Organization. Communicable Diseases Surveillance Response. UNAIDS/WHO Working Group on Global HIV/AIDS/STI Surveillance. Guidelines for Sexually Transmitted Infections Surveillance; 1999. WHO/CDS/CSR/EDC/99.3

of a special data collection form that is distributed to health sites to collect the needed information. The forms are used to collect aggregate information,which includes,number of new episodes of STI syndromes,number of treated cases by type and location of facility,type of STI by gender and by age group(<20,20-29 and 30+ years).

The data collection form also records information about re-treatment and number of contacts traced. This aggregated information is recorded by age groups. The reports are produced on monthly basis from health facilities on dully filled tools to NACP, through respective District and Regional Medical Offices. Analysis,utilization and record keeping is recommended at all levels. The National AIDS Control Programme aggregates all the reports countrywide to form an annual national report.

6.5 Results

6.5.1 Surveillance of other STIs for the year 2011

During the year 2011, a total of 99,346 new STI episodes were reported from STI clinics throughout the country. Of those, 44,153 (44%) were genital discharge syndromes, 13,585(14%) were genital ulcer diseases, 18921 (19%) were pelvic inflammatory diseases, 7339 (7%) were VDRL/RPR positive and 15,348 (15%) were reported as other STIs Syndromes (Table 6.1).

Although the data trends (Figure 6.1) are not predictive in a problem causal pathway, we hypothesize that STI prevention interventions have been prolific (excluding all other postulates), as we compare the reported data in 2009 and those in 2011. The reported information in the latter had far fewer STI cases as compared to those in the former surveillance.

Figure 6.1: Comparison of newly reported STI episodes in 2011 to reported cases in 2009

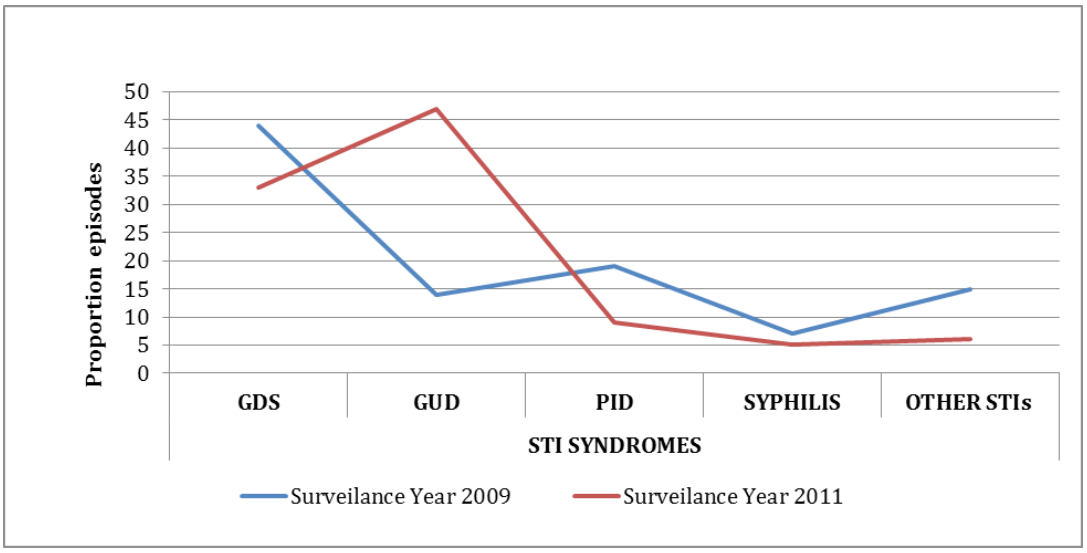


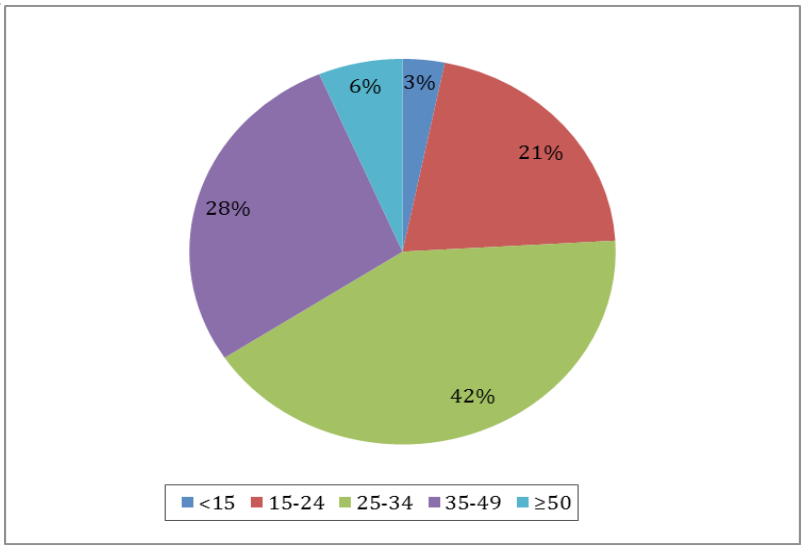
Table 6.1 Distribution of reported new STI episodes by agegroups, sex and syndromes, Tanzania, 2011

	MALE						FEMALE						ALL					
STI/Age Group	<15	15-24	25-34	35-49	>=50	TOTAL	<15	15-24	25-34	35-49	>=50	TOTAL	<15	15-24	25-34	35-49	>=50	TOTAL
Number of new clients with Genital Discharge syndrome	197	3830	6537	5625	1556	17745	509	8691	9269	6894	1045	26408	706	12521	15806	12519	2601	44153
Number of new clients with Genital Ulcer Disease	229	1305	2245	2134	786	6699	214	1970	2146	2095	461	6886	443	3275	4391	4229	1247	13585
Number of new clients with Pelvic Inflammatory diseases	X	X	X	X	X	X	603	3955	7879	5275	1209	18921	603	3955	7879	5275	1209	18921
Number of new clients with VDRL/ RPR +VE	211	654	1121	881	374	3241	79	1093	1517	1038	371	4098	290	1747	2638	1919	745	7339
Number of new clients with other STIs	473	1134	1846	2320	879	6652	521	2557	2666	2493	459	8696	994	3691	4512	4813	1338	15348
TOTAL EPISODES	1110	6923	11749	10960	3595	34337	1926	18266	23477	17795	3545	65009	3036	25189	35226	28755	7140	99346

X = Not Applicable

Pelvic Inflammatory diseases prevail (figure 6.2) among young women of reproductive age between 24 to 34; as compared to other age groups of the same sex

Figure 6.2: Distribution of New Cases of Pelvic Inflammatory Diseases by Age groups among females, Tanzania 2011



Among the newly reported STI cases/episodes, GDS had the highest prevalence of 44.4% (44,152/99,346) followed by PID, 19.1% (18,921/99,346); Other STIs, 15.4% (15,348/99,346); GUD; 13.7% (13,585/99,346) and Syphilis, 7.4% (7,340/99,346). Although few regions did not report during this year, some regions enumerated substantial counts of new STI cases. In this view, Arusha, Mtwara, Lindi and Dodoma regions had reported episodes totaling to 35,350, 15,095, 11992, 6,622 and 5691 respectively. Moreover, the least counts of new STI episodes were recorded in Coast (671) and Dar-es- Salaam (571) regions. The regional distributionof new STIs episodes by age groups, sex and syndromes types are shown in Table 6.2 below.

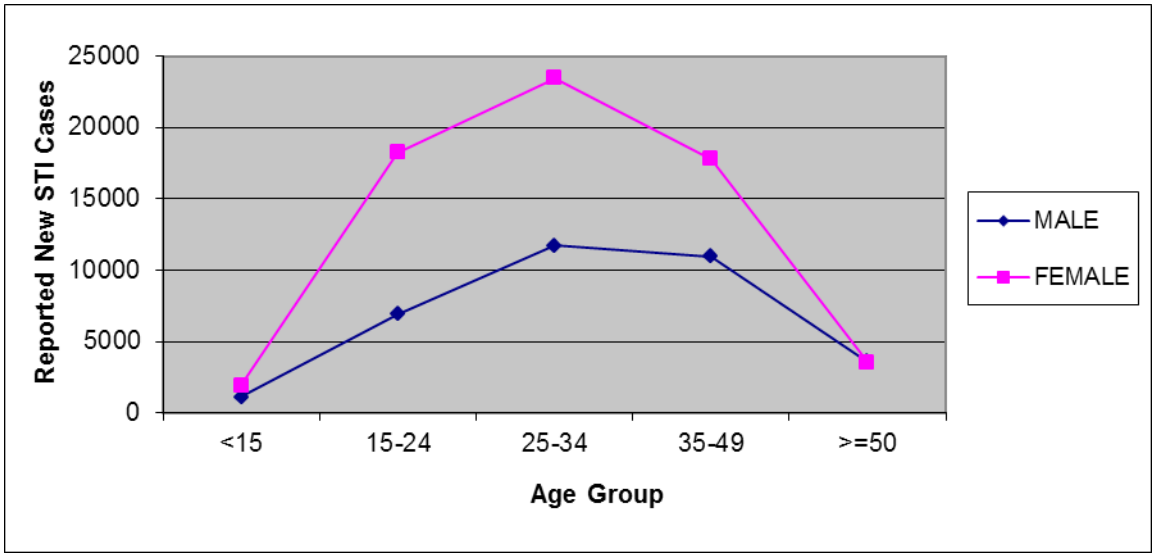
Table 6.2: *Distribution of reported new STI episodes by age groups, sex, syndromes and regions, Tanzania, 2011*

	SEX	GDS						GUD						PID						VDRL/RPR+VE						OTHERS						
REGION	AGE GROUP	<15	15-24	25-34	35-49	>=50	TOTAL	<15	15-24	25-34	35-49	>=50	TOTAL	<15	15-24	25-34	35-49	>=50	TOTAL	<15	15-24	25-34	35-49	>=50	TOTAL	<15	15-24	25-34	35-49	>=50	TOTAL	GRAND TOTAL
ARUSHA	Male	74	1237	2080	2539	770	6700	5	169	297	646	284	1401	X	X	X	X	X	X	46	137	125	86	8	402	140	214	399	1238	403	2394	10897
	Female	146	4477	4585	4098	432	13738	9	358	323	841	118	1649	128	319	2711	1667	307	5132	0	82	158	124	7	371	149	1001	977	1292	144	3563	24453
COAST	Male	0	20	47	30	3	100	0	11	21	9	2	43	X	X	X	X	X	X	0	2	5	7	0	14	1	4	8	4	5	22	179
	Female	2	59	74	35	2	172	1	3	20	15	3	42	44	44	73	57	19	237	0	7	9	4	1	21	2	6	4	8	0	20	492
DODOMA	Male	31	189	345	313	119	997	6	61	134	118	83	402	X	X	X	X	X	X	128	52	103	119	80	482	16	69	115	95	48	343	2224
	Female	58	398	510	386	119	1471	5	111	188	138	100	542	21	324	459	386	126	1316	22	115	182	137	83	539	20	166	177	128	39	530	4398
DSM	Male	0	34	49	45	1	129	0	4	16	9	2	31	X	X	X	X	X	X	0	0	7	9	3	19	0	5	13	8	3	29	208
	Female	3	62	38	53	6	162	1	2	4	4	4	15	0	34	57	44	15	150	2	4	5	6	2	19	0	4	4	6	3	17	363
IRINGA	Male	6	113	152	118	28	417	12	62	98	62	22	256	X	X	X	X	X	X	18	41	34	32	18	143	16	32	40	27	15	130	946
	Female	15	191	164	78	19	467	7	84	80	48	16	235	19	152	236	160	31	598	17	69	54	35	18	193	13	58	43	23	18	155	1648
KAGERA	Male	8	221	428	334	107	1098	13	84	126	112	23	358	X	X	X	X	X	X	1	14	20	32	9	76	22	76	117	99	51	365	1897
	Female	20	397	483	279	67	1246	2	97	123	92	9	323	14	327	506	309	39	1195	2	67	87	37	14	207	29	134	190	130	40	523	3494
KIGOMA	Male	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KILIMANJARO	Male	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X		-	-	-	-	-	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LINDI	Male	9	615	1043	621	177	2465	9	217	415	264	100	1005	X	X	X	X	X	X	5	53	133	111	56	358	44	149	417	264	110	984	4812
	Female	38	687	911	458	69	2163	13	294	385	229	49	970	10	660	1048	716	131	2565	7	121	241	190	32	591	50	208	330	255	48	891	7180
MANYARA	Male	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MARA	Male	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MBEYA	Male	2	246	425	259	75	1007	3	135	247	174	38	597	X	X	X	X	X	X	1	21	82	60	14	178	8	49	86	60	22	225	2007
	Female	17	450	482	251	40	1240	8	232	238	144	17	639	12	278	389	248	42	969	1	110	127	95	12	345	5	92	77	66	12	252	3445
MOROGORO	Male	3	105	249	122	33	512	2	40	106	79	23	250		X	X	X	X	X	X	18	53	31	8	114	2	22	42	36	17	119	995
	Female	4	202	308	175	27	716	0	81	97	84	11	273	14	193	313	256	53	829	5	32	54	41	9	141	16	43	42	34	15	150	2109
MTWARA	Male	32	633	928	674	108	2375	170	305	447	388	111	1421		X	X	X	X	X	X	235	405	296	145	1083	192	284	309	254	93	1132	6011
	Female	149	735	737	517	181	2319	151	347	321	243	57	1119	315	836	1120	851	183	3305	11	326	384	235	166	1122	181	376	349	244	69	1219	9084
MWANZA	Male	-	-	-	-	-	-	-	-	-	-	-	-		X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RUKWA	Male	3	74	121	84	21	303	6	34	50	50	20	160		X	X	X	X	X	X	10	18	7	5	41	4	15	15	11	3	48	552
	Female	7	121	134	106	34	402	5	58	75	55	20	213	3	110	61	44	47	265	2	23	23	14	5	67	5	16	22	7	2	52	999
RUVUMA	Male	21	150	225	162	33	591	2	63	82	62	18	227		X	X	X	X	X	X	21	34	23	6	86	16	115	146	129	30	436	1340
	Female	32	348	304	167	35	886	9	84	82	51	10	236	9	237	304	216	30	796	0	39	47	34	3	123	29	268	254	175	17	743	2784
SINGIDA	Male	-	-	-	-	-	-	-	-	-	-	-	-		X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHINYANGA	Male	0	141	356	264	68	829	1	112	178	131	57	479	X	X	X	X	X	X	2	40	79	49	18	188	11	88	117	84	76	376	1872
	Female	7	482	439	242	8	1178	1	172	178	116	39	506	14	391	492	263	178	1338	9	74	104	70	17	274	21	165	172	115	50	523	3819
TABORA	Male	8	52	89	60	12	221	0	8	28	30	3	69	X	X	X	X	X	X	1	10	23	19	4	57	1	12	22	11	3	49	396
	Female	11	82	100	49	6	248	2	47	32	35	8	124	0	50	110	58	8	226	1	24	42	16	3	86	1	20	25	10	2	58	742
TANGA	Male	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL		706		15806	12519	2600	44152	443	3275	4391	4229	1247	13585	603	3955	7879	5275	1209	18921	290	1747	2638	1919	746	7340	994	3691	4512	4813	1338	15348	99346

x = Not Applicable

The highest number of new STI episodes occurred in the age group 25-34 among both males and females. Figure 6.3 shows the distribution of all newly reported STI episodes by all age groups and sex in during this period.

Figure 6.3: Total reported new STI episodes by age groups and sex, Tanzania Jan-Dec 2011



Further analysis were done to provide information indicating numbers of newly reported STI cases who were treated and/or re-treated following national algorithm for STI case management by region. In the table 6.3, below we document the number of episodes, contacts and/clients who were counseled and/or advised on using condoms, linked to HIV counseling and testing and referred from other services.

Table 6.3: Distribution of re-treatments, contacts, counseled and advice on condom use, linked to HIV counseling and testing, and clients referred from other services, Tanzania, January- December 2011

REGION	SEX	Number of Episodes re-treated-2nd line	Number of Episodes re-treated-3rd line regimen	Number of Episodes referred for 3rd line regimen	Number of contact treated	Number of clients counseled and advised on condom use	Number of clients linked to HIV counseling and testing	Number of clients referred from other services
ARUSHA	Male	174	2	2	3844	9997	7530	546
	Female	256	11	1	7686	24036	20733	1016
COAST	Male	12	0	0	37	147	168	36
	Female	23	1	2	72	362	173	92
DODOMA	Male	89	25	6	876	3099	3099	2506
	Female	170	37	18	1524	6144	6157	4940
DAR-ES-SALAAM	Male	14	2	1	56	411	132	52
	Female	154	3	0	172	312	271	172
IRINGA	Male	13	1	4	231	718	407	321
	Female	15	4	5	310	1171	630	545
KAGERA	Male	242	25	27	660	1580	1066	623
	Female	340	32	36	870	2376	1674	1048
KIGOMA	Male	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-
KILIMANJARO	Male	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-
LINDI	Male	1057	101	45	907	3601	2563	1673
	Female	1457	107	42	1286	4687	3670	2414
MANYARA	Male	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-
MARA	Male	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-
MBEYA	Male	87	2	3	570	2053	1158	496
	Female	115	6	4	695	2916	1927	821
MOROGORO	Male	20	1	2	250	896	733	453
	Female	29	1	7	383	1694	1365	747
MTWARA	Male	326	34	17	1283	4168	2846	662
	Female	491	40	29	1444	5894	3899	1210
MWANZA	Male	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-
RUKWA	Male	32	11	10	161	444	367	176
	Female	51	10	11	259	689	574	325
RUVUMA	Male	91	4	2	402	979	580	478
	Female	122	7	5	481	1668	1082	781
SINGIDA	Male	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-
SHINYANGA	Male	20	0	2	605	1359	874	339
	Female	38	12	2	789	2299	1352	1022
TABORA	Male	20	0	2	605	1359	874	339
	Female	38	12	2	789	2299	1352	1022
TANGA	Male	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-
TOTAL		5496	491	287	27247	87358	67256	24855

6.5. 2. Surveillance of other STIs for the year 2012

During the year 2012, a total of 162,101 episodes were reported from STI clinics throughout the country. Of those, 69,985 (43.17%) were genital discharge syndromes, 22706(14.01%) were genital ulcer diseases, 31562 (19.47%) were pelvic inflammatory diseases, 11,691 (7.21%) were VDRL/RPR positive and 26,157 (16.14%) were reported as other STIs Syndromes (Table 6.4).

Although the data trends (Figure 6.4) are not predictive in a problem causal pathway, we hypothesize that STI prevention interventions has been prolific (excluding all other postulates), as we compare the reported data in 2010 and those in 2012. The reported information in the latter had far fewer STI cases as compared to those in the former surveillance.

Figure: 6.4: Proportion of new STI syndrome/Cases in 2010 as compared to new Cases/syndromes in 2012

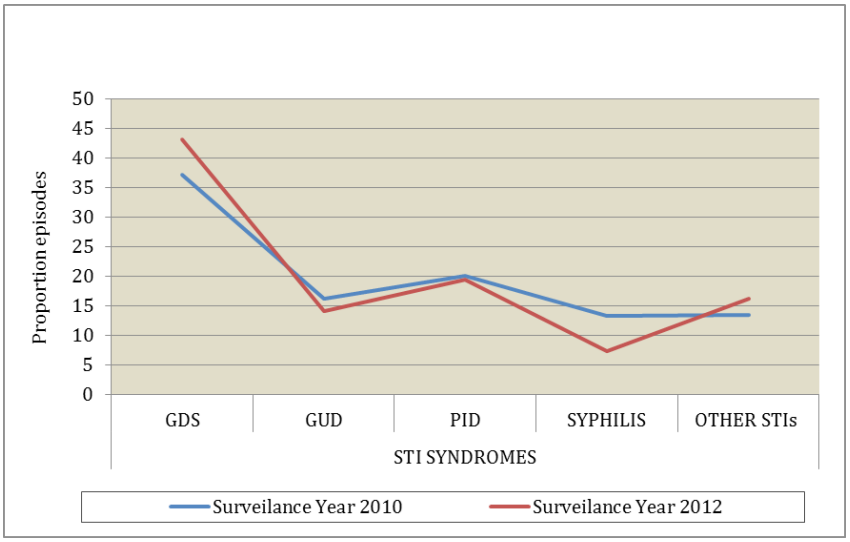


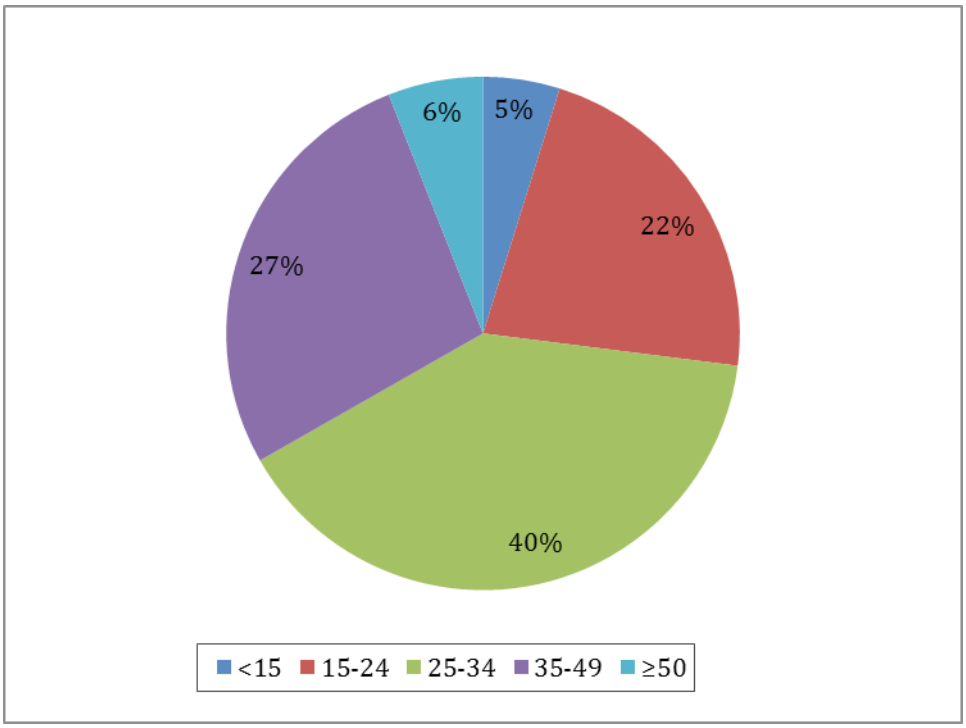
Table 6.4: Distribution of reported new STI episodes by age groups, sex and syndromes, Tanzania, 2012

	MALE						FEMALE						ALL					
STI/Age Group	<15	15-24	25-34	35-49	>=50	TOTAL	<15	15-24	25-34	35-49	>=50	TOTAL	<15	15-24	25-34	35-49	>=50	TOTAL
Number of new clients withGenital Discharge syndrome	486	7559	9740	7760	2395	27940	971	13047	14645	10306	3076	42045	1457	20606	24385	18066	5471	69985
Number of new clients with Genital Ulcer Disease	225	2116	3764	3547	999	10651	320	3076	4152	3385	1122	12055	545	5192	7916	6932	2121	22706
Number of new clients with Pelvic Inflammatory diseases	X	X	X	X	X	X	1524	7002	12545	8601	1890	31562	1524	7002	12545	8601	1890	31562
Number of new clients with VDRL/ RPR +VE	158	907	1597	1327	598	4587	208	1751	2407	1819	919	7104	366	2658	4004	3146	1517	11691
Number of new clients with other STIs	724	2482	3502	3462	1338	11508	1682	3853	3931	3251	1932	14649	2406	6335	7433	6713	3270	26157
Total Episodes	1593	13064	18603	16096	5330	54686	4705	28729	37680	27362	8939	107415	6298	41793	56283	43458	14269	162101

X = Not Applicable

Pelvic Inflammatory diseases prevail (figure 6.5) among young women of reproductive age between 24 to 34; as compared to other age groups of the same sex

Fig 6.5: Distribtuion of newly reported PID cases by age groups among females, Tanzania mainaland 2012



Among the newly reported STI cases/episodes, GDS were the most prevalent of 43.17% (69985/162,101) followed by PID, 19.47% (31,562/162,101); Other STIs, 16.14% (26,157/162,101); GUD; 14.01% (22,706/162,101) and Syphilis, 7.21% (11,691/162,101). Besides two regions failure to report, some regions enumerated substantial counts of new STI cases. In this view, Shinyanga, Dodoma, Arusha, Dar es Salaam and Manyara regions had reported episodes totaling to 23,345, 14,096, 13,949, 13,691 and 10,466, respectively. Moreover, the least counts of new STI episodes were recorded in Mbeya (1,376) and Mara (525) regions. The regional distribution of new STIs episodes by age groups, sex and syndromes types are shown in Table 6.5 below.

Table 6.5: Distribution of reported new STI episodes by age groups, sex, syndromes and regions, Tanzania, 2012

	SEX	GDS						GUD						PID						VDRL/RPR+VE						OTHERS						
REGION	AGE GROUP	<15	15-24	25-34	35-49	>=50	TOTAL	<15	15-24	25-34	35-49	>=50	TOTAL	<15	15-24	25-34	35-49	>=50	TOTAL	<15	15-24	25-34	35-49	>=50	TOTAL	<15	15-24	25-34	35-49	>=50	TOTAL	GRAND TOTAL
ARUSHA	Male	58	700	809	891	287	2745	0	81	135	296	23	535	X	X	X	X	X		0	39	59	48	5	151	79	139	126	142	31	517	3948
	Female	61	1712	1982	1795	304	5854	0	202	285	307	24	818	73	149	1307	723	91	2343	0	45	61	69	4	179	83	301	229	168	26	807	10001
COAST	Male	6	223	409	250	54	942	7	83	153	104	27	374	X	X	X	X	X		3	43	57	54	13	170	29	91	91	71	27	309	1795
	Female	32	508	638	334	91	1603	10	95	139	97	24	365	15	353	575	426	88	1457	7	59	80	52	12	210	49	154	154	101	37	495	4130
DODOMA	Male	32	451	707	718	315	2223	14	131	306	346	202	999	X	X	X	X	X		15	116	255	242	152	780	38	142	273	244	140	837	4839
	Female	51	758	972	866	337	2984	18	212	482	433	256	1401	33	600	941	718	257	2549	36	199	367	360	218	1180	80	207	383	334	139	1143	9257
DAR-ES-SALAAM	Male	29	600	706	412	108	1855	5	178	342	218	38	781	X	X	X	X	X		28	77	118	86	31	340	79	297	326	288	99	1089	4065
	Female	87	1333	1368	671	125	3584	8	244	291	229	40	812	70	1056	1294	859	156	3435	8	123	169	101	68	469	84	392	421	280	149	1326	9626
IRINGA	Male	40	291	572	340	64	1307	18	175	311	217	65	786	X	X	X	X	X		13	110	150	115	28	416	29	80	154	128	40	431	2940
	Female	63	507	602	292	55	1519	15	229	288	194	35	761	1040	469	700	444	84	2737	17	185	218	131	28	579	35	150	164	86	30	465	6061
KAGERA	Male	-	-	-	-	-	-	-	-	-	-	-	0	X	X	X	X	X		-	-	-	-	-	-	-	-	-	-	-	-	-
	Female	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KIGOMA	Male	15	76	113	78	10	292	42	9	51	20	2	124	X	X	X	X	X		30	3	5	3	0	41	0	9	21	13	5	48	505
	Female	24	220	283	178	15	720	0	45	31	40	7	123	29	97	113	58	19	316	0	6	9	5	4	24	3	28	47	35	10	123	1306
KILIMANJARO	Male	8	173	419	498	199	1297	2	53	145	244	53	497	X	X	X	X	X		8	8	8	9	1	34	8	71	206	761	404	1450	3278
	Female	57	734	842	610	395	2638	4	84	170	222	93	573	3	236	369	388	94	1090	6	15	33	35	5	94	15	89	194	561	112	971	5366
LINDI	Male	11	416	592	348	109	1476	9	140	280	185	66	680	X	X	X	X	X		1	33	105	77	29	245	29	139	215	171	88	642	3043
	Female	27	460	606	312	56	1461	16	214	253	156	31	670	12	464	713	455	95	1739	9	114	173	135	16	447	33	219	243	165	56	716	5033
MANYARA	Male	35	589	927	753	227	2531	4	116	178	157	28	483	X	X	X	X	X		2	34	34	43	14	127	43	95	239	190	72	639	3780
	Female	52	1039	1251	868	123	3333	4	124	149	163	25	465	26	454	613	515	104	1712	0	68	78	62	11	219	33	259	301	300	64	957	6686
MARA	Male	0	17	35	12	0	64	0	1	13	8	3	25	X	X	X	X	X		0	1	6	5	2	14	2	23	16	14	14	69	172
	Female	1	73	60	17	0	151	0	11	13	11	0	35	1	4	48	27	1	81	0	9	14	2	2	27	1	22	22	7	7	59	353
MBEYA	Male	0	39	82	38	11	170	0	32	45	38	28	143	X	X	X	X	X		1	22	19	26	14	82	9	14	32	31	23	109	504
	Female	2	73	104	50	7	236	0	46	93	55	16	210	0	42	95	57	19	213	0	25	24	35	21	105	8	25	32	25	18	108	872
MOROGORO	Male	7	246	449	314	58	1074	3	163	249	209	58	682	X	X	X	X	X		3	44	128	100	21	296	11	78	164	132	24	409	2461
	Female	16	606	660	332	62	1676	11	222	311	156	38	738	14	528	913	521	108	2084	6	113	210	150	14	493	22	133	227	194	22	598	5589
MTWARA	Male	11	251	390	211	71	934	26	110	137	92	42	407	X	X	X	X	X		4	26	75	67	23	195	45	75	79	44	30	273	1809
	Female	17	293	300	177	42	829	14	118	125	75	23	355	11	342	490	387	70	1300	8	80	125	80	11	304	39	104	135	47	7	332	3120
MWANZA	Male	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X	X		-	-	-	-	-	-	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RUKWA	Male	16	371	516	439	127	1469	7	165	274	274	78	798	X	X	X	X	X		1	42	132	119	19	313	20	88	103	106	34	351	2931
	Female	37	711	760	565	122	2195	19	304	360	279	65	1027	25	623	890	793	158	2489	11	130	174	147	25	487	35	123	134	88	19	399	6597
RUVUMA	Male	87	316	396	319	99	1217	21	110	199	180	44	554	X	X	X	X	X		3	31	64	37	19	154	51	85	125	117	31	409	2334
	Female	114	531	498	326	67	1536	31	180	195	200	21	627	25	358	446	336	82	1247	6	91	88	57	8	250	57	142	125	85	19	428	4088
SINGIDA	Male	40	356	710	638	216	1960	22	113	251	222	82	690	X	X	X	X	X		2	47	66	47	20	182	21	107	143	161	40	472	3304
	Female	84	730	944	705	168	2631	52	206	302	241	79	880	53	437	753	560	191	1994	12	102	142	92	62	410	31	213	220	174	55	693	6608
SHINYANGA	Male	65	958	1239	1157	341	3760	9	217	378	451	74	1129	X	X	X	X	X		11	98	170	128	36	443	108	471	489	377	109	1554	6886
	Female	104	2231	2336	2003	435	7109	10	344	512	409	52	1327	87	637	1999	1178	218	4119	14	207	228	175	90	714	914	917	572	356	431	3190	16459
TABORA	Male	7	156	188	120	50	521	17	54	39	84	25	219	X	X	X	X	X		11	59	51	82	43	246	40	66	151	71	31	359	1345
	Female	14	283	273	124	51	745	43	99	81	97	31	351	3	144	176	148	48	519	34	110	149	102	57	452	29	132	127	101	37	426	2493
TANGA	Male	19	1330	481	224	49	2103	19	185	278	202	61	745	X	X	X	X	X		22	74	95	39	128	358	83	412	549	401	96	1541	4747
	Female	128	245	166	81	621	1241	65	97	72	21	262	517	4	9	110	8	7	138	34	70	65	29	263	461	131	243	201	144	694	1413	3770
TOTAL		1,457	20,606	24,385	18,066	5,471	69,985	545	5,192	7,916	6,932	2,121	22,706	1,524	7,002	12,545	8,601	1,890	31,562	366	2,658	4,004	3,146	1,517	11,691	2,406	6,335	7,433	6,713	3,270	26,157	162101

X= Not Applicable

Figure 6.6 shows the distribution of all reported episodes of STIs by age groups and sex. Consistently with the trend in previous years, the highest number of STI syndromes was reported in the 25-34 years age group, for both males and females.

Figure 6.6: Total reported new STI episodes by age groups and sex, Tanzania Jan-Dec 2012

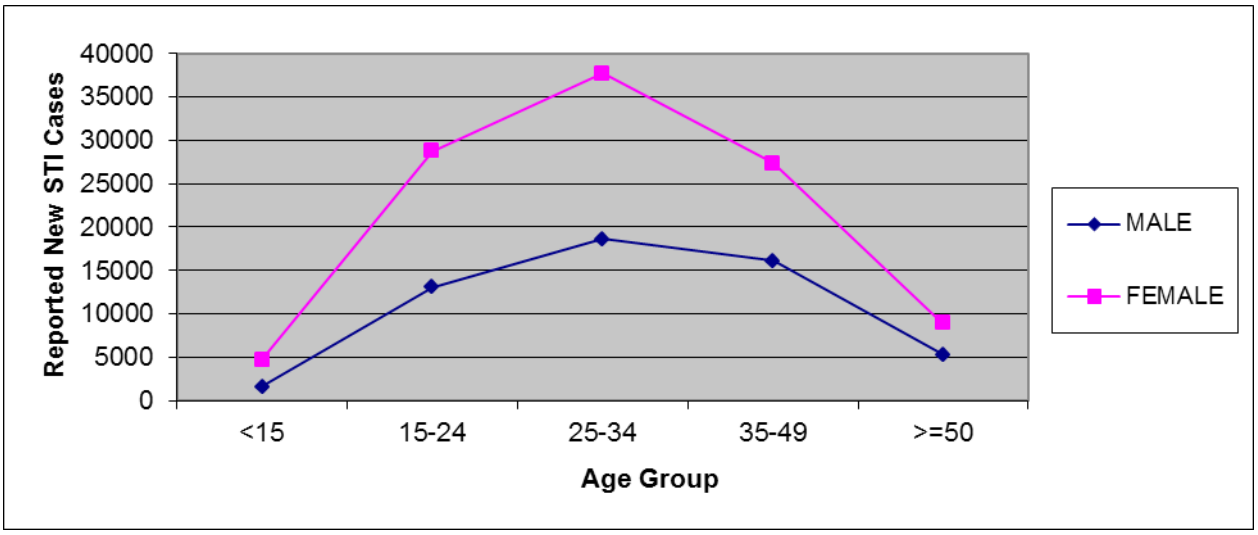


Table 6.6 Number of reported STI cases who were re-treated, contacted, counseled and advised on condom use, linked to HIV counseling and testing, and clients referred from other services by region .

REGION	SEX	Number of Episodes re-treated-2nd line	Number of Episodes re-treated-3rd line regimen	Number of Episodes referred for 3rd line regimen	Number of contact treated	Number of clients counseled and advised on condom use	Number of clients linked to HIV counseling and testing	Number of clients referred from other services
ARUSHA	Male	49	0	0	3109	3948	3948	3948
	Female	74	0	0	4820	10301	10301	10301
COAST	Male	91	3	24	317	1596	1190	391
	Female	169	11	72	600	3286	2585	963
DODOMA	Male	208	36	26	1856	5530	5134	2849
	Female	421	87	32	2907	10328	9548	4920
DAR-ES-SALAAM	Male	406	61	29	896	3299	1786	857
	Female	517	75	77	1693	6222	3820	2696
IRINGA	Male	94	14	13	1027	2373	1527	1068
	Female	131	18	11	1416	3430	2301	1525
KAGERA	Male	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-
KIGOMA	Male	26	0	14	96	378	263	247
	Female	33	0	13	63	758	574	579
KILIMANJARO	Male	102	40	42	1231	2426	1110	274
	Female	133	54	38	1390	3591	2139	358
LINDI	Male	284	47	15	599	2231	1385	918
	Female	341	58	18	741	3131	2113	1458
MANYARA	Male	176	17	20	826	3053	2746	4366
	Female	229	18	31	986	4900	4366	4997
MARA	Male	34	1	1	22	146	81	200
	Female	28	4	0	72	206	12	63
MBEYA	Male	19	2	0	120	459	304	216
	Female	21	6	1	153	632	287	256
MOROGORO	Male	293	6	2	896	2051	1389	489
	Female	568	11	2	1518	3639	2823	778
MTWARA	Male	142	14	2	320	1510	542	357
	Female	201	11	16	410	2561	899	649
MWANZA	Male	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-
RUKWA	Male	163	34	53	716	2062	1514	886
	Female	296	32	31	1222	3984	3023	1633
RUVUMA	Male	72	9	11	714	1923	1587	379
	Female	116	9	20	1057	3219	2672	635
SINGIDA	Male	257	47	50	1168	3065	1578	1222
	Female	267	59	145	1974	4948	2496	1978
SHINYANGA	Male	121	207	130	4321	5337	4664	4430
	Female	240	515	258	10097	12856	11207	11283
TABORA	Male	136	49	50	566	657	516	178
	Female	211	61	61	730	1354	784	139
TANGA	Male	202	38	298	1168	2320	1192	517
	Female	254	21	252	1482	2742	1100	522
TOTAL		7125	1675	1858	53299	126452	95506	69525

Chapter Seven

VOLUNTARY MALE MEDICAL CIRCUMSCISION SERVICES

7.1:Introduction

Since 1983, when the first cases of AIDS were diagnosed in Tanzania, the country has progressively sought mechanisms for HIV infection prevention. Key among these have been enhancing national blood safety, prevention of mother-to-child transmission, HIV testing and counseling, control of STIs, and promotion of abstinence, faithfulness and using condoms. The country's efforts to become innovative, through adoption of international standards and search for solutions have increased and paid off with reduction in new infections, increased life expectancy for PLWHA, and reduction in orphan hood.

In 2007, WHO and UNAIDS issued recommendations to implement Voluntary Male Medical Circumcision (VMMC) in settings with high HIV prevalence and low prevalence of male circumcision. A number of countries were identified in Eastern and Southern Africa (ESA) to scale up male circumcision for HIV prevention. These recommendations followed the outcomes of clinical trials demonstrating risk reduction of female-to-male sexual transmission of HIV by roughly 60%. Prior to these studies, male circumcision was carried out for both medical and traditional reasons. In order to maximize public health benefits, countries need to rapidly and safely scale-up male circumcision to approximately 80% of all men aged between 15-49 years. Countries have mobilized resources and, in collaboration with partners, have commenced the national scale up of male circumcision.
In Tanzania Male circumcision was initiated towards the end of 2009 and beginning of 2010 in seven (8) regions that had low male circumcision prevalence rates and high HIV prevalence in collaboration with USG partners. The implementation process has been guarded through the National Strategy for Scaling up Male Circumcision that was developed in 2010 for the period 2010-2015. From these regions the main goal was to circumcise over 2.8 million males in 5 years. The priority age groups included 10-24 years (priority number one); 25-34 priority number two and those above 35 years. The programme uses all the WHO/UNAIDS standards on MC for HIV prevention – requiring HIV testing of all MC clients. Different approaches are being used to create demand and majority have accessed services through health facility based (static) and outreach or campaign MC services.

By December 2012 over 44,000 MC clients had been circumcised in all the 8 regions, the majority of whom (70%) are in the age groups of 10-25 years old. Currently a Country Operation Plan for the period 2013-2017 is being developed to assist implementers to accelerate Voluntary male circumcision services in the 12 regions

7.1.3 Data Collection Methods

The National Male circumcision recording and reporting system consist of the following tools;four recording and one reporting(Site.District and Region).The recording tools include MC cards coded as client card and Individual Client record,MC service Registers,MC surgical theatre register.MC cards(MC Identification cards and Individual Client record) capture the entire clients particulars,which are fed into the Male circumcision registers.The MC service registers is used to track all services provided to clients(eg.STI screened,HIV tested etc)while the surgical theatre register is used to track the information of circumcision procedure.

At the end of each month, the MC providers summarize the collected information according to the list of indicators in the carbonated site monthly summary form- "Monthly site summary form". The summarized information is disseminated at the site for use to improve MC Service provision. A copy is sent to the office of the District Medical Officer by the 7th day of the following month for compilation. At district level, summary reports from all the MC facilities/sites are aggregated to develop a district report in the carbonated district monthly summary form- "District monthly summary form". This report is discussed by the CHMT for MC services improvement. A copy of the district summary report is sent to the office of the Regional Medical Officer by the 14th day of the following month. At the Regional level, district summary reports from all the respective districts are aggregated using the carbonated regional monthly summary form – "Regional monthly summary form" to produce a regional summary report for use in the region. A copy of this report is sent to the NACP by the 21st day of the following month. At the different levels, the reports are generated manually or electronically. At the national level, NACP aggregates regional summaries to produce an annual national report that is disseminated widely for use.

7.1.4 Results:

Table 7.1 shows distribution of clients circumcised for HIV Prevention from the first four regions to implement VMMC for HIV Prevention in 2010. A total of 39,520 clients were circumcised of whom 28,353 in Iringa, 6,084 in Mbeya, 4,613 in Kagera and 470 in Shinyanga. Notably, most of the circumcised males (n = 25,142) were aged between 15-25 years..

Table 7.1 Distribution of Voluntary Male Medical Circumcision by the first Four Regions to implement by Age groups and; 2010

Region	< 1 yrs	1 ot 14 yrs	15 to 25 yrs	above 26 yrs	Total
Iringa Region	62	8234	18925	1132	28353
Kagera Region	9	1767	2426	411	4613
Mbeya Region	4	2442	3515	123	6084
Shinyanga	1	184	276	9	470
Total	**76**	**12,627**	**25,142**	**1,675**	**39,520**

As shown in Table 7.2 below, the number of males circumcised in 2011was 117,196, of whom c45,976 were from Iringa, 10,985 from Kagera, 9796 from Mbeya, 2,663 from Mwanza, 2,588 from Rukwa , 43,969 were from Shinyanga and 1,219 from Tabora. As in 2010, the age group of 15-25 contributed majority of the circumcised clients.

Table 7.2: Distribution of Male who voluntary Circumcised by age and Regions;2011

Region	< 1 yrs	1 ot 14 yrs	15 to 25 yrs	above 26 yrs	Total
Iringa Region	14	21668	21934	2360	45976
Kagera Region	366	4745	4864	1010	10985
Mbeya Region	1	3876	5608	311	9796
Mwanza Region	28	2248	330	57	2663
Rukwa Region	1	753	1791	43	2588
Shinyanga Region	0	17071	23814	3084	43969
Tabora Region	0	375	807	37	1219
Total	**410**	**50,736**	**59,148**	**6,902**	**117,196**

In 2012 a total of 183,480 clients were circumcised in seven regions that were implement this intervention as follows; (49,347) Iringa, (11,322) Kagera, (32,088) Mbeya, (12,302) Mwanza, (11,398) Rukwa , (44,082) Shinyanga and (22,941) Tabora. (Table 7.3).Unlike in the previous years, most clients (90,926) were aged 10-14 years followed by those aged 15-25 years (79,145).

Table 7.3 Distribution of Male who accessed Voluntary Medical Male Circumcision services by age in seven Regions; 2012

Region	< 1 yrs	10 to 14 yrs	15 to 25 yrs	above 26 yrs	Total
Iringa Region	15	27765	18538	3029	49347
Kagera Region	418	5685	4467	752	11322
Mbeya Region	2	17594	13094	1398	32088
Mwanza Region	0	7523	3539	1240	12302
Rukwa Region	0	5034	5993	371	11398
Shinyanga Region	0	17891	22629	3562	44082
Tabora Region	4	9434	10885	2618	22941
Total	**439**	**90,926**	**79,145**	**12,970**	**183,480**

Chapter Eight

HOME BASED CARE SERVICES

1.1 Background

Community Home-Based Care (HBC) is defined as any form of care given to chronically ill people in their homes. It includes activities that provide physical, psychological, social, and spiritual support (WHO/GPA, 1993). Families are the central focus and form the basis of community HBC. Community HBC targets chronically ill patients: those who continue to be ill for more than one month and who need continuous medical attention and management. These patients may include adults and children with cancers, HIV and AIDS, sickle-cell disease, cardiovascular diseases, diabetes,and cerebral palsy.

The Ministry of Health and Social Welfare (MOHSW) started implementing HBC services back in 1996, this started as a pilot into two regions namely; Pwani and Rukwa under DANIDA support. Later, these services have been scaled up gradually to cover all districts in the country. The main implementers of HBC are non-governmental organizations (NGOs), community-based organizations (CBOs), and faith-based organizations (FBOs) under mandate from the MOHSW that develops policies, guidelines and training materials.

In 1999, the first National Home Based Care Guideline (HBC) were developed, aiming to provide guidance to managers, health care providers and home based care providers in the community.

In 2003 the Ministry of Health and Social Welfare developed a Health Sector Strategy for HIV/AIDS (2003-2006) which identified Home Based Care as the most cost effective alternatives to mitigate the physical, mental, spiritual, and socio-economic difficulties experienced by PLHIV and their families.

The second Health Sector HIV and AIDS Strategic Plan-II (2008-2012) is now in use and the strategy emphasizes the establishment of effective linkages between care and treatment and support of PLHIVs after introduction of Nation Care and Treatment services. With the challenges that the country is now facing regarding identifying new HIV cases and retention of clients who are on care and treatment, the Ministry has recently developed the third Health Sector HIV and AIDS Strategic Plan whereby the community based HIV and AIDS services strategies to identify new clients and retentions of all clients on care and treatment are addressed.

Data Collection Methods

The national HBC recording and reporting system aims to provide information needed for monitoring implementation and making informed decisions on various aspects of service provision for managers, programmers, and HBC stakeholders, including the general public. The system consists of Notebook/ Register for Community HBC provider, Monthly summary forms for community HBC provider and monthly summary form for facility/district and regional levels.

The notebook is used by the HBC provider to record the condition of clients and the services provided. Each provider routinely fills in client information while providing services. At the beginning of each month, each HBC provider will refer to these records to summarize information for the month just ended into monthly summary forms for community HBC provider, to create community-level HBC monthly summaries. Once the community-level monthly record is generated, the service provider shares it with members of ward health committees and other community leaders, informing them on progress in implementing HBC services and identifying strengths and weaknesses for improvement. By third (3rd) day of the following month, the service provider will also send a copy of the monthly summary or report to the health-facility HBC contact person.

The health-facility HBC contact person will aggregate reports from all service providers in the catchment area, using the monthly summary form for facility level to generate a monthly summarization on indicators in wards or divisions. This report will be shared and discussed by the management team of the health facility and committees responsible for HBC services to identify strengths and weaknesses and improve implementation. The HBC contact person will send a copy of this report to the district HBC coordinator by 10th day of the following month.

The district HBC coordinator will aggregate reports from all facilities in the district to generate a district report using the monthly summary form for district level. This district report will be sent to the CHMT for discussion and a copy sent to the regional HBC coordinator by the 20th day of the following month. The regional HBC coordinator will aggregate reports from all districts in the region to generate a regional report, which will be disseminated to the RHMT for discussion and a copy sent to the NACP by the 25th day of the following month.

NACP aggregates regional summaries electronically to make national report, NACP produces the national report by 30th of the following month, and it provides feedback regularly to sub- national levels and disseminates the national report to sub- national levels on a quarterly basis.

RESULTS

1.0 Coverage of HBC services

Table 8.1 below shows the coverage of Home Based Care services in every region of Tanzania mainland by the end of December, 2012. Results in the table show that the coverage of these services varies from one region to another ranging between 32.8% and 92.9% at ward level, the lowest coverage being Singida and the highest being Pwani region.

Table 8.1 Coverage of HBC services in all regions of Mainland Tanzania as of December 2012.

REGION	Total number of health facilities	Total number of health facilities providing HBC services	Percentage of health facilities providing HBC services	Total ward per region	Total number of ward providing HBC services	Percentage of ward providing HBC service	Total number of districts providing HBC	Total districts per region
Arusha	293	100	34.1	130	98	75.4	7	7
Pwani	262	113	43.1	112	104	92.9	7	7
Dar es Salaam	479	56	11.7	90	47	52.2	3	3
Dodoma	340	103	30.3	190	117	61.6	6	6
Iringa	437	162	37.1	189	161	85.2	8	8
Kagera	266	65	24.4	180	65	36.1	5	8
Kigoma	241	114	47.3	104	59	56.7	4	4
Kilimanjaro	400	112	28.0	138	91	65.9	7	7
Lindi	216	133	61.6	126	112	88.9	6	6
Manyara	170	77	45.3	119	68	57.1	5	5
Mara	265	89	33.6	154	95	61.7	6	6
Mbeya	374	130	34.8	209	134	64.1	8	8
Morogoro	377	141	37.4	178	141	79.2	6	6
Mtwara	207	91	44.0	149	100	67.1	7	7
Mwanza	399	130	32.6	214	129	60.3	8	8
Rukwa	259	72	27.8	97	48	49.5	5	5
Ruvuma	261	89	34.1	142	77	54.2	5	6
Shinyanga	373	157	42.1	229	114	49.8	8	8
Singida	200	33	16.5	125	41	32.8	6	6
Tanga	326	110	33.7	196	137	69.9	9	9
Tabora	261	125	47.9	163	110	67.5	6	6
TOTAL	**6406**	**2202**	**34.4**	**3234**	**2048**	**63.3**	**132**	**136**

1.1 Clients enrolled in HBC services.

Table 8.2 below shows the cumulative number of clients enrolled in Home Based Care services by the end of December, 2012. The overall enrollment in all regions shows that female clients are more enrolled to the services compared to male clients, the highest number of female clients being in Shinyanga (13394) and the lowest in Mwanza (224) Although table 8.1 shows the least covered region was Singida and the highest covered region was Pwani, the results in table 8.2 shows that Mwanza region has the least enrollment of clients to HBC services with a total of 307 clients enrolled and Shinyanga with the highest

enrollment of 19,527 clients by December 2012. Comparing to the number of clients enrolled to HBC services in the year 2011, the results of year 2012 show that there was an increase in number of clients enrolled in HBC services by 56,469 clients.

Table 8.2 Cumulative number of clients enrolled in HBC services by the end of year 2011 and 2012

	2011			2012		
REGION	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Arusha	203	338	541	332	705	1037
Pwani	268	595	863	601	1170	1771
Dar es Salaam	2058	4279	6337	3620	7315	10935
Dodoma	2787	5114	7901	3226	6031	9257
Iringa	7772	12906	20678	6121	11913	18034
Kagera	728	1128	1856	898	1374	2272
Kigoma	-	-	-	951	1362	2313
Kilimanjaro	3367	4698	8065	3805	5740	9545
Lindi	2259	2813	5072	2393	3681	6074
Manyara	1722	2490	4212	1256	1783	3039
Mara	1784	3031	4815	2528	4393	6921
Mbeya	2531	4990	7521	4472	10787	15259
Morogoro	1402	2998	4400	1585	3254	4839
Mtwara	619	1144	1763	2638	3750	6388
Mwanza	2472	5142	7614	83	224	307
Rukwa	-	-	-	1055	1750	2805
Ruvuma	968	1538	2506	2443	3493	5936
Shinyanga	1577	2325	3902	6133	13394	19527
Singida	191	347	538	1891	3481	5372
Tanga	850	1958	2808	2290	5278	7568
Tabora	2217	3142	5359	5585	8436	14021
TOTAL	**35,775**	**60,976**	**96,751**	**53,906**	**99,314**	**153,220**

1.2 New patients enrolled in HBC services

Table 8.3 below shows the total number of new clients enrolled in HBC services by the end of year 2011 and 2012. Results in this table shows that Iringa region has the highest number of new clients enrolled in home based care services with a total number of 3821 new clients enrolled while Arusha region ranks the last in enrolling new clients to HBC services with a total number of 63 new clients enrolled to HBC services by the end of year 2012. The results also show that there is an increase in number of new clients enrolled in HBC from year 2011 where the new clients enrolled were 21,822 compared to year 2012 which had a total number of 33,866 new clients enrolled in HBC services.

Table 8.3 New Patients enrolled in HBC services categorized by sex by the end of year 2011 and 2012.

	2011			2012		
REGION	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Arusha	62	86	148	21	42	63
Pwani	67	102	169	255	477	732
Dar es Salaam	251	411	662	1264	2413	3677
Dodoma	88	186	274	162	296	458
Iringa	656	964	1620	1292	2529	3821
Kagera	0	0	0	71	167	238
Kigoma	-	-	0	604	1097	1701
Kilimanjaro	2164	3067	5231	660	946	1606
Lindi	189	279	468	686	1335	2021
Manyara	793	938	1731	63	83	146
Mara	270	520	790	682	1324	2006
Mbeya	1067	1649	2716	709	1114	1823
Morogoro	120	292	412	199	422	621
Mtwara	900	1183	2083	86	129	215
Mwanza	0	0	0	934	1574	2508
Rukwa	0	0	0	796	1234	2030
Ruvuma	537	896	1433	757	1103	1860
Shinyanga	938	1317	2255	1053	1475	2528
Singida	0	0	0	212	409	621
Tanga	589	1241	1830	1039	2082	3121
Tabora	0	0	0	775	1295	2070
TOTAL	**8,691**	**13,131**	**21,822**	**12,320**	**21,546**	**33,866**

1.2 **Reasons for enrolment in HBC services**

Table 8.4 below shows the distribution of the reasons for enrolment to HBC services in reporting regions by the end of year 2011 and 2012. The results in the table shows that more than a half of HBC patients 23,918 (73.5 %) were enrolled due to HIV infection, followed by enrollment due to other reasons which were 3,551 (11%) cases and Tuberculosis diagnosis being the third with a total number of 1427 cases enrolled in the year 2012. .

Table 8.4 Reason for enrollment in HBC services for reporting regions by the end of year 2011 and 2012)

	2011			2012		
Reasons	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
HIV infection	5273	9401	14,674	8322	15596	23,918
Sickle cell disease	75	88	163	196	235	431
Cardiovascular diseases	611	865	1,476	513	827	1,340
Diabetes	387	473	860	410	379	789
Cerebral palsy	243	240	483	304	357	661
Cancer	91	132	223	145	262	407
Tuberculosis	494	528	1,022	714	713	1,427
Others	750	687	1,437	830	2721	3,551
Total	**7,924**	**12,414**	**20,338**	**11,434**	**21,090**	**32,524**

1.3 Types of HBC services provided

Table 8.5 below shows the frequency distribution of different HBC services that were provided by HBC providers in all regions by the end of year 2011 and 2012. From the results in the table, it shows that medical care was the commonest service that was being provided in the year 2012 with a frequency of 87,368 while nutritional support was the least service provided to HBC clients with a frequency of 51525 times. The results show the resemblance of trends in service provided in year 2011 and 2012.

Table 8.5 Frequency distribution of services that were provided in regions by the end of year 2011 and 2012)

Type of HBC Services Provided	Frequency of service	
	2011	2012
Medical Care	39950	87368
Nursing care	28314	53793
Psychosocial support	24496	60440
Nutritional support	19113	51525
Preventive services	37919	82489

1.4 Referral and linkage of HBC services with other services.

Table 8.6 below shows the HBC referrals that were provided and completed by the end of year 2011 and 2012. In general, results show a big difference between total referrals offered to clients with a total number of referrals of 25,923 in year 2011 and 47,093 in year 2012 and total number of completed referrals which is low compared to referrals offered with a total number of 17768 in year 2011 and 24,674 referrals completed in year 2012 respectively.

Table 8.6:HBC referrals provided and those completed by the end of year 2011 and 2012.

	2011		2012	
REGION	Total referrals offered	Total completed referrals	Total referrals offered	Total completed referrals
Arusha	114	75	387	310
Pwani	666	437	391	217
Dar es Salaam	539	339	2251	1258
Dodoma	636	525	1919	1313
Iringa	2868	1333	5404	1495
Kagera	0	0	132	47
Kigoma	0	0	989	596
Kilimanjaro	4767	2302	2553	1014
Lindi	164	104	1047	759
Manyara	1935	1739	738	410
Mara	569	344	2788	1756
Mbeya	977	639	1854	1408
Morogoro	6628	5424	3056	2666
Mtwara	1268	660	136	59
Mwanza	0	0	13250	5504
Rukwa	0	0	2202	846
Ruvuma	718	662	1457	708
Shinyanga	3093	2411	2368	1378
Singida	0	0	439	216
Tanga	981	774	2125	1120
Tabora	0	0	1607	1594
TOTAL	25,923	17,768	47,093	24,674

1.5 HBC referrals by type of services

Tables 8.7 and 8.8 below, show HBC referrals that have been offered by type of services by end of December, 2011 and 2012. The results show that the service with the highest frequency of referral to all the regions was care and treatment with a total frequency of 11,258 in 2011 and Health facility for management of opportunistic infections with a frequency of 12,307 in 2012 while the service with the lowest frequency of referral was other services with a total frequency of 1,819 in 2011 and PMTCT services with a frequency of 1,995 in 2012.

Table 8.7: Number of HBC referrals by type of services by the end of year 2011.

	2011						
REGION	HIV counseling and testing	Care and treatment clinic	Health facility for management of opportunistic infections	TB Clinic	PMTCT services	Other services	Total
Arusha	25	43	27	4	11	4	114
Pwani	38	419	173	17	3	16	666
Dar es Salaam	101	133	167	26	7	105	539
Dodoma	147	197	161	44	6	81	636
Iringa	221	1315	951	106	113	162	2868
Kagera	0	0	0	0	0	0	0
Kigoma	0	0	0	0	0	0	0
Kilimanjaro	1342	1446	854	290	348	487	4767
Lindi	30	32	45	22	13	22	164
Manyara	368	570	655	181	65	96	1935
Mara	100	138	240	38	19	34	569
Mbeya	111	364	337	29	53	83	977
Morogoro	540	4461	1331	83	130	83	6628
Mtwara	250	482	180	87	121	148	1268
Mwanza	0	0	0	0	0	0	0
Rukwa	0	0	0	0	0	0	0
Ruvuma	127	256	198	41	33	63	718
Shinyanga	715	1020	751	156	277	174	3093
Singida	0	0	0	0	0	0	0
Tanga	102	382	143	37	56	261	981
Tabora	0	0	0	0	0	0	0
TOTAL	**4,217**	**11,258**	**6,213**	**1,161**	**1,255**	**1,819**	**25,923**

Table 8.8: Number of HBC referrals by type of services (2012)

	2012						
REGION	HIV counseling and testing	Care and treatment clinic	Health facility for management of opportunistic infections	TB Clinic	PMTCT services	Other services	Total
Arusha	47	201	88	15	11	25	387
Coast	82	95	116	31	28	39	391
Dar es Salaam	381	385	724	135	149	477	2251
Dodoma	346	517	621	70	34	331	1919
Iringa	812	564	1976	520	429	1103	5404
Kagera	58	21	37	4	4	8	132
Kigoma	281	190	220	110	49	139	989
Kilimanjaro	319	1278	563	53	54	286	2553
Lindi	182	252	302	76	69	166	1047
Manyara	152	242	198	85	24	37	738
Mara	454	536	1165	183	173	277	2788
Mbeya	697	494	547	53	54	9	1854
Morogoro	463	1507	862	30	56	138	3056
Mtwara	26	22	27	8	14	39	136
Mwanza	1817	2042	2510	256	280	6345	13250
Rukwa	631	605	504	73	73	316	2202
Ruvuma	471	424	339	69	33	121	1457
Shinyanga	691	738	559	168	129	83	2368
Singida	93	172	109	20	28	17	439
Tanga	446	505	457	193	212	312	2125
Tabora	461	565	383	35	92	71	1607
TOTAL	**8,910**	**11,355**	**12,307**	**2,187**	**1,995**	**10,339**	**47,093**

Chapter Nine

INTERGRATED BIOLOGICAL AND BEHAVIORAL SURVEILLANCE SURVEY AMONG FEMALE SEX WORKERS (FSWS)

Introduction

The prevalence of HIV infection in the adult population in Tanzania is estimated at 5.1% (THMIS 2011/2012). Dar es Salaam, which has one of the highest HIV prevalence in Tanzania, is estimated to have an overall HIV prevalence of6.9%, with women aged 15-49 years having a higher prevalence (8.2%) than males (5.3%) of the same age group (THMIS 2011/2012). However, evidence suggests that specific populations are at increased risk for HIV infection, including injecting drug users (IDUs), men who have sex with men (MSM), and female sex workers (FSW).

Female sex workers (FSW) are a group at disproportionately high risk for HIV infection because they often have a high number of sexual partners and may not use condoms at every encounter. FSWs are thought to have an important role in the introduction, early maintenance and reseeding of HIV infection into the general population. Several countries with low HIV prevalence showed rapid increases in HIV infection among FSWs well before similar increases are seen in the general population (AIDS and Behavior Journal 2001).

Studies that have been conducted among female bar workers in Moshi and Mbeya found high proportions of women engaged in informal commercial sex work and the prevalence of HIV infection among them ranging from 19-68%.

According to a study conducted in Dar es Salaam, 82% of female PWIDs reported their major source of income was trading sex for money (AIDS Behav, 2007). It has been shown that FSW who inject drugs are at higher risk for HIV than those who do not (PLos One 2011), and that even FSWs who do not inject drugs but whose steady male partners are PWIDs are also at higher risk for HIV (PLos One 2012).

In this chapter we provide a summary of findings of a study conducted n 2011 among FSWs in Dar es Salaam that explored on sexual and risk behavior in relation to HIV and STIs in this high risk population.

Methodology

A cross sectional survey was conducted in Dar es Salaam in 2011 to recruit FSW using Respondent Driven Sampling (RDS). RDS is a chain referral sampling method designed to reduce the biases generally associated with chain referral methods in order to yield a probability-based sample

Results

A total of 537 FSWs were recruited. The median age of participants was 29 years old (interquartile range [IQR]: 23-36 years), and 40.3% (95% CI: 34.0-47.1%) were aged between 25 and 34 years. The majority of them (72.9%, 95% CI: 67.1-78.1%) had attended some or completed primary school. Most

(57.9%, 95% CI: 50.5-66.1%) had never been married, 32.7% (95% CI: 50.5-66.1%) were divorced or separated, and 8.7% (95% CI: 5.0-11.0%) were widowed. HIV prevalence was 43.3% (95% CI: 30.2-68.6%) among divorced or separated participants and 38.6% (95% CI: 27.9-48.5%) among those who had been widowed.

Table 9.1: Demographic characteristics, respondent-driven sample of FSW, Dar es Salaam, Tanzania, 2011.

	N	% (95% CI)*	HIV + (N)	HIV Prevalence % (95% CI)*
Age				
15–24 years	172	35.6 (27.1, 43.9)	17	8.1 (3.6, 13.3)
25–35 years	209	40.3 (34, 47.1)	79	42.2 (32.3, 53.4)
36–50 years	141	21.9 (16.7, 28.5)	68	47.3 (34.2, 60.2)
>50	15	2.2 (0.7, 4.3)	8	52.2 (17.6, 97.4)
Median Age 29 years (IQR 23-36)				
Education				
No formal education	38	7.7 (4.1, 12.0)	16	30.8 (12.6, 56.8)
Completed or some primary education	404	72.9 (67.1, 78.1)	130	31.6 (24.4, 38.5)
Completed or some secondary education	92	19.4 (14.8, 24.6)	26	37.1 (20.6, 52.6)
Marital status				
Currently married/cohabitating	6	0.8 (0.2, 2.0)	1	n/a
Divorced/separated	200	32.7 (26.1, 40.2)	72	38.6 (27.9, 48.5)
Widowed	54	8.7 (5.0, 11.0)	31	43.6 (30.2, 68.6)
Never married	271	57.9 (50.5, 66.1)	66	25.7 (17.8, 34.1)
Age at first sex				
<10 years	3	0.3 (0.0, 0.8)	2	67.6 (0.0, 100.0)
10–15 years	181	36.1 (28.9, 40.4)	52	28.4 (20.1, 40.1)
16–20	319	59.9 (55.5, 67.4)	108	33.2 (25.0, 42.3)
>20	24	3.7 (2.2, 5.4)	6	25.7 (6.3, 48.0)
Reason for entering sex work				
Need money to support family/pay debt	391	71.0 (67.0, 76.8)	124	32.6 (25.1, 40.3)
Well paid/extra income for luxuries	58	10.8 (7.4, 14.5)	21	24.3 (11.8, 39.5)
Abandoned by husband/parents/siblings	34	7.4 (4.4, 11.1)	14	45.6 (20.6, 69.2)
Other reasons	53	10.9 (6.8, 13.1)	13	24.5 (12.6, 41.8)
No of clients on last day of sex work				
1 client	121	22.4 (17.2, 28.1)	36	32.3 (20.0, 47.1)
2–4 clients	276	55.9 (48.8, 61.6)	83	27.5 (20.0, 36.6)
≥ 5 clients	128	21.7 (17.0, 28.1)	50	40.9 (26.7, 53.5)
Duration in sex work, years	Median 3 (IQR 2-6)			

The median age of sexual debut was 17 years old (IQR 15-18). The median duration in sex work was 3 years (IQR 2-6), and the median number of clients on the last day worked was 3 (IQR 2-4). The most common reason given by FSW for entering into sex work was the need for money to support their family or to pay off debts (71.0%; (95% CI: 67.0-76.8%)) (Table 9.1). About 97.8% (95% CI: 96.2-99.2%) of FSW ever had one-time clients, 81.1% (95% CI: 75.6-85.5%) ever had regular commercial clients, and 72.6% (95% CI: 66.3-78.2%) ever had steady partners. Participants with a history of ever having casual, nonpaying partners (20.4%; 95% CI: 15.0-24.4%) were reported less frequently (Table 9.2). The prevalence of HIV infection did not differ by partner type. Consistent condom use in the past 30 days with non-paying steady partners was 31.6% (95% CI: 22.4-38.1%) compared to 65.4% (95% CI: 57.5-71.5%) with one-time partners and was 59.4% (95% CI: 42.7-69.6%) with non-paying casual partners.

The percent of FWSs who reported alcohol and non–injection drug use in the past 30 days was 67.7% (95% CI: 61.3%-72.8%) and 61.2% (95% CI: 51.1%-79.3%), respectively.FSW rarely reported using drugs themselves 1.3% (95% CI: 0.3%-2.7%), but often suspected their partners were PWID (49.1%; 95% CI: 43.8%-55.5%).

Table 9.2: Risk behaviors and HIV status, respondent-driven sample of FSW, Dar es Salaam, Tanzania, 2011

	N	% (95% CI)*	HIV + (N)	HIV Prevalence % (95% CI)*
Ever had partner type				
Steady partner				
Yes	393	72.6 (66.3, 78.2)	130	32.5 (25.1, 40.5)
No	141	27.4 (21.9, 33.7)	40	26.6 (16.2, 38.4)
Casual sex partner				
Yes	96	20.4 (15.0, 24.4)	32	32.7 (21.3, 48.4)
No	439	79.6 (75.6, 85.0)	30	31.4 (18.3, 45.2)
Regular client				
Yes	437	81.1 (75.6, 85.5)	141	30.6 (23.7, 38.6)
No	96	18.2 (13.9, 23.6)	30	31.4 (18.3, 45.2)
One-time client				
Yes	525	97.8 (96.2, 99.2)	168	31.2 (24.9, 38.2)
No	9	2.2 (0.9, 3.8)	3	33.9 (0.0, 70.0)
Condom use by partner type in the last 30 days				
Steady partner				
Always	79	31.6 (22.4, 38.1)	23	31.8 (18.7, 53.1)
Most of the time	11	6.1 (2.5, 10.4)	4	16.3 (0.0, 45.0)
Occasionally	37	12.9 (8.5, 18.1)	10	21.1 (6.5, 41.7)

Never	135	49.5 (42.4, 59.4)	39	30.7 (17.7, 43.4)
Casual non-paying client				
Always	40	59.4 (42.7, 69.6)	10	20.3 (8.0, 40.9)
Most of the time	9	12.2 (5.0, 22.5)	5	48.4 (9.1, 88.1)
Occasionally	10	11.7 (4.6, 21.9)	5	49.3 (14.8, 90.2)
Never	17	16.7 (9.3, 28.3)	3	11.4 (0.0, 30.0)
Regular client				
Always	291	69.3 (61.2, 76.0)	94	32.5 (23.7, 41.5)
Most of the time	42	10.7 (6.9, 15.4)	15	29.8 (10.7, 51.3)
Occasionally	64	14.5 (10.4, 19.3)	23	33.5 (19.8, 50.1)
Never	14	5.5 (2.1, 10.3)	2	7.7 (0.0, 29.8)
One-time client				
Always	349	65.4 (57.5, 71.5)	117	34.9 (26.9, 43.0)
Most of the time	71	16.5 (12.1, 22.2)	16	20.3 (7.0, 36.5)
Occasionally	76	15.7 (11.1, 21.8)	28	27.3 (14.7, 40.5)
Never	10	2.4 (0.9, 4.1)	2	10.3 (0.0, 44.3)
Used alcohol in the past 30 days				
Yes	360	67.7 (61.3, 72.8)	115	30.8 (23.3, 39.6)
No	175	32.3 (27.2, 38.7)	56	31.2 (21.9, 41.1)
Used non-injection drugs in the past 30 days				
Yes	53	84.1 (73.1, 97.6)	23	71.4 (54.1, 86.8)
No	32	15.9 (2.4, 26.9)	11	0.0 (0.0)
Ever injected drugs				
Yes	6	1.3 (0.3, 2.7)	6	100 (100, 100)
No	525	98.7 (97.3, 99.7)	162	29.7 (23.5, 36.7)
Any sex partners used drugs				
Yes	307	61.3 (56.1, 67.8)	44	29.9 (21.0, 43.3)
No	66	10.2 (7.3, 13.5)	75	27.2 (19.6, 34.7)
Don't know	155	28.5 (22.1, 33.5)	169	39.0 (23.7, 51.5)
Any sex partners injected drugs				
Yes	243	49.1 (43.8, 55.5)	30	46.9 (31.5, 64.1)
No	140	23.3 (17.9, 28.2)	86	23.2 (16.5, 29.4)
Don't know	146	27.6 (21.7, 33.5)	52	38.3 (26.0, 52.1)

In bivariate analysis, HIV prevalence was higher among FSW who suspected that partners injected drugs, 46.9% (95% CI: 31.5%-64.1%) as compared to FSW who did not suspected that partners injected drugs 23.2% (95% CI: 16.5%-29.4%).In a multivariate model (Table 9.3), adjusting for demographic and behavioral characteristics, the adjusted odds ratio (AOR) of HIV infection among women who suspected that their partners injected drugs was 3.3% (95% CI: 1.66%-6.72%); (2.3 times greater) and was 0.09 times higher per additional year of sex work (AOR 1.09 95% CI: 1.03%-1.2%).Factors which were not significant at the p<0.05 level were excluded from the best fit model during step wise regression, they were age, having a steady partner, having used non-injection drugs in the past 30 days and having a partner who used non-injection drugs in the past 30 days.

Table 9.3: Factors associated with prevalent HIV infection, respondent-driven sample of FSW, Dar es Salaam, Tanzania, 2011

	OR	95% CI	p value	aOR	95% CI	p value
Age (Categorical)*	2.45	1.81,3.30	<0.01			
Non-injection Drugs in Past 30 days*	1.00	0.99,1.00	0.06			
Duration in sex work	1.08	1.03,1.14	<0.01	1.09	1.03,1.15	<0.01
Partner used drugs (non-injection)*	1.00	1.00,1.01	0.13			
Partner who injects drugs	3.22	1.60,6.51	<0.01	3.34	1.66,6.72	<0.01

aOR, adjusted odds ratio.

*excluded from the best fit model during stepwise regression because p>0.05

In summary, 32% of FSWs in Dar es Salaam are HIV-infected, and the prevalence is even higher (47%) among FSWs who suspected that their steady non-paying sexual partners inject drugs.

In this group of FSWs the Prevalence of STIs/RTI was also high.

Chapter Ten

MONITORING AND REPORTING OF THE HEALTH SECTOR RESPONSE TO HIV/AIDS

10.1 Introduction

In the year 2008, Tanzania started reporting on a standard set of indicators that aimed at monitoring and reporting on progress in the health sector response to HIV and AIDS towards Universal Access, and the UNGASS Declaration of Commitments on HIV/AIDS. This section provides the values and reporting period for each indicator. It is intended at assessing progress made over time as well as reference material for subsequent reporting.

10.2 Methods

Sources of information for the indicators consisted of national programme implementation reports and population-based surveys. Denominators for some indicators were estimated through modeling or application of sample estimates to specific population groups**.** Data were collected through review of national publications, consultation with managers and programmers of various interventions. After compilation, indicator values were presented for validation in a stakeholders meeting and the feedback was used to improve the report.

10.3 Results

Table 10.1 provides a list of indicators with values and reporting period for each.

Table 10.1 List National and international HIV/AIDS Monitoring indicators

Sno	Indicator	Indicator Value	Reporting Period
A	General country information		
	Number of Regions in the country	25	as of Dec 2012
	Number of health facilities	6892	as of Dec 2012
	Number of health facilities that offer ART	1156	as of Dec 2012
B	Testing and counseling		
1	Percentage of health facility that provide HIV testing and counseling services	32	as of Dec 2012
2	Percentage of women and men aged 15-49 who received an HIV test in the last 12months	28.66	As of Dec 2012
C	**Prevention in health care settings**		
1	Number of health facilities with post-exposure prophylaxis(PEP) services available on site	1156	as of Dec 2012
D	**Sexually transmitted infections**		
1	Percentage of antenatal care attendees who were positive for syphilis	4	ANC,2007-2008

E	Antiretroviral therapy		
1	Percentage of health care facilities that offer ART	17	as of Dec 2012
2	Number of eligible adults and children currently receiving antiretroviral therapy	432,338	as of Dec 2012
F	**TB/HIV**		
1	Percentage of adults and children enrolled in HIV care who had TB status assessed and recorded during their last visit	89.4	as of Dec 2012
G	**Women and children**		
1	Number of pregnant women attending ANC at least once during the reporting period	1,682,886	as of Dec 2012
2	Number of health facilities providing ANC services	4832	as of Dec 2012
3	Number of health facilities providing ANC services that also provide HIV testing counselling for pregnant women	4832	as of Dec 2012
4	Number of pregnant women with unknown HIV status attending ANC who were tested during ANC and received results	840,536	as of Dec 2012
5	Percentage of HIV-positive women who received antiretrovirals to reduce the risk of mother to child transmission during pregnancy and delivery	82.14	as of Dec 2012
6	Percentage of pregnant women who were tested for HIV and received their results-during pregnancy,during labour and delivery and during the post-partum period(<72),including those with previously known HIV status	51	as of Dec 2012
7	Percentage of pregnant women attending antenatal care whose male partner was tested for HIV	16	as of Dec 2012
8	Percentage of HIV-Infected pregnant women assessed for ART eligibility through either clinical staging or CD4 testing	28.2	as of Dec 2012
9	Percentage of infants born to HIV-infected women(HIV-exposed infants) who are provided with antiretrovirals (either mother or infant) to reduce the risk of HIV transmission during the breastfeeding period	100	as of Dec 2012
10	Percentage of infants born to HIV-infected women receiving antiretroviral prophylaxis to reduce the risk of early mother-to-child-transmission in the first weeks(i.e early postpartum transmission around 6 weeks of age)	96.77	as of Dec 2012
11	Percentange of infants born to HIV-infected women started on contrimoxazole (CTX) prophylaxis within two months of birth	66.1	as of Dec 2012
12	Percentage of infants born to HIV-infected women receiving a virological test for HIV within two months of birth	29.06	as of Dec 2012

Chapter 11
HIGHLIGHTS OF RESEARCH PUBLICATIONS IN TANZANIA

Title:

"After my husband's circumcision, I know that I am safe from diseases": Women's Attitudes and Risk Perception Towards Male Circumcision in Iringa, Tanzania.

Authors:

Layer E H, Beckham SW, Mgeni L, Shembilu C, Momburi RB, Kennedy CE.

Source:

PLOS ONE: 2013: (8), E 74391

Objective:

To assess women's perceptions of male circumcision in Iringa, Tanzania.

Methodology:

Qualitative study methodology was used to HIV - negative and HIV positive married women whose husbands were circumcised in the previous years. Focus group discussion (FGD) was also conducted to married and unmarried women (31). Recruitment relied on safe – reported HIV status and husband's circumcision status. Participants were purposively sampled from women's groups, HIV support groups and health centers in urban and rural areas (32). Snowball sampling was also used to identify eligible interview participants. Data coding matrices were developed to compare findings between in-depth interviews with married women. Findings were compared across matrices to determine if themes differed by marital status of data collection methods.

Results:

Women had strong preferences for circumcised men and perceived increased sexual desirability of circumcised men. The health benefits of male circumcision were generally overstated. Many respondents falsely believed that women are also directly protected against HIV and that risk of all STIs is greatly reduced in circumcised men.

Conclusion:

Efforts to engage women about the risks and limitations of male circumcision, in addition to the benefits should be expanded so that women can accurately access their risks of HIV/STIs, during sexual Intercourse with circumcised men.

Title:

HIV/AIDS Knowledge, Attitude and Practice among women in the least and most HIV/AIDS affected Regions of Mainland Tanzania.

Authors:

Katapa RS, Rweyemamu DK

Source:

Journal of Biosocial Science, 2013: 1- 10

Objectives:

To make a comparison of HIV/*AIDS Knowledge, Attitude and Practice* between women in Iringa and Arusha Regions.

Methodology:

A survey was conducted in Iringa and Arusha regions using three stage sampling procedures to collect data in selected districts. The first stage involved selection of a sample of population census enumeration areas in urban wards of the selected districts. The second stage involved selection of household. The third stage involved selecting women in the 30 selected households in each enumeration area. The actual sample sizes were 121 women in Arusha district and 52 women in Iringa Urban district. Confidentiality of the information was assured. Initially, a chi-squared distribution was used in making comparison between the women in two regions for each variable of interest.

Results:

This paper found significant difference in HIV/ AIDS awareness between women in Iringa region, which has the highest HIV/AIDS prevalence and Arusha Region with the lowest prevalence in Mainland Tanzania. Women in Arusha region have more knowledge of HIV/AIDS than those in Iringa Region.

Conclusion:

Besides, learning more about sexual behavior in the two regions, it would be useful to know more about the history of the epidemic in the regions.

Title:

Gender differences in HIV disease progression and treatment outcomes among HIV patients one year after starting antiretroviral treatment (ART) in Dar- es- Salaam, Tanzania.

Authors:

Mosha F, Muchunguzi V, Matee M, Sangeda ZR, Vercauteren J, Nsubuga P, Lyamuya E, Vandamme AM

Objectives:

To investigate gender differences in treatment outcome during first line antiretroviral treatment (ART) in a hospital setting in Tanzania, assessing clinical social demographic, virological and immunological factors.

Methodology:

A cohort study involving HIV infected patients scheduled to start ART and followed up to 1 year on ART was conducted. Structured questionnaires and patients file review were used to collect information and blood was collected for CD4 viral load testing. Gender differences were assessed using kruskal - Wallis test and chi - square test for continuous and categorical data respectively. Survival distributions for female patients were estimated using the kaplan meier method and compared using Cox proportional hazards models.

Results:

After 1 year of standard ART, a higher proportion of females survived although this was not significant, a significantly higher proportion of females had undetectable plasma viral load (69%women 45% men), however females ended a comparable CD4 cell count signifying a worse CD4 cell increase. The unadjusted relative hazard for death for men compared to women was 1.94. After correcting for confounding factors, the cox proportional hazard showed no significant difference in the survival rate.

Conclusion:

It is recommended continuous follow up of this and more cohorts of patients to better understand the underlying causes for these differences and whether this will translate in longer term differences.

Title:

Community perspectives on parental influence on engagement in multiple concurrent sexual partnerships among youth in Tanzania: Implications for HIV prevention programming

Authors:

Fehringer JA, Babalola S, Kennedy CE, Kajula JL, Mbwambo JK, Kerrigan D.

Source:

AIDS care: psychological and socio-medical aspects of AIDS/HIV, 2013, 25 (2) 207- 214

Objective:

To explore the community's perspectives on the role that parents can play in influencing their children's decision to engage on concurrent sexual partnerships (CPs).

Methodology:

A total of 16 in -depth interviews, 32 focus group discussions and 16 key informant interviews with 280 adult participants were conducted in Tanzania. Data was coded; findings and conclusions were developed based on themes that emerged from coding.

Results:

Three parental influences on concurrent sexual partnerships (CPs) emerged: parents were too busy or too (embarrassed) to talk with their children about sex and CPs. Also, parents encouraged CP through complicity of silence when their daughters came home with extra cash or consumer goods. Sometimes, when parents engage in CPs the children themselves learn to behave similarly. These results suggest that parents can influence their children's decision to engage in CPs.

Conclusion:

HIV prevention interventions should address this by promoting parent-child communication about sexuality, associated disease risks and gender- equitable relationships. Also, promoting positive parental role modeling and educating parents on the implication of encouraging CPs in their children.

Title:

Applying the Dynamic Social Systems Model to HIV prevention in a Rural African Context: The Masai and the Esoto Dance

Authors:

Siegler JA, Mbwambo JK, DiClemente JR,

Source:

OSAGE: 2013

Objectives:

To explore traditions reportedly coadunate with sexual partnership, including wife sharing, fertility rituals and various traditional dances.

Methodology:

This study applied the Dynamic Social Systems Model (DSSM) to the issue of HIV risk among the Masai tribe of Tanzania, using data from a cross –sectional, cluster survey among 370 randomly selected participants from Ngorongoro and Siha Districts. A culturally appropriate survey instrument was developed. The DSSM, combining structural and system theories, was applied to systematize complex multilevel factors regarding Esoto practice.

Results:

Participants reported multifaceted beliefs regarding Esoto. A majority viewed the dance as exciting and essential, yet most men feared social stigma and three quarters of women had experienced physical punishment for nonattendance. In multivariate logistic regression Esoto attendance was predicated by female gender.

Conclusion:

The DSSM proved useful for characterizing Esoto and for revealing feedback loops that maintain Esoto, thus indicating avenues for future interventions.

Title:

Reported Physical and Sexual Abuse in Childhood and Adult HIV Risk Behavior in Three African Countries: Findings from Project Accept (HPTN-043).

Authors:

Richter L, Komárek A, Desmond C, Celentano D, Morin S, Sweat M, Chariyalertlsak S, Chingono A, Gray G, Mbwambo J, Coates T

Source:

AIDS Behav, March 2013: 0439-7

Objectives:

To explore the relationships among both men and women who reported histories of childhood abuse from representative samples of communities in three countries in southern and Eastern Africa (South Africa, Zimbabwe and Tanzania).

Methodology:

A baseline survey was conducted in four sites in 3 countries - Zimbabwe, Tanzania and South Africa (2 sites) as part of a 3 years randomized community trial to rapidly increase knowledge of HIV status and promote community responses to reduce HIV incidence through mobilization, mobile testing, provision of same - day HIV test results and post- test support for HIV.

Results:

The results indicate that childhood sexual and physical abuse is high in all three settings. Also, among men and showed strong relationships with range of sexual risk behaviors including engaging in behaviors that put the individuals at risk of HIV infection. Individuals abused in childhood comprised between 6 and 29% of young adult men and women living in those African settings, and constitute a population at high risk of HIV infection.

Conclusion:

Abuse prevention is imperative in situations of known child vulnerability in order to prevent inter-regional cycles of sexual risk and HIV infection in high HIV prevalence environments. It is also important as a secondary prevention strategy among PLHIV who have been abused in childhood.

Title:

Condom use among HIV- positive sexually active adult and partner's HIV status in Dar- es- Salaam, Tanzania

Authors:

Conserve D, Sevilla L, Younge S, Mbwambo J

Source:

Journal of health Care for poor and underserved, February 2012: (23), 191-203.

Objective:

To examine the predictors of condom use and partner's HIV status among HIV positive individuals who had sex in the past six months.

Methodology:

Data was collected from incoming service form administered to 45,071 clients seeking HIV testing during 1997-2008 at the Muhimbili University College of Health Sciences voluntary counseling and testing (VCT) Clinic in Dar-es-Salaam Tanzania. The form inquired socio-demographic characteristics, HIV testing history for themselves and their sexual partners, sexual practices, reason for attending the clinic and condom use in the previous six months. The HIV status of clients was confirmed with the result of their capillus HIV test.

Results:

Sixteen percent of the 45,071 clients reported using condoms always in past six months. Multivariate logistic regression revealed that age and knowledge of partners HIV Status were the strongest predicators of consistent condom use. Analysis also revealed that, education and marital status were significant predicators of knowledge of partner's HIV status. This same study also found that HIV status disclosure to partner was lowest among participants who were unaware of their partner's HIV status in contrast to those who knew their partner was HIV positive or HIV negative.

Conclusion:

Future efforts to prevent new HIV infections are needed. Also, programs should aim to increase condom use and prevention practices that facilitate HIV positive individuals to communicate their HIV Status with partners

Title:

Increases in HIV Testing and Case detection from NIMH Project Accept ((HPTN 043) among 16-32 year olds: A randomized community – Based Intervention in Tanzania, Zimbabwe, and Thailand

Authors:

Sweat M , Morin S, Celentano D, Mulawa M, Singh B, Mbwambo J, Kawichai S, Chingono A, Khumalo-Sakutukwa G, Gray G, Richter L, Kulich M, Sadwski A, Coates and the Project Accept Study Team

Source:

Lancet Infect Dis. July 2011; 11(7): 525-532

Objective:

To examine the effect of the intervention on uptake of HIV testing and Counseling (HTC) and HIV case detection**.**

Methodology:

This was a multisite, community randomized trial conducted in Tanzania, Zimbabwe, and Thailand. The study randomly assigned half of 10 rural communities in Tanzania, 8 in Zimbabwe, and 14 in Thailand to receive a multiple component community-based voluntary counseling and testing intervention together with access to standard clinic-based voluntary counseling and testing**.**

Results:

A higher percentage of 16–32 year-olds were tested in intervention communities than in control communities (37% vs. 9% in Tanzania; 51% vs. 5% in Zimbabwe; and 69% vs.23% in Thailand). The mean difference between the percentages of the population tested in CBVCT versus SVCT communities was 40.4% across the 3 country study arm pairs, which was statistically significant. Despite higher prevalence of HIV among those testing at SVCT venues the intervention detected 3.6 times more HIV infected clients in the CBVCT communities than in SVCT communities.

Conclusion:

This multiple component, community-level intervention is effective at both increasing HIV testing rates and detecting HIV cases in rural settings in developing countries.

Title:

PEPFAR's Evolving HIV Prevention Approaches for Key Populations—People Who Inject Drugs, Men Who Have Sex with Men, and Sex Workers: Progress, Challenges, and Opportunities

Authors:

Needle R, Fu J, Beyrer C, Loo V, Abdul-Quader AS, McIntyre JA, Li Z, Mbwambo JK, Muthui M, and Pick B

Source:

J Acquir Immune Defic Syndr**,** 2012; (60):S145–S151

Objective:

To estimate the HIV disease burden, understand risk behavior trends, and determine coverage and resources required for appropriate scale-up of services for KPs.

Methodology:

The study examined epidemiological patterns, the availability and use of surveillance, surveys, size estimation methods, and scientific findings to plan and implement evidence-based HIV prevention interventions for KPs. Also included in this review are PEPFAR-specific and illustrative case studies, which reflect best program practices for each of the KPs. Also it examined the challenges ahead for PEPFAR's programming and made recommendations for KPs to ensure that efforts to introduce and scale-up evidence-based combination intervention packages for PWID, MSM, and SWs are implemented in all affected countries.

Results:

To expand country planning of programs to further reduce HIV burden and increase coverage among KPs, PEPFAR developed a strategy consisting of technical documents on the prevention of HIV among people who inject drugs (July 2010) and prevention of HIV among men who have sex with men (May 2011), linked with regional meetings and assistance visits to guide the adoption and scale-up of comprehensive packages of evidence based prevention services for KPs

Conclusion:

The implementation and scaling up of available and targeted intervention adapted for KPs are important steps in gaining better control over the spread and impact of HIV/AIDS among these population

Title:

Management of HIV and AIDS at lower primary health care facility in Chalinze, Eastern Tanzania

Authors:

Boniphace I, Boniface J, Mugusi F. and Marcel T

Source:

Tanzania Journal of Health Research, July 2011, (13:3)

Objectives:

To gather experiences on implementation of Antiretroviral Therapy (ART) services and share lessons learnt with other health care providers and programme implementing partners.

Methodology:

This was a descriptive cross-sectional study which involved patients enrolled to ART services between May 2007 and April 2009. Data collection involved observation of health providers' performance and retrospective ART and care patients' registers review. During the study period, 611 care and 284 ART patients were attended.

Results:
Majority of patients were adults' aged between 25 to 45 years. Only 4.4% pre ART and 5.6% ART children were enrolled during the study period. Majority of the patients were females 622/895 (69.5%), males had significantly higher mean weight compared to females (mean 53.3 and 46.3 respectively). Most patients reported to be working and were ambulatory. At presentation to the clinic, majority of patients had CD4+T-lymphocytes≤350 and in WHO clinical stages III/IV. Sixteen patients on care died at different times during the study period, contributing to mortality rate of 2.13 per 100 patient-years.

Conclusion:
ART services can successively be provided at health centre level and encourages HIV-infected persons to seek care. However, clinicians need regular clinical mentorship and supportive supervision.

Title:

Tuberculosis –HIV co- infection among patients admitted at Muhimbili National Hospital in Dar es Salaam, Tanzania

Authors:
Kamenju P, Aboud S

Source: Tanzania Journal of Health Research, Jan. 2011, (13:1) 25-31

Objectives:
To describe the clinical presentation and prevalence of TB-HIV co-infection among patients admitted at Muhimbili National Hospital between August 2008 and July 2009 in Dar es Salaam.

Methodology:
Retrospective analysis was performed on 387 TB patients admitted at Muhimbili Hospital Medical ward. For each patient, data on socio-demographic, clinical presentation characteristics and diagnosis of TB were recorded. Data were analyzed using statistical package of social sciences (SPSS) programme.

Results:
Of the 300 TB patients tested for HIV 58.3% were HIV-infected and 56.4% of these were already on antiretroviral therapy (ART) at time of admission. There was significantly higher proportion of deaths among HIV- infected TB patients (29.1% versus 15.2%) than in the HIV un-infected TB patients.

Conclusion:
It is recommended to emphasize on the provision of HIV counseling and testing to all TB patients to ensure proper management and timely initiation of ART in TB-HIV co-infected patients in order to improve the outcome and reduce mortality.

Title: 4

"It is her responsibility":Partner involvement in prevention of mother to child transmission of HIV programmes, northern Tanzania

Authors:

Falnes EF, Moland MK, Tylleskä T, de Paolli MM, Msuya SE, and Engebretsen IM

Source:

Journal of the international AIDS Society 2011, 14:21

Objective:

The study aimed to explore acceptability of the PMTCT programme components and to identify structural and cultural challenges to male involvement

Methodology:

The study was conducted during 2007-2008 in rural and urban areas of Moshi in Kilimanjaro region. Mixed methods were used that included focus group discussions with fathers and mothers, in-depth interviews with fathers, mother and health personal, and a survey of 426 mothers bringing their four-week-old infants for immunization at five reproductive and health clinics.

Results:

Routine testing for HIV of women at the antenatal clinic was highly acceptable and appreciated by men, while other programme components, notably partner testing, condom use, and the infant feeding recommendations, were met with continued resistance. Very few men joined their wives for testing and thus, few men were on PMTCT counseling. The main barriers reported were that women did not have the authority to ask their husbands to test for HIV and testing and counseling centers and the antenatal clinics, were defined as a typical female domains, where men were out of place.

Conclusion:

Deep-seated ideas about gender roles and hierarchy are major obstacles to male participation in the PMTCT programme. Empowering women remains a huge challenge. Empowering men to participate by creating a space within the PMTCT programme that is male friendly should be feasible and should be highly prioritized for the PMTCT programme to achieve its potential.

Title:

Community-based intervention to increase HIV testing and case detection in people aged 16-32 years in Tanzania, Zimbabwe, and Thailand (NIMH Project accept HPTN 043) a randomized study.

Authors:

Sweat M, Morin S, Celentano D, Mulawa M, Singh B, Mbwambo J, Kawichai S, Chingono A, Khumalo-Sakutukwa G, Grey G, Ritchter L, Kulich M, Sadowski A, Coates T

Source:
The Lancet Infectious Disease, 2011,11(7): 2011, 492-493

Objectives:
To assess whether HIV testing could be increased by combination of community mobilization, mobile community-based voluntary counseling and testing (VCT), and support after testing.

Methodology:
The study is underway in ten communities in Tanzania, eight in Zimbabwe and 14 in Thailand. Communities at each site were paired according to similar demographic and environment characteristics, and one community from each pair was randomly assigned to receive community based VCT (CBVCT) plus access to SVCT. Intervention was provided for about three years (2006-09). The primary end point of HIV incidence was pending completion of assessments after the intervention. In this interim analysis, secondary end point of uptake in HIV testing examined difference in characteristics of clients receiving their first HIV test and repeat testing. Analysis was limited to clients aged 16-32 years

Results:
The proportion of clients receiving their first HIV testing during the study was higher in CBVCT communities than in SVCT communities in Tanzania (2341 [37%] of 6250 vs 579 [9%] of 6733), Zimbabwe (5437 [51%] of 10700 vs 602 [5%] of 12150 and Thailand (7802 [69%] of 11290 vs 2319 [23%] of 10033). The mean difference in the proportion of clients receiving HIV testing between CBVCT and SVCT communities was statistically significant.

Conclusion:
CBVCT should be considered as a viable intervention to increase detection of HIV infection, especially in regions with restricted access to clinic-based VCT and support services after testing

Title:
Identifying Programmatic Gaps: Inequities in Harm Reduction Service Utilization among Male and female Drug Users in Dar es Salaam, Tanzania

Authors:
Lambdin BH, Bruce RD, Chang O, Nyandindi C, Sabuni N, Zamudio-Haas S, McCurdy S, Masao F, Ivo Y, Msami A, Ubuguy O, Mbwambo J

Source:
*PlOS ONE,*2013, 8(6): e67062.

Objective:
Assessment of gender inequities in utilization of outreach and MAT (medication Assisted Treatment)

services and evaluate differences in HIV risk behaviors between female and male PWIDs

Methodology:

Routine outreach data collection between December 2010 to mid-August 2012 and baseline data on clients enrolling in methodone from February 2011 to August 2012 were utilized. Binomial regression was used to estimate adjusted relative risk estimates comparing females and males.

Results:

From December 2010 to August 2012, 8578 contacts were made to drug users; among them 1,898 were injectors. A total of 453 injectors were eligible and referred to MAT, of which, 443 were enrolled in treatment. However, regarding total outreach contacts, outreach to PWID, referral to MAT and enrollment in MAT, 8% or less of drug users accessing services were women. In contrast, weighted estimations from surveys suggest that 34% of PWIDS are female, and this approximation is similar to recent population size estimates. Overall, 43% of traditional outreach workers conducting outreach with drug users were female. Though reporting higher level of condom usage, female PWID were more likely to report multiple sex partner, anal sex, commercial sex worker and struggle under a higher burden of addiction, mental disorders and abuse.

Conclusions:

Services have not been mobilized adequately to address the clear needs of females who inject drugs. A clear and urgent need exists for women-centered strategies that effectively engage female PWID into HIV prevention services.

Title:

Acceptability of Medical Male Circumcision and Improved Instrument Sanitation among a Traditionally Circumcising Group in East Africa

Authors:

Siegler AJ, Mbwambo JK, DiClemente RJ

Source:

AIDS Behav 2012(16):1846-1852

Objective:

Assessment of Acceptability of Medical Male Circumcision and improved Instrument Sanitation among a Traditionally Circumcising Group

Methodology:

Cross-sectional study was conducted in 2008 among the Maasai tribe in Northen Tanzania. The study used a geographically stratified, cluster sample design to select 368 eligible participants from 37 area clusters. All data analyses were adjusted to correct for the clustered hierarchical nature of the data and conducted in STATA 11.2

Results:
Most respondents had been circumcised in groups. With 56% circumcised with a shared knife rinsed in water between initiates. Contrasting practice, 88% preferred use of medical supplies for their son's circumcisions. Willingness to provide MMC to sons was 28%; however, provided the contingency of traditional leadership support for MMC, this rose to 84%.

Conclusions:
MMC provides the best combination of safety and certain HIV prevention efficacy. However, because circumcision is an important rite of passage in many cultures, changing current practice will require balancing traditional and the benefits of MMC. Our results indicate that support from traditional leaders can be more important than adherence to tradition itself. Thus, persuading traditional leaders of the value of MMC, and involving them in program design and implementation.

Title:
Adherence to Combination Prophylaxis for prevention of Mother-to-child Transmission of HIV in Tanzania

Authors:
Kirsten I, Sewangi J, Kunz A, Dugange F, Ziske J, Jordan-Harder B, Harms G, Theuring S

Source:
PLOS ONE 2012, 6(6): e21020.

Objective:
The study aimed at analyzing adherence to combination prophylaxis under field conditions in a rural health facility in Kyela, Tanzania

Methodology:
A cohort of 122 pregnant women willing to start combination prophylaxis in Kyela District Hospital was enrolled in an observation study. Risk factors for decline of prophylaxis were determined, and adherence levels before, during and after delivery were calculated. In multivariate analysis, identified risk factors for declining pre-delivery prophylaxis included maternal age below 24 years, no income-generating activity, and enrolment before 24.5 gestational weeks.

Results:
Women who stated to have disclosed their HIV status were significantly more adherent in the pre-delivery period than women who did not. In the intra- and postpartum period, rather low drug adherence rates during hospitalization indicated unsatisfactory staff performance. Only ten mother-child pair were at least 80% adherent during all intervention phases; one single mother-child pair met a 95% adherence threshold.

Conclusion:

Achieving adherence to combination prophylaxis has shown to be challenging in this rural study setting. Our findings underline the need for additional supervision for PMTCT staff as well as for clients, especially by encouraging them to seek social support through status disclosure. Prophylaxis uptake might be improved by proponing drug intake to an earlier gestational age. Limited structural conditions of a healthcare setting should be taken into serious account when implementing PMTCT combination prophylaxis.

Title:

Feasibility of using Flash-heated Breast-milk as an infant Feeding Option for HIV exposed, uninfected infants after six Months of age in Urban Tanzania.

Authors:

Chantry CJ, Young SL, Rennie W, Ngonyani M, Mashio C, Israel-Ballard K, Peerson J, Nyambo M, Matee M, Ash D, Dewey K, Koniz-Booher P

Source:

J Acquir Immune Defic Syndr: 2012 May 1; 60(1):43-50

Objective:

To determine among HIV infected mothers, the feasibility and protocol adherence of FH expressed breast-milk after 6 months of exclusive breastfeeding.

Methodology:

Prospective longitudinal study, involved 101 HIV-infected breastfeeding mothers from Dar es salaam, Tanzania. Peer counselors provided in-house counseling and support on infant feeding from 2 to 9 months postpartum. Mothers were encouraged to exclusively breastfeeding for 6 months followed by FH expressed breastmilk, if her infant was HIV negative. Clinic-based staff measured infant growth and morbidity monthly and mothers kept daily logs of infant morbidity. FH behavior was tracked until nine months postpartum using daily logs, in –home observations, clinic and home based surveys. Bacterial cultures of unheated and heated milk samples were performed

Results:

Thirty-seven of 72 eligible mothers (51.4%) chose to flash-heat. Medium (range) frequency of milk expression was 3 (1-6) times daily and duration of method use on-study was 9.7 (0.1-15.6) weeks. Mean (SD) daily milk volume was 322 (201) mL (range 25-1120). No heated and 32 (30.5%) unheated samples contained bacterial pathogens

Conclusion:
FH is a simple technology that many HIV-positive women can successfully use after exclusive breastfeeding to continue to provide the benefits of breast-milk while avoiding maternal-to-child transmission associated with non-exclusive breastfeeding. Based on these feasibility data, a clinical trial of the effects of FH on infant health outcomes is warranted

Title:
An overview of HIV prevention Interventions for people who inject Drugs in Tanzania

Authors:
Ratliff EA, McCurdy AS, Mbwambo JK, Lambdin HB, Voets A, Pout S, Maruyama H, Kilonzo GP

Source:
HINDAWI, 2013; id 183186:6

Objective:
To describe how the Tanzania AIDS prevention program (TAPP), medecins du monde France (MdM-F), and other organizations have been at the forefront of addressing harm reduction interventions among IDUs in Africa.

Methodology:
HIV prevention among PWIDs was improved by extending services and programs to reach them and others at risk for HIV. Also, developing additional programs to strengthen existing programs and expand activities to include structural interventions and address vulnerabilities that increase HIV risk for all Tanzania.

Results:
Programmes have been developed to help vulnerable communities speak for themselves. In collaboration with open air communication, PWUDs have been trained to use firm and music as advocacy tools. Clients produced the music video, “inawezekana” calling for an end to the HIV epidemic in the country through harm reduction services.

Conclusion:
Looking towards the future organizations working with PWID/PWUD should strive to integrate inputs from the community during program planning stages to develop well targeted, streamlined programs that address the specific experiences and needs of that community

Annex 1

The Ministry of Health and Social Welfare through National Aids Control Programme recognizes the individual contributions from the following expert and consultants, who were involved in the preparing and finalization of report:

1. Dr. Angela Ramadhani	Programme Manager, NACP
2. Dr. Geoffrey. Somi	NACP- Epidemiology
3. Dr. Robert Josiah	NACP- Care and Treatment
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5. Dr. Samwel Sumba	TACAIDS,Department of Monitoring and Evaluation
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8. Mrs Levina Lema	Prevention of Mother to Child Transmission
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14. Dr.Werner Maokola	NACP- Care and Treatment
15. Dr. Denis Mzaga	NACP- Epidemiology
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17. Mr. Bernard Rabiel	NACP- Epidemiology Unit
18. Mr. Thomas Zakayo	Prevention of Mother to Child Transmission
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21. Nancy Msobi	Freelance
22. Dr.Mathias Abuya	NACP- Epidemiology Unit
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25. George Laizer	NACP- Epidemiology Unit
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