

NATCoD

General Introduction

HIV/AIDS/STI and Tuberculosis (TB) are one of the greatest public health threats that Eritrea faces today. HIV/AIDS is fatal, strikes population in the most productive ages and usually affects both the infected and the family. STIs are silent epidemic affecting the sexually active & productive age group. They are of public health importance diseases by themselves and predisposing factors to HIV epidemic. TB affects disproportionately the poor, often ends in death or serious disability, causes severe economic loss and exacerbates poverty.

Whereas we have been successful in mobilizing resources and carrying out many activities to combat these scourges, there remain many challenges for the division to face. The relationship between these three disease entities is scientifically well established. The major challenge is thus how to integrate the activities that are tailored for the comprehensive care & treatment and the prevention & control of these diseases.

The Government of the State of Eritrea is committed to implement multi-sectoral strategies that will confront silence, denial, stigma and discrimination associated with HIV/AIDS/STI and TB. The policy of the HIV/AIDS/STI programs clearly asserts the involvement of ministries, civil society, and people living with HIV/AIDS, vulnerable groups, women and young people to fight HIV/AIDS and STIs.

Prevention remains to be the main tool of responding to HIV/AIDS and TB infections. However, prevention must be integrated and go hand-in-hand with holistic care, support, and treatment for all of the programs.

The division accomplishes its tasks through its four units and by working with different partners within and outside the Ministry of Health with the principle of multisectoral approach to fight HIV/AIDS/STI and Tuberculosis diseases. The units of NATCoD are:

1. HIV/AIDS Counselling & Prevention Unit,
2. HIV/AIDS/STI Care & Support Unit,
3. Tuberculosis (TB) control Unit, and
4. Epidemiology & Monitoring Unit.

As a result of all the efforts made in collaboration with all partners the HIV situation in Eritrea is showing remarkable success. The prevalence of HIV and syphilis in the 2009 round of ANC sentinel surveillance was 1.31% and 0.62% respectively, which is remarkably lower than the previous rounds of ANC sentinel surveillance surveys. The 2010 Eritrean Population Health Survey also showed an adult HIV prevalence of 0.93%. Further more data derived from VCT clients, PMTCT clients and blood donors are continually showing reduction in HIV and syphilis positivity rates. Knowledge about HIV/AIDS is still maintained at high level, condom distribution is also increasing

recently, PLWHA put on ART are averaging 1000 per year. Although all these are encouraging, hard work is still needed to control the epidemic further.

The performance report of 2011 of the various units follows. Though the organization of the division is indicated as above, for the purpose of logical flow of reading & to avoid repetition the report is organized under two headings which are the HIV/ADS/STI Control Program and the TB Control Program

Vision, Mission and Goals of NATCoD:

- Vision: To maintain and sustain a healthy population that is free of HIV/AIDS, Sexually transmitted infections and tuberculosis.
- Mission: To prevent and control HIV/AIDS, Sexually transmitted infections and tuberculosis so that they are no longer of public health problems in the country

Goals of NATCOD:

- To halt the transmission of TB and HIV/STI infections nationwide,
- Improve the quality of life of people living with the diseases and contribute to the attainment of health related Millennium Development Goals.
- To mitigate the economic and social effect of HIV/AIDS in people infected and affected by the disease

i) HIV/AIDS/STI

Introduction

The activities of the HIV/AIDS and STI program are implemented mainly by the HIV/AIDS Counseling & Prevention Unit, the HIV/AIDS/STI Care & support Unit and by the Epidemiology & Monitoring Unit. The HIV/AIDS Counseling & Prevention Unit has been actively working to strengthen existing VCT/PMTCT sites in order to meet its targets set for the year. While the main function of the HIV/AIDS/STI Care & support Unit is to deal with the increasing demand of care and support requirements for people infected and affected with HIV and AIDS, and the overall monitoring, and evaluation of the program is followed by the Epidemiology and Monitoring Unit.

The overall objectives of the HIV/AIDS/STI program are:

- To halt the transmission of HIV/STI infections nationwide,
- Improve the quality of life of people living with HIV/AIDS and contribute to the attainment of health related Millennium Development Goals.
- To mitigate the economic and social effect of HIV/AIDS in people infected and affected by the disease

Highlight of planned Activities

- Expansion of VCT and PMTCT sites.

- Training of health workers on VCT, PMTCT, ART and early infant and child diagnosis
- Review of VCT Guideline
- Commemoration of World AIDS Day
- Develop early infant and child diagnosis manual for health worker
- Implement newly revised ART guideline
- Revision of registers and reporting formats
- Conducting supportive supervision
- HIV/AIDS and TB integration
- Finalize GF round 8 and 10 negotiations
- Routine data collection, entry, analysis & dissemination of HIV/ AIDS/ STI & TB infections: AIDS/STI/TB cases report, VCT report, PMTCT report, ART report, HBC report, blood transfusion donors HIV screening report and other relevant reports from partners etc.
- Produce reports and provide data as requested by NATCoD and various partners.
- Assist in developing UNGASS and universal access country reports
- Compile necessary data for the joint MOH/GF indicators required by GF LFA every six months
- Assist the GF data quality Auditing team in assessing HIV/AIDS/ STI and TB data quality and validity
- Conduct 2011 ANC, CSW, Truck drivers and TB patients HIV and syphilis survey.
- Participate in M & E officers training in zones

Implementation Status

- The number of VCT and PMTCT sites increased from 173 to 239 and from 131 to 198, respectively
- VCT guidelines reviewed and ready for printing
- World AIDS Day commemorated under the theme of *'the three zeros'*
- Supportive supervision to Zoba Maekel, Gash barka, Anseba and SRSZ conducted
- Training of all counselors for early infant and child diagnosis in zoba Maekel, Dehub, Anseba, NRSZ and Gash Barka zones. :
- 168 new counselors were trained in six zones; Anseba 32, Dehub 32, Debubawi Keih Bahri 30, Semenawi Keih Bahri 32, Maekel 23 and Gash Barka 19.
- In collaboration with UNICEF, early infant diagnosis manual for health workers was developed and a consensus workshop was conducted to incorporate comments of stakeholders. The comments are being incorporated to finalize the manual. Its printing is delayed in the process carried by the MOH administration and finance.
- Based on the revised ART guideline, all ART sites are instructed to start ARV at higher CD4 count.
- In order to start negotiations on the implementation of phase 1 round 10 and phase 2 round 8 global fund grant, the clarifications requested from the secretariat were sent to the global fund.

- Routine data collection, entry, analysis & dissemination of HIV/ AIDS/ STI & TB infections: AIDS/STI/TB cases report, VCT report, PMTCT report, ART report, HBC report, blood transfusion donors HIV screening report and other relevant reports from partners was done.
- Produced reports and provided data as requested by NATCoD and various partners.
- Assisted in developing UNGASS and universal access country reports
- Compiled necessary data for the joint MOH/GF indicators required by GF LFA every six months.
- Assisted the GF data quality Auditing team in assessing HIV/AIDS/ STI and TB data quality and validity.
- Conducted the 2011 ANC sentinel surveillance, CSW, Truck drivers and TB patients HIV and syphilis surveys.
- Participated in M & E officers training in zones

Discussion and Analysis

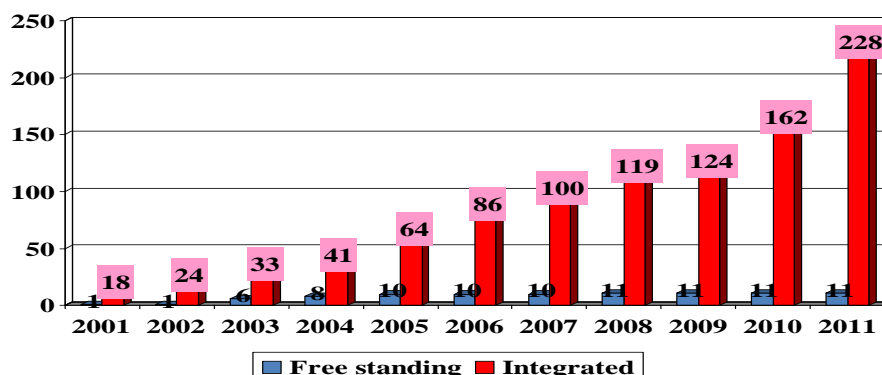
VCT service delivery:

There are two types of VCT sites in Eritrea. These are the 11 free standing and 228 integrated VCT sites which are located inside health facilities. Both these sites are staffed with trained counselors and operate according to the national guidelines of VCT.

Newly Opened VCT Sites by Year and Type, 2001 – 2011

Year	Integrated	Free standing	TOTAL
2001	18	1	19
2002	6	0	6
2003	9	5	14
2004	9	2	11
2005	23	2	25
2006	21	0	21
2007	14	0	14
2008	19	1	20
2009	5	-	5
2010	38	-	38
2011	66	-	66
TOTAL	228	11	239

Cumulative number of VCT sites by year and type, 2001- 2011



In 2011 alone 66 new integrated VCT sites were opened,

Distribution of VCT sites by zone and type in 2011

Zone	Hospital	H.C	H.S.	F. Standing	Total
Maekel	11	4	22	2	39
Debub	6	10	49	3	68
Gash/Barka	5	10	28	3	46
Anseba	2	9	22	1	34
NRS	4	10	21	1	36
SRS	2	2	11	1	16
Total	30	45	153	11	239

Currently there are 239 VCT sites in the country. In this year alone 66 VCT sites were opened. The 228 VCT sites are integrated in health facilities: 30 in hospitals, 45 in health centres and 153 in health stations while 11 of the VCT sites are free standing VCT which give only VCT services. The largest number of VCT sites are located in Debub (68) followed by Gash Barka (46) and Maakel (39) zones. The remaining 86 VCT sites are distributed in Anseba (34), NRSZ (36) and SRSZ has 16 VCT sites.

The number and distribution of VCT sites are expanding from time to time. In the last 12 years around half million people were tested voluntarily for HIV to know their status. In the year 2011 alone, a total of 87,079 people were tested for HIV in the 239 VCT sites and received their HIV results. This is a good indication of increased risk perception, reduction of self imposed stigma and initiation of behavior change exhibited in the

population and an entry point to care and support of those affected and infected by HIV/AIDS.

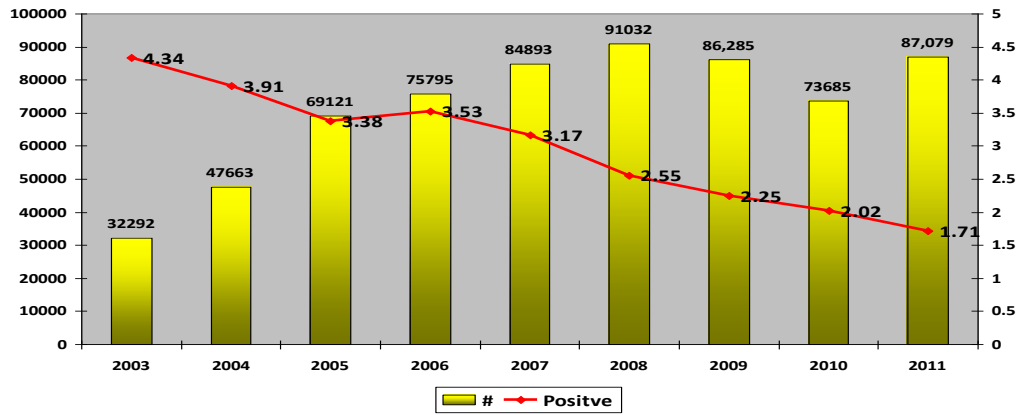
Despite the opening of new VCT sites, the number of clients attending VCT sites was showing a decreased trend in the last two years. The number of people tested in 2009 was 86,285 while the number reduced to 73,685 in 2010 with a reduction of 15% from that of the year 2009 but increased to 87,079 clients in 2011. Although the reasons for reduction should be investigated systematically, the increased uptake of PMTCT could be reasonably cited as one of the reasons.

As indicated in the following table and graph, the overall HIV positivity rate in VCT clients in 2011 was 1.71% lower than that of 2010 (2.02 %) and 2009 (2.25%). This could be due to the overall reduction of HIV infection in Eritrea and/ or expansion of VCT services to rural and remote areas where HIV prevalence is lower than in the urban areas.

Yearly performance of VCT Services 1999 – 2011

YEAR	VCT clients	Reactive	Prevalence	Remarks
1999	1510			
2000	2010			
2001	2227			
2002	10659	1213	11.38%	The prevalence is high in this year because the results of positive of volunteers and patients who came for diagnosis was mixed.
2003	32292	1402	4.34%	
2004	47663	1866	3.91%	
2005	69121	2334	3.38%	
2006	75795	2677	3.53%	
2007	84,893	2694	3.17%	
2008	91,032	2324	2.55%	
2009	86,285	1942	2.25%	
2010	73,685	1490	2.02%	
2011	87,079	1492	1.71%	

of VCT Attendees & HIV Positivity rate, 2003 –2010



VCT Clients HIV positivity rates by zone & hospitals in 2011

	VCT done	HIV reactive	HIV positivity
Maekel	29238	846	2.89%
Debub	21087	155	0.74%
Anseba	10349	110	1.06%
NRSZ	7319	62	0.85%
SRSZ	3251	18	0.55%
Gash Barka	12968	156	1.20%
Sembel PC	1946	61	11.86%
OMH	147	1	0.68%
OPH	365	36	10.2%
Halibet	312	37	11.86%
OMSH	97	10	10.31%
Total	87,079	1492	1.71%

Like the previous years higher number of VCT service was provided in Maekel and Debub zone with VCT clients of 29238 and 21087 respectively, that comprise about 58% of the total 87,079 VCT clients served in this year. In the other zones the number and proportion of VCT clients served is low even though the number of VCT sites are adequate. Therefore, special focus will be given to increase the number of VCT clients in these zones.

The HIV positivity rate in VCT clients was higher in Maekel which is 2.89% followed by Gash Barka zone (1.20%). The lowest prevalence was recorded in SRSZ zone (0.55%) and Debub zone (0.74%) followed by NRSZ (0.85%) and Anseba (1.06%).

VCT Clients in zones VS large hospitals located in Asmara

The overall VCT tests done in zonal health facilities by end of 2011 is 64,212 or 96.7% of the total VCT tests done in the country and 1.6% became HIV positive, while the VCT tests done in the big and referral hospitals located in Asmara are only 2867 or 3.29% but 5.06% became HIV positive, this could be due to the mixing up of VCT clients with patients who have symptoms and signs of AIDS who came to these hospitals for clinical diagnosis. These phenomenon is seen every year and is increasing the HIV positivity rate in the over all VCT clients. Therefore, we need to improve the performance and quality of VCT services in these hospitals. Particularly we need to assess the deployment of counselors and VCT performance in these hospitals.

VCT clients & HIV positivity rates in zones & National Referral Hospitals in 2011

Site	VCT clients	Reactive	% positive
All zones	84,212 (96.71%)	1347	1.6%
National Ref. hospitals	2867 (3.29%)	145	5.06%
Total VCT clients	87,079	1492	1.71%

VCT clients by sex

VCT clients' sex distribution was 55.3% males and 44.7% females. Thus, males are seeking VCT services more than females.

However, the HIV positivity rate in VCT clients by sex was 2.07% in females and 1.43% in males. This result was exhibited every year of its kind with high HIV positives in females than in males and shows the trend of feminization of HIV/AIDS.

VCT clients and their HIV positivity rate by sex in 2011

Sex	Tested at VCT	HIV positive	HIV positivity percentage
Male	48,144 (55.3%)	687	1.43%
Female	38,938 (44.7%)	805	2.07%

Total	87,079	1492	1.71%
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VCT clients and their HIV positivity rate by sex and zoba

As shown in the following table, HIV positivity rate in all zones and in hospitals located in Asmara VCT clients is higher in females than in males. The highest HIV positivity rate by zones in females was observed in Maakel (3.32%) and Gash barka zone (1.53%). In males the highest was in Maakel zone which was 2.54% and Gash Barka zone 1.04% while it is low in the remaining zones.

VCT clients and their HIV positivity rate by sex and Zoba in 2011

Zone	Total VCT done	Males		Females	
		VCT done	HIV positivity rate	VCT Done	HIV positivity rate
Maekel	29,238	16,022	2.54%	13,216	3.32%
Dehub	21,087	11,564	0.54%	9523	0.96%
Anseba	10,349	5628	0.94%	4721	1.21%
NRSZ	7,319	4229	0.61%	3090	1.17 %
SRSZ	3,251	2404	0.33%	847	1.18%
Gash Barka	12,968	7015	1.04%	5953	1.53%
Halibet	312	166	12.05%	146	11.64%
Sembel PC	1,946	973	2.47%	973	3.80%
OPH	365	85	15.29%	280	8.21%
OMH	147	12	8.33%	135	0
OMSH	97	43	13.9%	54	7.41
Total	87,079	48,144	1.43%	38,938	2.07%

PMTCT service delivery:

NATCoD had started opening of PMTCT testing centres for pregnant women in 2002 as a pilot project to enable pregnant women to know their HIV status and enable those found HIV positive to prevent the transmission of HIV to the new born as well as plan for their future wellbeing. Up to 2004 the availability of PMTCT testing centres was limited only in Zoba Maekel & Dehub. In 2006 PMTCT centres were scaled up to all zones. Since then PMTCT testing centres were expanded in most hospitals, all health centres and some health stations in all zones. As a result to-date there is a total of 198 PMTCT testing centres in the country integrated in ANC/MCH clinics all over the country. This year alone a total of 67 new PMTCT sites were opened

The distribution of PMTCT sites are 10 in hospitals, 49 in health centres, 134 in health stations and 5 in free standing sites. This means out of the total 273 health facilities available in the country, 198 health facilities or 83.5% are providing PMTCT services.

Newly Opened & cumulative PMTCT sites by year, 2002 – 2011

Year	Newly opened PMTCT sites	Cumulative PMTCT sites
2002	3	3
2003	0	3
2004	7	10
2005	29	39
2006	19	58
2007	15	73
2008	16	89
2009	4	93
2010	38	131
2011	67	198

Distribution of PMTCT sites by zone and facility by September 2011

Zone	Hospital	H.C	H.S.	F. Standing	Total
Maekel	4	6	13	0	23
Dehub	3	10	46	2	61
Gash/Barka	0	12	24	2	38
Anseba	0	9	19	1	29
NRS	3	10	21	0	34
SRS	0	2	11	0	13
Total	10	49	134	5	198

PMTCT services provision:

In the year 2011, the total pregnant women tested for PMTCT were 66,986 which is the highest since the beginning of the service. Out of the 66,986 pregnant women tested 297 women became HIV positive, bringing the HIV positivity rate in PMTCT to 0.44% which is lower of that of last year.

In this reporting period women who attended first ANC in the PMTCT sites were 70,215. Thus, the PMTCT uptake in the PMTCT sites was high at 95.4% as in the previous period. This is good indication of the effectiveness of the PMTCT sites and shows that if we increase our PMTCT sites we can reach more pregnant women to make mother to child transmission of HIV to its very low level.

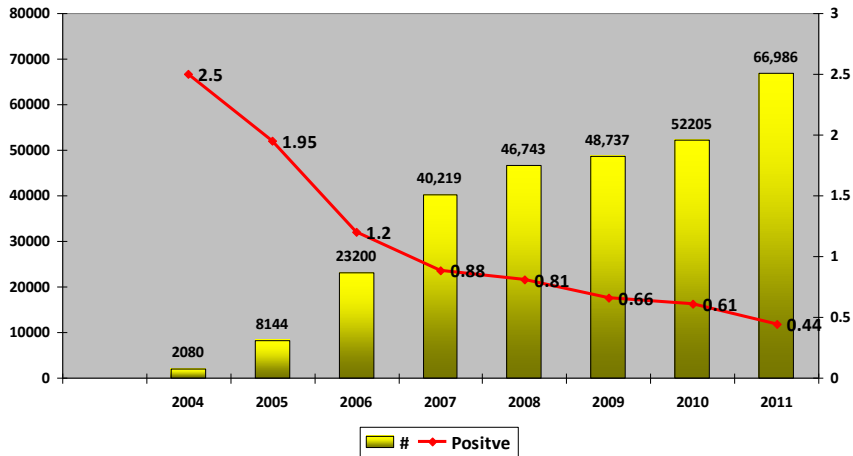
Taking 4% of annual expected rate of pregnancy, around 144,000 women are expected to become pregnant in a year. Therefore, out of the total 144,000 expected pregnant women 66,986 women were tested for PMTCT. This makes the PMTCT coverage in 2011 (66,986 /144,000) to be 46.5% which is higher than the previous years. This estimation may not be exact and we shall see what it will look like by use of spectrum, a system which is now commonly used globally.

As it can be seen from the following table, the number of pregnant women tested for PMTCT has increased from 8,144 in 2005 to 66,986 in 2011; this is about eight fold increase in six years. In this year, 17898 pregnant women were tested in Gash Barka zone which is the highest from all zones, followed by Debub zone (16,302) and Anseba zone (11,825). Lowest PMTCT clients were served in SRSZ (1978) and NRSZ (7324)

PMTCT clients HIV positivity rates, 2004 – 2011

Year	Total PMTCT tested	HIV positives	HIV positivity in PMTCT clients	HIV positive Women who took ARV
2004	2080	52	2.5%	30
2005	8144	159	1.95%	97
2006	23,200	275	1.2%	73
2007	40,219	353	0.88%	369
2008	46,743	380	0.81%	423
2009	48,437	318	0.66%	464
2010	52,205	321	0.61%	528
2011	66,986	297	0.44%	561

of PMTCT Attendees & HIV Positivity rate, 2004 –2011



As it can be seen from the above table and graph, HIV positivity rate in PMTCT clients was decreasing from year to year. However, since this is a voluntary testing affected by volunteer bias it is difficult to reach into conclusion from this data. But still its comparison over the years will give us valuable information.

As it can be seen from the above and following table, the overall HIV positivity rate in PMTCT clients in 2011 was 0.44% which is lower than last year which was 0.61%. Relatively higher positivity rate is observed in Maekel which became 1.11%. In all other zones except the referral hospital and Sembel poly clinic it is still below 1% .The lowest being in Dehub and NRSZ zone which is 0.24% and 0.23%, respectively.

PMTCT clients HIV positivity rates by zone in 2011

Zone	PMTCT test done	HIV reactive	HIV positivity rate	Women who took ARV
Maekel	11022	122	1.11%	140
Dehub	16302	39	0.24%	53
Anseba	11825	34	0.29%	53
Gash Barka	17898	69	0.39%	57
NRSZ	7324	17	0.23%	17
SRSZ	1978	6	0.30%	5
OMH	35	1	2.8%	217
Sembel PC	602	9	1.49%	26
Total	66,986	297	0.44%	561

ARV prophylaxis coverage in PMTCT in 2011

In 2011, a total of 561 HIV positive pregnant women took ARV prophylaxis for PMTCT. Taking 4% of annual expected rate of pregnancy, annually 144,000 women will get pregnant. By taking 1.31% of HIV prevalence in pregnant women we could have 1834 women infected with HIV that require ARV prophylaxis in a year. Therefore, the coverage for ARV prophylaxis in PMTCT for 2011 is higher than the previous year but still very low at 561/1834 (30.6%).

A total of 304 babies were born alive from HIV positive mothers in health facilities. Hence, according to the national guidelines 280 of them, that is 92.1%, had taken ARV prophylaxis to prevent vertical transmission of HIV infection.

Moreover, 174 babies born from HIV positive mothers were followed and tested for HIV at 18 months to know their HIV status out of which 12 became HIV positive. This makes mother to child transmission of HIV to stand at 6.9%. However, evidence indicates 34 % of HIV infected infants die before reaching their first year and 50% die before reaching their second year. In order, to prevent the high mortality of children, introduction of early infant diagnosis is of paramount importance in identifying HIV infected children early and providing the necessary care as early as possible. The program in collaborations with its partners is striving to kick start the program in early 2012.

Babies born from HIV positive mother who took Bactrim prophylaxis:

In the year 2011 a total of 304 babies were born alive from HIV positive mother hence according to the national guidelines 1162 babies were given Bactrim prophylaxis to prevent opportunistic infections, this is only 53.3% coverage of bactrim prophylaxis. This shows that there is low follow up and coverage in provision of bactrim prophylaxis in infants born from HIV positive mothers.

Summary of PMTCT out comes in 2011

PMTCT out comes Indicator	Numerator	Denominator	PERCENT
PMTCT coverage in 2011	66,986	144,000	46.5%
ARV prophylaxis coverage in PMTCT	561	1834	30.6%
Transmission of HIV from mother to child in PMTCT	12	174	6.9%
Babies who took ARV	280	304	92.1%
Babies who took bacterim prophylaxis	162	304	53.3%

Condom Sales and Distribution as Prevention to HIV & STI:

Condom distribution and appropriate use is one of the main methods to reduce the risk of HIV & STI infections in sexually active people. Eritrea has been aware of the importance

of condoms and has considered it as one of the main strategies for the prevention of HIV and STI.

In the public health sector, condoms are distributed free of charge through VCT/PMTCT sites, family planning clinics, STD clinics etc. On the private sector, condoms are distributed by ESMG (Eritrean Social Marketing Group) with a nominal fee through multiple outlets that reaches about 8000 that include: hotels, bars, kiosks and vendor machines.

The numbers of male condoms distributed in the year 2011 were 6,383,856, which looks more than the number distributed in the previous four years (look the following table). This is largely due to high condom distribution by ESMG which distributed 5,636,640 condoms. However, male condom distribution to zones by MOH outlets was only 747,216, pieces.

Trend of male condoms sales & distribution by MOH & ESMG, 1998 –2011

Year	By MOH	By ESMG	Total
1998	2997760	1825488	4823248
1999	2725792	2932272	5658064
2000	4056464	4550432	8606896
2001	3520338	5267849	8788187
2002	5330400	6312797	11643197
2003	6349134	6073200	12422334
2004	2905110	3300000	6205110
2005	2052040	3960180	6012220
2006	2500000	3899760	6399760
2007	476,783	4,300,871	4,777,654
2008	1,829,232	3,232,440	5,061,672
2009	2,421,216	3,345,720	5,766,936
2010	186,912	5,625,960	5,812,872
2011	747,216	5,636,640	6,383,856

As could be seen in the above table, most of the male condoms were distributed through ESMG. MOH’s condom distribution is negligible and needs strong attention by all the concerned authorities in the MOH

Female condom distribution:

In 2011 the total female condoms distributed to zones by MOH were 21,100.

Female condom distribution by year 2003 – 2011

Year	Female condom distributed	Remarks
2003	5000	
2004	20,000	
2005	27,000	
2006	10,000	
2007	5192	
2008	137,300	
2009	35,180	
2010	0	There has not been any distribution because zones had enough condoms in stock.
2011	21,100	

Sexually transmitted infections

In Eritrea a syndromic and etiologic method is used to diagnose and treat STI cases and the main source of data for STI is a health facility based report that is compiled by HMIS. In the year 2011, a total of 5310 STI cases were reported from health facilities across the country. Out of the total, 2857 cases were reported from hospitals and health centers diagnosed by etiologic method while the rest 2453 STI cases were reported from health stations using syndromic approach of STI diagnosis.

In this year STI report has shown an increase. However, it is believed that there is still under reporting and non-reporting in STI cases. Moreover, it is known that many STI cases used to visit pharmacies for drug prescription and self treatment due to self imposed stigma. Therefore, the actual numbers of people who are infected by STI could be more than it is reported.

As the following table illustrates, this year the highest STI cases from hospitals and health centres were reported from National referral hospitals (878), Debub (678), Gash Barka (484) and Maekel (387).

STI cases in hospitals and health centers using etiological approach by zones, in 2011

Zone	STI cases
Anseba	176
Debub	678
SRSZ	26
Gash Barka	484
Maekel	387

NRSZ	228
National referral hospitals	878
Total	2857

All STI cases by zones in 2011

Zone	STD by etiologic diagnosis	Male urethral discharge	Vaginal discharge	Genital ulcer disease	Total
Anseba	176	123	127	99	525
Debub	678	47	416	42	1183
SRSZ	26	4	14	144	188
Gash Barka	484	193	237	284	1198
Maekel	387	62	346	185	980
NRSZ	228	9	74	47	358
National referral hospitals	878	0	0	0	878
Total	2857	438	1214	801	5310

As it can be seen from the above table, over all by both diagnostic approaches highest STI cases are reported from Gash barka zone (1198), Debub zone (1183) and Maekel zone (980), while lowest cases are reported from SRSZ (188) and NRSZ (358) with Anseba zone in between (525) cases). The same table shows 1214 are vaginal discharge and 801 are genital ulcer diseases.

STI cases in health stations diagnosed using syndromic approach by years 2004 –2011

STD report from health stations by syndromic approach 2004 – 2011

Year	Male urethral discharge	Vaginal discharge	Genital ulcer disease	Total
2004	233	1026	1185	2444
2005	334	1461	1143	2930
2006	358	1530	723	2611
2007	314	1621	984	2914
2008	407	1659	1047	3113
2009	313	1418	719	2450
2010	290	1121	607	2018
2111	438	1214	801	2453

Yearly total STI Cases 2001 – 2011

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Hospitals & HCs*	3175	3275	2934	2554	2610	2620	3007	3561	2875	2326	2857
HSs**	1529	1410	1104	2444	2930	2611	2914	3113	2450	2018	2453
Total	4704	4685	4038	4998	5540	5231	5921	6674	5325	4344	5310

*HCs= Health centers **HSs= Health stations

In the last two years, the annual number of health facility based STI cases report was being reduced from year to year with some fluctuation in between. Thus, STI cases are being steadily stabilizing from year to year. This is a good indication for behavior change and condom use. However, as it is a health facility based report and there is a great chance of miss diagnosis of STI and underreporting especially those who seek treatment in pharmacies. The 2003, 2005, 2007 and 2009 sentinel surveillances carried out in pregnant women show syphilis prevalence of 1.6%, 2.4%, 1.12% and 0.62%, respectively. Therefore, this could be a good estimate to know the actual prevalence & trend of STI in the country rather than the monthly and annual report of STI.

Blood transfusion screened for HIV, syphilis, HBV and HCV markers

In the year 2011 a total of 10,095 blood units were collected and screened for HIV, syphilis, HBV and HCV markers by the National Blood Bank and distributed to hospitals in the country. Out of the total collected and screened blood units 9230 (91.43%) were from voluntary blood donors and rest 865 (8.57%) were from replacement blood donors. In the voluntary blood donors HIV and syphilis positivity rates were 0.043% and 0.26%, respectively while in the replacement blood donors both HIV and syphilis prevalence were 0.116% and 0.69%, respectively.

Blood donors tested for HIV & their HIV positivity rate by 2011

Type of donors	Voluntary blood donors	Replacement blood donors	Total
Total Donors	9230 (91.43 %)	865 (8.57%)	10,095
HIV positivity	4 (0.043%)	1 (0.116%)	5 (0.05%)
Syphilis Positivity	24 (0.26%)	6 (0.69%)	30 (0.29%)

Blood transfusion tested for HIV & their HIV positivity rate 1999 – 2011

Year	Voluntary donors		Replacement donors		Total Blood tested for HIV
	No	Positivity rate	No	Positivity rate	
1999	6085	1.6%	1366	4.6%	7451(100%)

2000	7141	1.4%	1019	3.6%	8160(100%)
2001	2427	0.5%	1158	2.6%	3585(100%)
2002	2799	0.5%	1131	1.5%	3930(100%)
2003	2608	0.2%	1637	0.3%	4245(100%)
2004	2565	0.2%	1523	0.3%	4088(100%)
2005	2832	0.16%	2020	0.18%	4852(100%)
2006	4259	0.14%	1723	0.58%	5982(100%)
2007	6160	0.14%	1521	0.55%	7681 (100%)
2008	7208	0.11%	1529	0.33%	8737 (100%)
2009	7600	0.039%	1731	0.23%	9331(100%)
2010	6563	0.04%	982	0.4%	7545 (100%)
2011	9230	0.043%	865	0.116%	10,095(100%)

All blood donors are first screened by history taking for their prior risk of HIV infection, syphilis and hepatitis through a standardized risk assessment format and then all blood taken from donors with low risk is screened for the four biological markers before transfusion. This enables the NBTS the use of blood free from HIV and other infectious diseases.

AIDS cases and deaths

In the year 2011, only 1029 AIDS cases and 139 AIDS deaths were reported from health facilities in the country. Reduction of AIDS cases and AIDS deaths could be attributed to ARV treatment of PLWHA.

AIDS cases and deaths reported by zones & referral hospitals by 2011

Zone	AIDS cases	AIDS cases death
Anseba	75	6
Debub	186	13
SRSZ	20	3
Gash Barka	52	12
Maakel	467	62
NRSZ	20	6
National referral hospitals	209	37
Total	1029	139

Number of AIDS cases reported in by age group

The number of AIDS cases reported by age group in 2011 shows that 5.2% of the cases are in under-five years old children and the remained 94.8 % are in above five years old people mostly adults. As it shown in the following table in 2003 about 8.7% of the AIDS cases reported were in under-five children which were the highest in the last eight years. In average in the last five years about 6% of all reported AIDS cases were in under-five aged children. This health facility based AIDS case load in under-five children

corresponds with the percentage of children on ART which was about 6% for this year and last year.

Trend in AIDS cases by age group, 2003 - 2011

Year	Number of under 5 years AIDS cases	Percentage of total	Number of above 5 AIDS cases reported	Percentage of total	Total
2003	157	8.7%	1653	91.3%	1810
2004	135	6.3%	1994	93.7%	2129
2005	202	6.7%	2809	93.3%	3011
2006	206	7.8%	2440	92.2%	2646
2007	108	5.55%	1835	94.45%	1943
2008	110	5.33%	1952	94.66%	2062
2009	92	5.54%	1566	94.45%	1658
2010	71	4.86%	1388	95.13%	1459
2011	54	5.2%	975	94.8%	1029

Number of AIDS deaths, by 2011

In 2011 only 139 deaths due to AIDS were reported from health facilities, as it can be seen from the following table, the number of AIDS deaths was also decreasing from year to year in the last several years.

From the total 139 AIDS death reported in this year, 9 deaths (6.5%) have occurred in children under-five years old, while the remaining 130 (93.5%) of the AIDS deaths were in above five years old people. In average in the last eight years about 8.5% of all AIDS deaths reported from health facilities were in under-five age children, these shows that children are receiving a big toll of the AIDS burden in the country. In the last eight years, the highest AIDS deaths in under-five children was in 2005 which was 11.1% of the total AIDS deaths.

Number of AIDS deaths by age group, 2003 – 2011

Year	Number of under 5 years AIDS deaths reported	Percentage of total	Number of above 5 AIDS deaths reported	Percentage of total	Total
2003	22	10.8%	182	89.2%	204
2004	11	4.9%	215	951%	226
2005	26	11.1%	207	88.9%	233
2006	24	9.2%	238	90.1%	262
2007	22	8.46%	238	91.53%	260
2008	23	8.41%	229	91.58%	252

2009	18	9%	182	91%	200
2010	12	5.3%	172	94.7%	184
2011	9	6.5%	130	93.5%	139
Total	167	8.52%	1793	91.5%	1960

Cumulative AIDS cases and AIDS deaths reported:

The cumulative AIDS cases and AIDS deaths reported from health facilities since the start of the AIDS epidemic in the country has so far reached 33,165, and 2939 respectively. In Average the annual AIDS cases report are about 1800 AIDS cases a year and the average annual AIDS death reported are about 200 AIDS deaths a year. As this report is a health facility based report it shows only the ice berg of the epidemic but is useful for planning, care and support needs of HIV/ AIDS infected and affected people.

Trend cumulative AIDS cases and death 1988 - 2011

Year	1988-2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
Cases	13,475	2223	1810	2129	3011	2646	1943	2072	1658	1459	1029	33,165
Death	763	216	204	226	233	262	260	252	200	184	139	2939

ART programme implementation

Currently there are 19 ART sites in the country. The new ART sites opened in 2011 were in Gash Barka zone; Tesseney and Akordat hospitals. In 2011 a total of 761 eligible patients with HIV infection had started ART. This raised the total PLWHA put on ART since August 2005 to 7057. Most of the patients are receiving their ARVs in sites located in Asmara.

Distribution of ART Sites by Zones in 2011

Zone	ART sites
Anseba	2
Dehub	4
SRSZ	2
Gash Barka	4
Maakel	6
NRSZ	1
Total	19

With the increase in number and expansion of ART sites to the Zones, the number of patients on ART is also increasing. Starting with 709 patients in the last months of 2005, by 2011 there were around 7282 patients who started ART. Out of the total of 7282 patients who started ART in the last six years 630 died and 407 lost to follow-up. Thus,

currently there are about 6245 PLAH who are currently alive and taking ARV. The following table shows the number of patients on ART in each site by year.

PLHA taking antiretroviral medicines in ART Sites from August 2005 to 2011

	Hospital	2005	2006	2007	2008	2009	2010	2011	TOTAL
1	Orotta	387	356	275	165	206	174	168	1731
2	Halibet	139	276	259	159	121	98	86	1138
3	Hazhaz	92	215	195	169	113	135	121	1040
4	Orotta Pediatrics	52	80	57	50	76	95	61	471
5	Digsa Com. Hospital	39	46	34	54	16	73	68	330
6	Keren military		157	94	68	20	20	6	365
7	Air force		13	17	13	0	6	5	54
8	Keren Hospital		27	63	58	69	50	88	355
9	Sembel Hospital		5	113	101	101	119	67	506
10	Mendefera Hospital			108	69	30	26	50	284
11	Dekemhare Hospital			31	33	48	13	21	146
12	Barentu Hospital			47	102	76	90	53	368
13	Asseb Hospital			6	34	14	18	34	106
14	Massawa Hospital			2	32	36	45	34	149
15	Dekemhare military Hospital				7	10	Not reported	8	25
16	Barentu military Hospital					19	26	25	70
17	Assab military Hospital					12	Not reported	1	13
18	Teseney hospital						32	77	109
19	Akordet hospital						13	13	26
	Total	709	1175	1301	1114	967	1030	986	7282

The above table indicates that the number of patients with advanced HIV disease enrolled in to the ART provision is showing fluctuating in number from year to year. In addition the majority of patients are being treated in Orotta hospital followed by Halibet and Hazhaz hospitals. About 6.5% of the total patients started ART so far are children under 15 years old. These are taking their ARV in Orotta paediatric hospital, and other zonal ART sites.

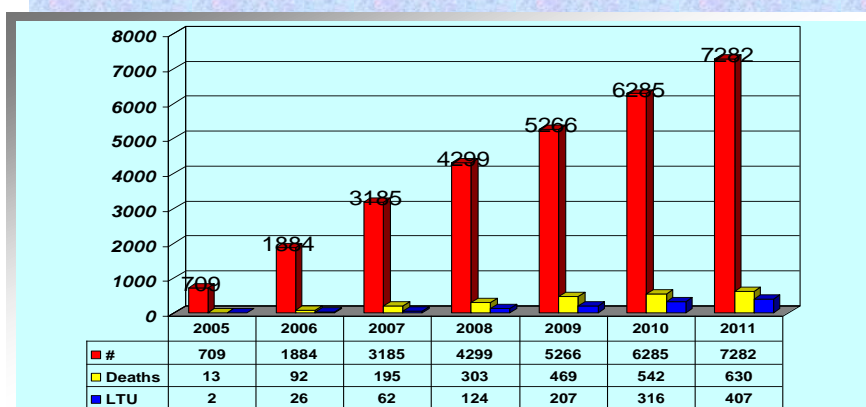
As the following table shows, 76.4% of patients on ART are in the age group 26 - 49 years old.

ART intake in children and adults, death and lost to follow up by year, 2005 –2011

Year	Children who received ARV	Adults who received ARV	Total	Died	Lost to follow up
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2005	54	655	709	13	2
2006	85	1090	1175	79	24
2007	65	1236	1301	103	36
2008	57	1057	1114	108	62
2009	97	870	967	125	83
2010	111	919	1030	111	123
2011	71	915	986	91	77
Total	540	6742	7282	630	407

Cumulative # of Patients on ART, Deaths & Lost To Follow-up (LTU) 2005- 2011



6248 PLHA currently on treatment

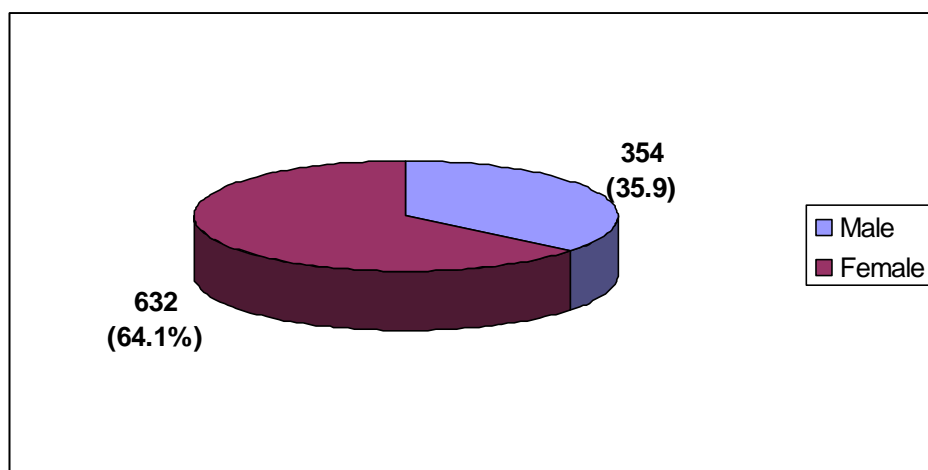
Sex and Age distribution of PLHA taking ARVs:

As the following table shows 76.98% of patients put on ART in 2011 are in the age group 26- 49 years old, 11.46% are in the age group above 50 years old, 4.36% are from in 15- 25 years old and 7.2% are children under 15 years old.

Age group	0-4 years	5-14 years	15-25 years	26-49 years	>50 years	Total
Male	8	29	7	232	74	350
Female	8	26	36	527	39	636
Total	16	55	43	759	113	986
% of total	1.62	5.58	4.36	76.98	11.46	100.00

Sex distribution of patients on ARV by 2011

The following figure indicates the sex distribution of patients. According to these figures the sex distribution of patients on ARV in 2011 shows a relatively higher percentage for females (64.1%) versus males (35.9%). This finding is similar with other African countries where the majority of patients on ART are females.



National ART coverage for Eritrea

Based on spectrum estimation, the number of people who need ARV in the country in 2011 was estimated at **9,862**. Based on this estimation, the coverage of ART in the country is **50.8%**. The coverage in the previous years was high as a result of starting ARV with CD4 count of less or equal to 200cell/mm³. It is important to note here that the previous years' estimations were not based on spectrum. *The table below will need a revision through use of spectrum estimation and will be reported in 2012.*

Proportion of PLWHA that need ART & those who started ART by year, 2005 –2011

year	PLWHA that need ART	PLWHA that received ART	Percentage
2005	7182	709	12.3
2006	7182	1884	26.2
2007	7182	3185	44.3
2008	7182	4292	59.8
2009	7182	5259	73.2
2010	7182	6117	85.2
2011	9862	7282	50.8%

ART related indicators

Analysis of some important ART related indicators showed that in the 2011 the number of patients changed treatment due to drug toxicity were 466 patients. The number of patients who changed treatment due to drug failure were 6, patients died were 91, and 77 patients also lost to follow up. Based on cohort analysis done in four hospitals in Asmara

the number of patients on ARV who survived 12 months after starting treatment was 85%.

ARV RELATED INDICATORS FOR 2011

ART related indicator	TOTAL
Number of new patients on ART	986
Number of new and existing patients on ART	7282
Change of regimen due to toxicity	466
Change of regimen due to treatment failure	6
Death	91
Loss to follow up	77

Community/Home Based Care

The two tables below show the number of clients, care providers and number of beneficiaries. This program is mainly carried out by BIDHO and the religious groups. The MOLHW and NUEW also carry out home based care. This program is very difficult for NATCoD to follow as it is not easy to supervise. It is very hard to accept the huge number of clients needing home based care in the event that at this time beneficiaries of ART have improved their quality of life and can live without home based care like any other person who does not have the virus.

Number of Clients, care providers and beneficiaries by Organizations

Organization	No. of Clients	No. of Care Providers	No. of Beneficiaries
Orthodox	160	32	800
Catholic	1194	109	5970
Evangelical	58	16	400
Mufti	50	11	250
MOLHW	37	9	170
NUEW	17	3	85
BIDHO	643	156	3215
TOTAL	2156	337	10890

Number of clients and care providers by Zoba

ZOBA	CLIENTS
Maakel	0
Dehub	0
Anseba	43
Gash-Barka	96
Northern R.S	0
Southern R.S	8
TOTAL	147

PLWHA on Co-trimoxazole prophylaxis

Cotrimoxazole is an important drug used for the prophylaxis and treatment of various opportunistic infections. This prophylaxis is given as a package in the comprehensive HIV care. Thus, in 2011 a total of 740 patients were given co-trimoxazole for the prevention of opportunistic infections in the ART sites, by sex they were 323 males and 417 females.

Constraints/Challenges

- Delay and incomplete report and under reporting of all HIV related activities
- Transportation problem for supportive supervision to zones – oftentimes vehicles are not available from government garage and supervisions are not carried according to plan.
- Lack of space for counseling and testing in health stations
- Low condom distribution by MOH health facilities.
- Most FBOs are not reporting on HBC this year and the previous year.
- Global fund related work is becoming cumbersome and negatively affecting implementation and supervision of other important program related activities

Conclusion

- High number of first ANC registrants which could be targeted for PMTCT
- Good acceptance of HIV test by pregnant mothers for PMTCT.
- Integration of VCT services in 92% of health facilities is encouraging step in HIV prevention.
- Integration of PMTCT services with ANC in 75% of Health facilities.
- Initiation of outreach programs for PMTCT
- Despite expansion, the number of VCT clients testing for HIV is fluctuating from year to year – may be attributed to PMTCT or other reasons- may require investigation.
- HIV positivity rate in VCT and PMTCT sites showing a declining trend.
- HIV and Syphilis positivity rate in blood donors specifically in voluntary blood donors is also becoming low.
- Male condoms distribution by MOH health facilities is very low – a need for a mechanism to increase the distribution.
- With introduction and expansion of ART sites, morbidity and mortality due to AIDS is declining
- Data collection & analysis is improving from time to time. This however will require great effort to computerize and ensure it is accommodated in the HMIS data base.

Recommendations

- Continuous programmed supervision by program staff to VCT/PMTCT and ART sites.

- Close follow up of VCT and PMTCT programs to reverse the fluctuating trend of tested clients.
- Training on record keeping (register) and reporting for counselors to improve recording and reporting
- Cleaning and editing of monthly report data to ensure quality and completeness of data should be carried out in reporting site and zones.
- Promote condom distribution by MOH

National TB Control Program (NTCP)

Introduction

Tuberculosis (TB) – an infectious airborne disease – is a major global health problem. Each year, there are around nine million new cases of TB, and close to two million deaths. All countries are affected, but 85% of cases occur in Africa (30%) and Asia (55%).

TB continues to be a major cause of morbidity and mortality in Eritrea. With the emergence of HIV, TB has become even more important a public health problem. The presence of TB as a public health problem is regrettable since the disease has a simple and effective diagnosis and treatment and which is available in every part of the country.

Eritrea has demonstrated its commitment to the control of TB and has been implementing the National TB Control Program since 1996 in accordance with the international norms for TB control the DOTS strategy.

The National Tuberculosis Control Program is overall responsible for:-

- Formulation of policy and policy guidelines
- Development of standard procedures for the control of tuberculosis,
- Planning, coordinating, training and supervision of personnel involved in tuberculosis work, budgeting, assist procurement of supplies, & monitoring and evaluation of the program.

Since the NTCP is based on DOTS, which is heavily dependent upon the laboratory services for microscopy, the National Health Laboratory provides the due support to check and maintain the quality of the microscopy in the program but it is the zoba AFB focal person who assesses the quality issues of laboratory services at the zoba.

The day to day implementation of the program is the responsibility of the Zobas and the sub-zobas who are in turn provided the technical support by the NTCP unit. Each Zoba has one TB coordinator responsible for the management of the program. Further, at all the health facility to the level of health centre, each such facility has one TB focal person for management of patients and one AFB focal person in-charge of the sputum microscopy quality assurance in the laboratory.

As new initiatives the NTCP has introduced the community DOTS since 2007, wherein the TB promoters are being identified, trained and placed in each of the villages. Moreover, the TB program has initiated the establishment of DOTS plus program. In the process the national health laboratory has started the sputum culture and sensitivity. For the last two quarters of the year, the Culture and DST system has been under renovation and the negative pressure cleaning.

The MDR-TB centre opened in June 2011 has started to manage MDR-TB patients. Since then a total of 32 MDR-TB cases are under management and their progress is good.

The NTCP has adopted the Directly Observed Treatment Short course (DOTS) strategy to combat tuberculosis as formulated and recommended by the WHO. The manual was produced in 1997 and revised in 2007. The case finding method is passive. Diagnosis is based on sputum smear microscopy. Treatment is based on WHO's treatment for categories I, II & III.

Goal of the NTCP:

The overall goal of the NTCP is to reduce the incidence and prevalence of TB to such a level that it does not constitute a public health problem in the country.

Objectives for the year 2011:-

- To increase detection rate for smear positive TB cases from 46.6% to 50 % in 2011
- To increase or at least maintain treatment success for new positive cases between 85%- 90 %.
- Enhance health promotion activities at all levels.
- To reduce the burden of TB in People Living with HIV/AIDS (PLWHA) and that of Human Immunodeficiency Virus (HIV) in TB patients.
- To enhance the community DOTS activities to improve the reach of the program
- To address the issue of MDR

Planned activities:

- To diagnose and treat 70% of all TB patients from the expected
- Training health workers on DOTS strategy and MDR-TB
- Establishment of MDR-TB centre
- Commemoration of World TB day
- Develop Baseline Survey Protocol & conduct the survey for MDR-TB
- International training on MDR-TB management
- Recruit International TB advisor
- Program Review internal and external by international experts.
- Conduct Supportive Supervision

Implementation status:

1. Capacity building

The following table shows the trainings conducted to increase the skills of health workers and TB promoters in the prevention, treatment and care of tuberculosis. The number of participants is appreciated but the impact is to be evaluated yet.

Table. Topics of training and number of participants by zones

Zoba	Topics	No. of participants		
		HQ+Zoba	Zoba	Total
Maekel	Refresher course on DOTS strategy & briefing on MDR-TB for health workers	180	142	322
	Refresher course for TB promoters on introduction to TB		90	90
Dehub	Refresher course on DOTS strategy & briefing on MDR-TB for health workers	40	458	498
	Refresher course on AFB microscopy for laboratory technicians	15	90	105
Anseba	Refresher course on DOTS strategy & briefing on MDR-TB for health workers	44		44
N Red S	Refresher course on DOTS strategy & briefing on MDR-TB for health workers	28		
Gash B	Refresher course on DOTS strategy for health workers -Mekerka	20	94	114
S Red Sea	DOTS strategy for health workers		8	8
Sawa hospital	Refresher course on DOTS strategy for health workers	40		40
Merhano hospital	MDR-TB and infection control for health workers and administrative staff	35		35
Physicians from all hospitals	DOTS strategy and MDR-TB	60		60
Medical school	4 hours sensitization on DOTS strategy for medical school students	30		30
Health science college	6 hours sensitization on DOTS strategy for public health technicians	30		30
National confederation Eritrean workers	Sensitization on tuberculosis	131		131

Members of pharmaceutical association	3 hours lecture on management of tuberculosis and anti-TB drugs	100		100
Total	(health W.& m. students = 665, non health W. =131	796	882	1678

2. MDR-TB

Merhano MDR-TB hospital is established and equipped to manage MDR-TB patients in June 2011. A total of 32 MDR-TB cases are being managed since the establishment of the hospital. According to the developed guideline patients enrolled as MDR-TB are; patients treated on category II and failed to treatment after five months who are culture and DST positive, contacts of MDR-TB confirmed cases that have done culture and DST. But since our C&DST system is under renovation, till the renovation is finalized, we decided to accept patients who are smear positive after five months treatment of Category II (2SRHZE/1RHZE/5RHE) in addition to those cases culture confirmed while the equipment was working.

Sputum Smear Conversion among MDR-TB patients:

One of the monthly monitoring aspects of MDR-TB patients on treatment is to check their sputum for AFB conversion. The table below shows the number of patients who have converted their sputum positive to negative in the consecutive months. Although it is too early to talk with certainty, the management of MDR-TB patients is showing encouraging results. This issue will be solved when the C&DST system starts functioning.

	1st Month	2nd Month	3rd Month	4th Month	5th Month
NO. of cases	30	22	17	10	10
AFB microscopy positive	24	13	11	2	2
AFB microscopy negative	6	9	6	8	8

3. A. Supportive Supervision:

Supportive supervision is one of the strategies to monitor the program. In 2011, a total of 132 sites have been supervised out of which 60 have been done by the zones only while 72 of them have been supervised by NTCP and the zones together.

Table. Supportive supervision conducted to facilities

Zone	Head quarter +zone				Zoba (alone)	Total
	Hospital	Health Centre	Health Station	Zonal pharmacy		
Maekel	4	8	15	1	7	35
Debut	2	-	-	1	10	13
Anseba	1	8		1	18	28
Gash B	3	6	-	1	25	35
NRS	4	4	1	1		10
SRS	3	-	4	1		8
MHS	3	-	-	-		3
Total	20	26	20	6	60	132

B. On site data verification: The LFA aimed at verifying data on the listed below indicators where the program has participated:

1. No. of TB cases detected
2. Cure rate of 85% or more for NSP
3. No. of TB patients screened for HIV

Sites selected:

1. Debut: 1 hospital & 3 health centers (Mendefera, Dibarwa, Digsu and Segenaiti)
2. Anseba: 1 hospital & 3 health centers (Keren, Hagaz, Elaberred & Hamelmallo)

The numbers of cases were found the same in all facilities but TB cases screened for HIV were less than the expected and the reason was that when patients are diagnosed at referral hospitals or other health facilities beside their treating centers they were investigate for co-infection and to avoid double counting the treating centers register the result but they don't report it.

C. Global Drug Facility monitoring and evaluation mission came & visited accompanied by the program to observe management of TB cases.

- Massawa hospital
- Gindae hospital
- Foro Health centre
- Nefasit health centre

4. World TB day commemoration: March 24, 2011:

- World TB day was commemorated in each zone by different activities:
 - General knowledge contest of students and TB promoters
 - Sensitization of the community on management and transmission of TB
 - Sensitization of students in schools
 - Drama on management and transmission of TB
 - Development and distribution, brochure and posters

5. Health Promotion:

TB Media Communication:

- Broad-Casted formerly Produced TB Radio and TV spots and Dramas through Mass Media.
- The Broad cast started from October and continued till the first quarter of 2011, as a result, 18 Spots were broad casted daily to air through Radio Dmtsi Hafash in 9 Eritrean language
- And three TV spots through ERI TV in Tigrina, Arabic and Tigre. (daily)
- A total of 21 spots were being broad casted every day in all Eritrean languages.

Broad casted Dramas

- A total of five TV Dramas each with a length of 10 min's broad casted at least 3 times from the month of October till the 1st quarter of 2011.
The drams were in Tigrina, Arabic and Tigre
- And two dramas of Tigrina and Arabic, each with a length of about 25 minutes broad casted in the length of period mentioned above.
- As the time chosen for broadcast was in the prime media time, it's believed that the required message were portrayed well enough to the target population
- Other than this, TB Key Messages were also being portrayed through the three Local Newspapers (Tigrigna, Tigre and Arabic) starting from October and was still in Schedule till the first months of 2011.

Production of TB promotional materials:

- Production of 6000 comic books targeting TB high risk groups.
- Development of 20 Newspaper pictures and messages.
- Reprinting of 1000 laminated posters.
- Reprinting of 3000 paper stickers
- Re-printing of 1000 pen stickers with TB messages.
- 1000 TB discussion guides photo copied

6 . Tuberculosis cases detection, notification and treatment outcomes:

The following tables talk about the detection, treatment outcomes and notification for tuberculosis.

Table 6.1 All type TB cases detected in 2011 versus 2010

Case Detected	No. of cases - 2011	No. of cases – 2010	Variance
New smear positive TB	838	832	6
New smear negative TB	1052	989	63
Extra-pulmonary TB	890	836	54
Retreatment	147	128	19
Smear not done	103	126	-23
Others	59	80	-21
Total	3089	2991	98

In the above table 6.1 we can observe that we have little improvement in the detection of all type TB cases in 2011 from that of 2010 - an increase of 98. The last two negatives in the variance column are also considered as achievements.

Table 6.2. TB Notification by Zones (2011)

Zone	NSP	NSN	EPTB	Re-Rx	SND	Others	Total	% all TB from exp.	% of SP from expected
Mackel	169	224	155	26	8	20	602	69.4	48.7
Dehub	140	120	98	29	11	16	414	32.9	27.8
Anseba	120	95	87	19	23	7	351	54.6	46.7
Gash B	176	201	218	20	29	11	655	72.2	48.5
NR Sea	124	76	82	35	26	1	344	47.1	42.5
SR Sea	37	25	21	7	5	3	98	103.1	97.4
MHS	72	47	78	7	1	1	241		
OPH		256	128				384		
Total	838	1052	890	147	103	59	3089	68.6	46.6

In table 6.2 it is seen the detection of each type of TB and the detections by zones based on their expectations. The last two columns in the table specifically show the percentages of detection for each zone as well as percentages for all type TB and sputum smear positive TB cases. The highest detection is observed in SRSZ while the lost is scored by Dehub zone. These figures will need further reasons why such results are recorded.

Table 6.3 Treatment outcome in 2011:

Zone	Reg.	Cure	Cure %	Rx comp.	No.Died	Death %	Failed	Default	T.out
Maekel	162	135	83	2	16	10	5	2	2
Debub	124	105	85	2	7	6	6	0	4
Anseba	94	82	87	3	2	2	3	3	1
Gash B	163	123	75	16	13	8	2	4	5
N Red Sea	156	117	75	5	13	8	6	2	13
S Red Sea	43	26	60	1	3	7	1	0	12
Total	742	588	79	29	54	7	23	11	37

Table 6.3 shows treatment outcomes by zones. It is observed here that the highest cure rate is observed in Anseba zone (87%) while the lowest is seen in SRS zone (60%) – a zone that has detected the highest. Moreover, the highest death rate is observed in Maekel zone (10%) while the lowest is seen in Anseba zone (2%).

Nationally it observed that:-

- Cure rate: 79%
- Success rate: 84%
- Death rate: 7%
- Failure rate: 3%
- Defaulter rate: 1%
- Transfer out rate: 5%

Table 6.4 National TB trend Notification 2005-2011

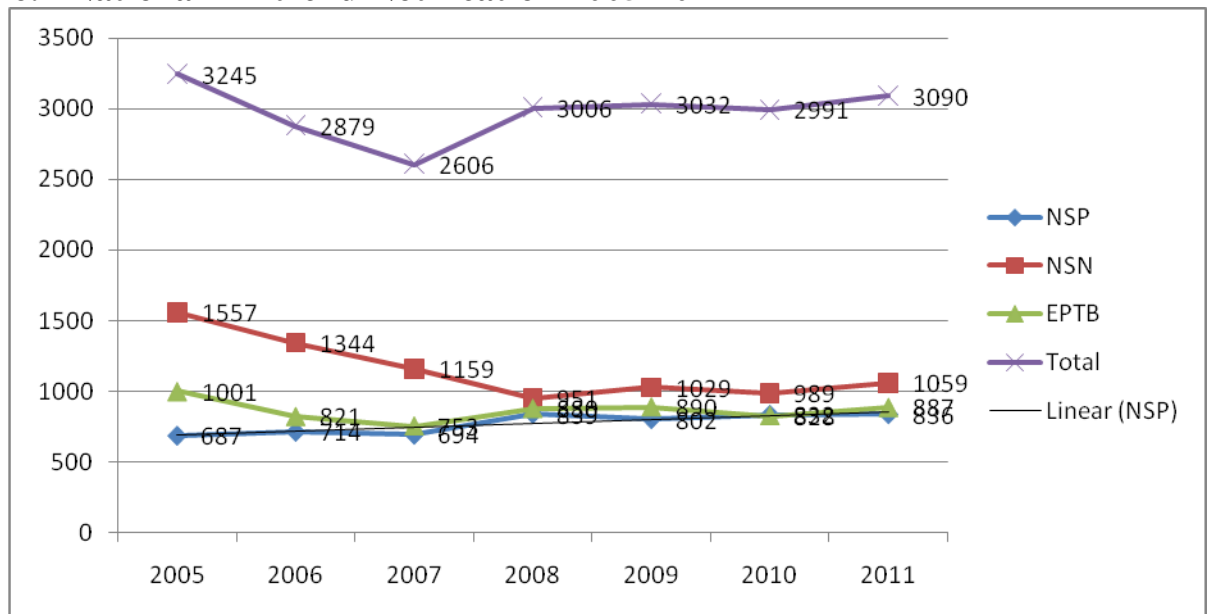


Table 6.4 shows the detection rate across the years. It is observed from the table that there have not been major achievements since 2008. Since prevalence study was done only once and because the study was the only one of its type, our estimation of expected cases may not be correct. We are planning to conduct prevalence survey in 2012.

7. Program review:

Internal and External Program Review was planned, task team and core team formed. The task team gave responsibility the core team to develop assessment tool and budget. The task team reviewed the assessment tools and budget. Then the core team conducted field visit in three zones (Anseba, Debub and Northern Red Sea). In each zone the zonal Medical office (TB coordinator), zonal pharmacy, one hospital and one health center visited and conducted the assessment with the concerned individual.

The Assessment tools focused on:-

1. Basic facility/subzone information
2. TB coordinator questionnaire
3. Health worker questionnaire
4. Questionnaire on laboratory services
5. Pharmacy staff questionnaire
6. TB patient questionnaire
7. Questionnaire for policy makers and Program managers
8. Proposed infrastructure conditions check list for good storage practices
9. Data collection tool for facility levels TB/HIV collaborative activities
10. Tool for interview with partners, donors and NGO's
11. Drug supply/Procurement

For internal program review:

- a. Questionnaire for policy makers and Program managers left to be assessed by external assessors
- b. Proposed infrastructure conditions check list for good storage practice left to be assessed by external assessors
- c. Data collection tool for facility levels TB/HIV collaborative activities left to be assessed by external assessors
- d. Tool for interview with partners, donors and NGO's, no donor or partner

Key finding of the assessment:

- The health facilities are very well equipped and have a good infrastructure

- The number of patients that the facilities are attending to is sufficient and the proportion of the chest symptomatic and cough symptomatic was very low according to the expected.
- The patients subjected to sputum examination were very few.
- Though the facilities were sufficiently equipped none was actually doing the sputum sample collection or fixing at the health station and at the health center.
- The health system is heavily losing the patients sent to the higher facility for diagnosis, since none of them came back or could be traced.
- The recording and reporting system, especially of the health center needs much improvement and continuous support from the zoba TB focal person

Conclusion

Though the peripheral health facilities are well equipped to conduct tests and are also getting sufficient number of patients, who could be possible suspects of TB and should be investigated for TB, are not doing so and therefore could possibly be contributing to low case finding and we should push training for our OPD physicians on DOTS strategy..

The program has done well over the year 2011 in establishing the MDR-TB hospital, conducting training two TB focal physicians from each hospital for a total of 60 on MDR-TB management, training Zoba Dehub TB focal persons and AFB Microscopy focal persons from each Microscopy centre on DOTS strategy and training Merhano hospital technical and administrative health workers on infection prevention for a total of 1678 health workers and medical students. To increase our success rate we should follow the transfer out cases by any means.

Recommendations related to the health facilities:-

1. The peripheral health facilities should start identifying the possible suspects and subject them to the sputum examination.
2. The peripheral health facilities should start utilizing to the optimum the equipment's made available to them
3. The zoba TB focal person needs to provide intensive and extensive support to the peripheral health facilities to help them identify suspects and instead of referring, to do sputum sample collection, fixing and microscopy.
4. The reporting and recording system of the peripheral health facilities needs much improvement and streamlining especially in terms of completeness of records.
5. Knowledge of the TB program personnel at the Zoba and the sub-zoba level needs to be very much strengthened in terms of; Patient interaction, understanding TB and

program terminologies, understanding categorization, recording and information segregation, coordination of recording in the card and the register and points to be communicated to the patient on awareness.

6. Reorientation of the TB focal person

7. Reorientation to the Physicians on categorization and investigation for TB patients as per the DOTS strategy

8. Knowledge of the lab personnel at the Zoba and the sub-zoba level needs to be very much strengthened in terms of; Patient interaction, sample recording, correct method of sputum collection, point to be communicated to the patient, internal and external quality control.

9. Reorientation of the AFB focal person on patient interaction and prevention methods.

Recommendations related to the NTCP and zones:

1. Regular scheduled and structured visit by the CDC coordinator/TB coordinator, zonal medical officer and the central TB unit

2. Supervision needs to be very much strengthened for both, the program and the Laboratory

3. A TB supervision curricula needs to be prepared for the central TB unit and the CDC coordinator to follow along with regular joint visit with the TB Advisor

4. A Lab supervision curricula need to be prepared for the central Health Lab for the Central Team to follow along with regular joint visit.

5. Information to the patient needs to be more accurate to the point and short and to be distributed by both the program and the lab since every level of contact of the patient with the health facility needs to be utilized for getting the patient to be aware of the condition and help identification of new cases.

6. The zobas with the help of the central TB unit should investigate the reasons for the high death rate, especially for zoba Maekel, Gash Barka and Northern red Sea

7. Human resource issue needs to be addressed as a priority, 4 zones already assigned TB coordinator but Southern Red Sea and Gash Barka needs one coordinator

8. The issue of incentive for the DOTS promoters need to sorted out and implemented by all zobas

9. Cascading supervision from and by the zoba level needs to be fully implemented.

10. The AFB focal people at the zoba level needs to undertake visits to the microscopy centers and conduct the external quality check and thereby each zoba needs to provide the quarterly discordant reports.

11. To expand the reach of the program in a bid to increase case finding the community DOTS needs to be implemented in full reaching including reaching out to the other sectors and community based structures.

General Challenges/Constraints in NTCP

- Delay of reports from all Zones and incomplete report and under reporting.
- Low capacity in manpower in our MDR-TB centre, no physician assigned for consultation
- Delay of recruitment of resident advisor.

- TB coordinator not assigned in Zoba Southern Red Sea and Gash Barka which are vital for our TB program.