

Comprehensive Approach to HIV in Northern Inhambane:

Counseling and Testing, ARV Treatment, PMTCT, TB/HIV

PROGRAM FINAL PERFORMANCE REPORT
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CARE International in Mozambique



Contact Information

Rene Celaya

Country Director
CARE International in Mozambique
Avenida Martirés de Mueda, 596
Maputo, Mozambique
Tel. +258 82 3188970
rcelaya@care.org.mz

Ben Schwartz

Director, Health Equity Unit
CARE USA, 151 Ellis Street NE
Atlanta, GA
Tel. +1 404 979-9204
bschwartz@care.org

Delphine Pinault

ACD/Director of Program Quality
CARE International in Mozambique
Avenida Martirés de Mueda, 596
Maputo, Mozambique
Tel. +258 82 3188970
dpinault@care.org.mz

Gundegmaa Jaamaa

Program Manager, CARE-CDC Health Initiative
CARE USA, 151 Ellis Street NE
Atlanta, GA
Tel. +1 404 979 9471
gjaamaa@care.org

Acronyms

ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral
BP	Biomedical Prevention
CCT	Community Counseling and Testing
CT	Counseling and Testing
CBO	Community-Based Organization
DOT	Directly Observed Therapy
DPS	Provincial Directorate of Health
EPTS	Electronic Patient Tracking System
HBC	Home Based Care
HCW	Health Care Worker
HCT	HIV Counseling and Testing
IPC	Infection Prevention and Control
I-TECH	International Training & Educational Center for Health
M & E	Monitoring and Evaluation
MCH	Maternal and Child Health
MoH	Ministry of Health
NGO	Non Governmental Organization
OIs	Opportunistic Infections
PEP	Post Exposure Prophylaxis
PEPFAR	President's Emergency Plan for AIDS Relief
PICT	Provider Initiated Counseling and Testing
PLHIV	People Living With HIV/AIDS
PMTCT	Prevention of Mother-To-Child Transmission
PwP	Prevention with Positives
SDSMAS	Directorate of District Health Authority
STI	Sexually Transmitted Infection
TB	Tuberculosis
TBA	Traditional Birth Attendant
USG	United States Government

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Executive summary

With technical and financial support from the President's Emergency Plan for AIDS Relief (PEPFAR) and the United States Centers for Disease Control and Prevention (CDC), CARE Mozambique provided comprehensive HIV/AIDS prevention and treatment interventions in the four northern districts of Inhambane province: Vilanculos, Inhassoro, Mabote and Govuro districts. The intervention officially commenced support to health facilities in Vilanculos District on May 15, 2007. It later expanded to Mabote and Inhassoro Districts in October of the same year, and lastly to Govuro District in January 2009.

The program supported six (6) health facilities providing care and treatment for people living with HIV/AIDS (PLHIV) including provision of long-term antiretroviral medication. The program also supported twenty-eight (28) health facilities providing prevention of mother-to-child transmission (PMTCT) services including counseling and testing for pregnant women and their spouses and one public health school that provides pre-service training for health professionals.

Other major support by the intervention included community counseling and testing for HIV and other major health diseases; community mobilization for health and home-based care services for PLHIV through CARE's partnership with community based organizations; health system strengthening through sub grants of funds to the four district health authorities supported for various activities including hiring and salary payment of key staff lacking in health facilities. The funds also supported supervision of health centers by district health teams, on the job training, and purchase of hospital consumables.

In general, the intervention provided support to the MOH at provincial, district, health facility and community levels in core HIV/AIDS technical areas while supporting broader MOH health system strengthening. The main HIV/AIDS related program areas and results supported through Mais Vida over the entire project period included:

1. Adult and pediatric ARV treatment, care and support
2. PMTCT
3. TB/HIV co-infection
4. Counseling and testing including CCT and PICT
5. Health system strengthening
6. Laboratory support
7. Biomedical prevention: Injection safety
8. Sexual prevention: Other sexual prevention

Some of the major results achieved in the program areas listed above include the following:

- Capacity building of both facility- and community-based HCWs on core HIV care and support intervention programs through formal and informal trainings, mentorship, on-the-job training and supervision
- Support to six health facilities to provide lifelong ARV therapy and 28 health facilities to provide PMTCT services.
- Commencement of 8,328 HIV+ clients on lifelong ARV therapy with a targeted 7,410 individuals
- Installation of databases for electronic patient monitoring in all six ART facilities; (these databases helped safeguard clients' information useful in monitoring treatment progress)

- Pre-service training of 34 MCH nurses in the Provincial School of Health through sub-grant funding to the institution
- Support to the MOH to promote and institutionalize some major programs in the care and treatment for HIV+ clients including the following: provider initiated counseling and testing, prevention with positives, biomedical prevention, and provision of ART in TB and ANC clinics through one-stop model approach
- Partnership with five community-based organizations to provide home-based care for HIV+ clients.

CARE is confident that the services and referral mechanisms established by CARE and its partners will be maintained and progress continued through handover to the Center for Collaboration in Health (CCS), the new partner identified by CDC to support the MOH for these services.

Program strategy

From its inception, the program has been providing support based on the following four (4) strategic approaches:

1. Capacity building of facility- and community-based health care workers (HCWs)

Capacity building focused on training Ministry of Health (MoH) staff to deliver quality services according to agreed upon national and, sometimes, international standards and protocols. Due to shortages of HCWs in northern Inhambane, most staff required substantial formal and informal skills training. CARE's clinical support team included clinicians, clinical psychologists, nutrition, laboratory and pharmaceutical advisors and MCH nurses who provided formal, continuous and on-the-job training to MoH staff and community activists. These program staff conducted routine supervisory visits to health facilities in the four districts during which they would build staff capacity on the job, in addition to the more formal "class room" type of trainings organized by the program. Partners were also trained in monitoring and evaluation as demonstrated by increasing quality of data at the health facility level over the life of the grant. Partners also learned how to manage sub-grants through ongoing support by CARE's sub-grants officer. Smaller, nascent CBOs especially appreciated this support.

2. Provision of essential medical supplies and equipment, and minor renovations

In close collaboration with health facilities and district health teams, Mais Vida provided all necessary drugs, medical and laboratory equipment for health centers to operate at good practice standards. CARE acted both as a procurement agent and helped build local capacity for transparent and accountable procedures by sub-granting to the Directorate of District Health Authority (SDSMAS) to purchase necessary supplies. Based on lessons learned and experience gained among district health authorities, CARE assisted local partners to improve the financial management of funds received from the government. The Mais Vida program also supported renovation of select health facilities, based on need. CARE facilitated procurement and monitoring of contractors in close collaboration with health partners, building local capacity to manage complex contracts and to identify and manage potential risks/challenges.

3. Reinforcement of capacity at the community level

In order to support treatment adherence and community capacity to respond to the epidemic, CARE complemented clinical technical assistance with support for community linkage, outreach and continuity of services. Upon selection of CBOs, the program collaborated with respective SDSMAS to provide technical training and supervision to CBOs on a range of relevant topics, including monitoring and evaluation, establishment of data registration systems, home visits, linkages with health facilities, grants and financial management etc. This enabled the targeted CBOs which are *Associação de Iniciativa para o Desenvolvimento da Comunidade* [AIPDC] in Vilanculos District, *Grupo Esperança de Vida* [GEV] and Lirhandzo in Inhassoro District, Tapona in Govuro District and Tsembeça association

in Mabote District, to conduct home visits, deliver home-based care, improve tracking of treatment defaulters, and mobilize the community for health and HIV interventions. CARE also helped build capacity of, and facilitate meetings among traditional birth attendants (TBAs), community DOT volunteers, and community health extension workers. In order to increase HIV prevention and early diagnosis of HIV, and to enhance referral to health facilities for care and treatment, the program provided CT at the community level through community counseling and testing (CCT) services.

4. Monitoring and evaluation

At initiation, the program assigned a point person in each program area to provide M&E technical support at the health facility level. The program manager, quality support consultant, clinical psychologists, technical advisors and the M&E team provided additional support to facility-based staff and district health staff on M&E, and analysis and use of data for decision making. This support included a detailed review and analysis of monthly data for each facility, followed by feedback sessions at the facility to address issues, correct errors, or jointly analyze and discuss data. Mentorship and on-the-job training were also provided to MoH district M&E point persons. The program hired data entry personnel to improve data registration via sub-grants with the district health authorities. These personnel received regular up-to-date feedback on data handling through quarterly capacity building sessions, monthly supervision, and on-the-job training. In general, data quality has been a challenge throughout the life of Mais Vida but with incremental visible improvements over the years.

Program objectives

At the inception of the program, Mais Vida had the following five-year objectives (May 2007 to May 2012):

- Increase and strengthen the capacity of the MoH to provide ART services at national and international standards
- Increase and strengthen the capacity of the MoH to provide PMTCT services to eligible clients
- Increase the capacity of the MoH to step up TB/HIV linkage and improve care of TB clients co-infected with HIV
- Strengthen the community response to ensure links between community resources and HIV clinical services. This objective was later incorporated into different program areas including ART, PMTCT, TB, CT and PwP.

Mais Vida was extended one year through May 2013. The objectives were revised yearly to accommodate emerging needs. These additional objectives included the following:

- Strengthen the MoH to provide quality CT both at facility and community levels in accordance with national and international standards
- Increase the capacity of the MoH to improve its health-related policies and health facilities
- Increase the capacity of the MoH to have functional laboratories to cater for all its patients
- Increase awareness on biomedical prevention including injection safety and prophylactic treatment for those accidentally exposed in the facility centers and the community
- Increase the capacity of the MoH and communities to strengthen and scale up sexual prevention including positive prevention messages among PLHIV

Achievement against targets

At inception, CARE established the following targets to be achieved over a five-year period:

1. 1,500 clients to be provided with ARV treatment services
2. One peripheral clinic to be created to provide ARV treatment and care services
3. 30 HCWs to be trained in diagnosis and management of HIV including administration of ARVs
4. 40 community health care workers to be trained in patient management at the community level
5. 500 pregnant HIV-positive women, including TB patients, to be provided with HIV care and treatment services

In subsequent years, CDC revised the annual targets for the program based on achievements from each previous fiscal year. However CDC did not provide new targets for Years 5 and 6 (based on correspondence with CDC Maputo). Hence, CARE set its own targets based on a ten (10) percent increase on each previous year's achievement.

The table below summarizes achievements in select indicators for the program.

Indicator	Target	Achievement	% of Target Achieved
Number of HIV+ individuals (adults and children) newly initiating triple regimen ART in service centers supported by the program	7,410	8,328	112%
Number of pregnant women who received CT for HIV and received their test result in ANC and maternity settings	71,386	71,870	101%
Number of pregnant women who received a complete course of ARV prophylaxis (mono, bi- and triple regimens) in ANC and maternity settings	8,210	7,814	95%
Number of exposed newborns that received ARV prophylaxis in maternity settings	3,287	3,103	94%
Number of exposed infants that started prophylaxis against opportunistic infections in the children-at-risk clinics	4,153	3,749	90%
Number of registered TB patients who received CT for HIV and received their test results at a TB service outlet	1,695	1,132	67%
Number of clients who received CT in a USG supported service outlet by Facility-based Voluntary CT (VCT)	23,728	29,547	125%
Number of clients who received CT in a USG supported service outlet by facility-based PICT	9,837	9,337	95%
Number of clients who received CT in a USG supported service outlet by CCT	24,130	34,209	142%
Number of Individuals who received PEP services	78	60	77%
Number of PLHIV reached with positive prevention messages at both facility and community levels	22,338	33,217	149%

Below is a list of objectives, planned activities and targets, and achievement over the six-year period:

Objective 1: Increase and strengthen the capacity of the MoH to provide ART services of national and international standards

Planned activities

1. Support six HIV centers (including one peripheral center) to provide care and treatment for HIV+ clients both in accordance with national and international standards)
2. 7,410 HIV+ individuals (both adult and children) to be newly commenced on lifelong ARV therapy
3. 323 HCWs to be trained to provide care and treatment for HIV+ clients both at facility and community levels in accordance with national and international standards
4. Improve referral systems of HIV+ clients from other sectors within the health facility to ARV clinics for better care and follow up
5. Improve quality of services provided by MoH staff through mentorship, supervision, on-the-job trainings and use of standard of care tools to monitor the quality of service delivery
6. Support monitoring and evaluation, provision and installation of electronic patient tracking system (EPTS) in all the supported treatment centers

Realized

1. Four existing HIV treatment centers were supported. These include Vilanculos Rural Hospital, Inhassoro, Mabote and Doane health centers in Vilanculos, Inhassoro, Mabote and Govuro Districts respectively. The program also supported the district health authorities of Vilanculos and Inhassoro in expansion of HIV treatment to two additional health facilities. These facilities are Mapinhane and Mangungumete health centers in Vilanculos and Inhassoro districts respectively.
2. 8,328 HIV+ clients were newly commenced on lifelong ARV therapy during the lifetime of the program. This represented 114% of the set target. The program was able to achieve this based on the expansion of treatment to the two additional centers mentioned above and decentralization of initiation of ARV treatment into other units, including TB and antenatal clinics through the “one stop” model.
3. 649 HCWs were trained at different levels to provide care and treatment of high quality; this achievement represented about 201% of the set target. A range of trainings were provided on topics including clinical tutorship for clinicians, adherence counseling, diagnosis and treatment of opportunistic infections (OIs), formation and follow up of community adherence groups, data entry and new ART monitoring tools.
4. The program supported dissemination of MoH approved referral tools and allocation of counselors to TB and antenatal clinics to carry out HIV counseling and testing of clients and subsequent referral of HIV+ positive clients to HIV service centers for further care and treatment. These efforts significantly improved the linkage of HIV clinics to other units within the health facilities, hence increasing the number of clients enrolled in the program.
5. The program supported on-the-job training, clinical tutorship in coordination with I-TECH (an international NGO approved by the MoH for providing pre- and in-service training and capacity building for the national health system). The program also hired a consultant to design tools to measure quality of service delivery in all the supported health facilities. The consultant was also involved in providing guidance and capacity building to both program and facility based staff on the use of these quality-measuring tools (including standard of care tools). Based on this technical support and the results from this quality evaluation, each facility designed and implemented improvement plans.
6. The program installed EPTS databases in all six supported HIV treatment centers. With these databases, patients’ medical information became better “secured” in case of possible loss of the physical case files. Day to day monitoring of patients was also made easier thanks to EPTS. This has helped to improve patient treatment

and care follow up and tracking of treatment defaulters. Program M&E staffs also provided quarterly capacity building for facility based HCWs to create more awareness on the usefulness of EPTS.

Objective 2: Increase and strengthen the capacity of the MoH to provide PMTCT services to eligible clients

Planned targets/activities

1. At least 26 sites to be supported in providing PMTCT services at national and international standards
2. Scale up and increase access to PMTCT services including PICT for pregnant women and their spouses, ARV and opportunistic infection prophylaxis for pregnant women and exposed infants, early infant diagnosis and safe nutrition for infants.
3. Formation of support groups of PLHIV and more community participation in care of pregnant and nursing mothers
4. At least 71,386 pregnant women will receive CT for HIV and receive their test result in ANC and maternity settings
5. At least 8,210 pregnant women will be provided with a complete course of ARV prophylaxis (mono, bi- and triple regimens) in ANC and maternity settings
6. At least 3,287 exposed newborns will receive ARV prophylaxis in maternity settings
7. At least 4,153 exposed infants to start prophylaxis against opportunistic infections in the children-at-risk clinics
8. At least 315 HCWs to be trained to provide PMTCT services of high quality in accordance with national guidelines at facility and community levels.

Realized

1. A total of 28 health facilities received support to provide PMTCT services, all of which are currently providing. During its lifetime, the program supported the MoH to expand PMTCT services to a total seven new sites: Chibuene and Macunhe Death Centers in Vilanculos District, Bazaruto, Macovane, Cometela and Inhapele Health centers in Inhassoro District and Papatane Health Center in Mabote District. This expansion enabled more pregnant women to access PMTCT services.
2. The program supported PMTCT scale up through capacity building of HCWs on PMTCT guidelines' updates including diagnosis and treatment of OIs, and administration of ARV drugs by MCH nurses through the one stop model in which clients receive all care at the antenatal clinic without further referral to the HIV clinic. The program also made hemoglobin screening machines available in all PMTCT service centers. This helped to scale up use of dual therapy ARV prophylaxis (which has wider impact on reduction of vertical transmission of HIV).
3. In collaboration with the district health authorities, Mais Vida created 25 mother-to-mother support groups and also provided capacity building for some of these groups on income generation activities for group sustainability. Other community support included identification, meeting and training of TBAs, training of MoH recognized community health extension workers on infant nutrition and capacity building of community activists on home base care for clients receiving PMTCT services. It is of note that one of the support groups later transformed into a CBO (Lirhandzo in Inhassoro district) providing HBC for PLHIV.
4. A total of 71,870 individuals were counseled and tested at sites supported by the program, representing 101% of the target.
5. 7,814 pregnant women received complete courses of ARV prophylaxis during the lifetime of the program, representing 95% of the target.
6. From the fourth to the sixth year of the program, 3,103 exposed newborns received ARV prophylaxis in maternity settings, representing 94% of the target. The target wasn't met for various reasons, including occasional stock-out of these medications.

7. 3,794 exposed infants started prophylaxis against opportunistic infections in the children-at-risk clinics from the fourth to the sixth year of the program. This represented 90% of the set target. Poor data entry and occasional stock-out of these medications were responsible for the below target result. Actual numbers may be higher.
8. 567 HCWs both at facility and community levels received in service capacity building and trainings during the lifetime of the program. These included training on new PMTCT guidelines and M&E tools, early infant diagnosis (EID), opportunistic infections and capacity building of TBAs.

Objective 3: Increase the capacity of the MoH to step up TB/HIV linkage and improve care of TB clients co-infected with HIV

Planned targets/activities

1. Four outlets (with two mobile clinics) providing TB care for TB/HIV infected clients
2. Strengthen TB diagnosis (both clinical and laboratory diagnosis), treatment and follow up among HIV+ clients
3. Institutionalized HCT for supported TB clinics and referral of PLHIV for care
4. Improve diagnosis and care of TB clients at the community level through identification and training of DOT counselors
5. 1,695 registered TB patients receive HCT and their test results at TB clinics supported by the program
6. 106 HCWs both at facility and community levels trained to provide care and treatment for TB/HIV infected individuals (diagnosed or presumed)

Realized

1. The program supported four TB clinics. These include Vilanculos Rural Hospital, Inhassoro, Mabote and Doane Health Centers in Vilanculos, Inhassoro, Mabote and Govuro Districts respectively. Two satellite TB clinics in Mapinhane and Mangungumete health centers were also supported.
2. The program supported the MoH through capacity building as well as dissemination and training on appropriate tools for the care and treatment of TB/HIV infected clients. Tools used included the Standard of Care quality monitoring tools which tend to monitor the screening of HIV+ clients for TB in HIV clinics
3. The program supported counselors at TB clinics to work with existing MoH staff in all the supported TB clinics. Counselors provided HCT for TB clients presenting in TB clinics and the subsequent initiation of pre ARV counseling for those that are HIV+, in addition to other tasks of follow up of TB clients on DOT.
4. The program supported the MoH to reactivate community DOT in all the supported districts. Thanks to the support of the program, the district TB focal point person met on a regular basis with the DOT activists to provide capacity building on community care for TB and also receive feedback on the level of care and screening provided by the activists.
5. 1,132 registered TB patients received HCT and their test results at TB clinics supported by the program. This represented 67% of the target. This result was particularly low due to the fact that most clients coming to the TB clinics already knew their HIV status and, in most cases, had already been counseled.
6. The program provided capacity building to 169 HCWs both at facility and community levels. This represented about 159% of the set target. These capacity building and training sessions enabled the program to fully integrate TB and HIV care in all the supported facilities.

Objective 4: Strengthen the MoH to provide CT at the facility and community levels in accordance with national and international standards

Planned targets/activities

1. Six service outlets (including two mobile clinics) providing CT for HIV at facility level
2. Two districts providing CT at community level through CCT, and 24 sites providing CT through PICT
3. Implement quality assurance to ensure that HCT is implemented at nationally and internationally acceptable standards.
4. 23,728 individuals receive HCT and their test results through facility-based HCT
5. 9,837 individuals receive HCT and their test results through facility-based PICT excluding TB and PMTCT
6. 24,130 individuals receive HCT and their test results at the community level through CCT
7. 81 health care providers and lay counselors trained in offering HCT both at facility and community levels in accordance with national and international standards

Realized

1. Five facility-based service outlets providing voluntary CT were supported during the program lifetime. The program could only support PICT in five sites instead of six because the program lacked enough qualified human resources to support supervision in all the peripheral health centers.
2. The program provided CCT in Vilanculos district but further expansion was not possible due to suspension placed on expansion of CCT by the MoH in May 2011 as a result of poor quality of testing results obtained following an evaluation of tests carried out by counselors.
3. The program Laboratory Technical Advisor, in conjunction with the Prevention Officer, provided on-site mentorship and supervision on quarterly basis to counselors in monitoring quality of CT provided to clients using MoH quality assurance checklist.
4. 29,547 individuals received HCT and their test results through facility-based HCT. This represented 125% of the target. This was possible thanks to capacity building and regular supervision provided to HCWs
5. 9,337 individuals received HCT and their test results through facility-based PICT. This result represented 95% of the set target. The initial uptake of PICT was slow and the program was unable to expand PICT to all peripheral health centers for reasons mentioned above.
6. 34,209 individuals received HCT and received their test results at the community level through CCT. This represented 142% of the target. The program targeted communities of high risks behaviors and public places (like markets, motor parks) for CCT and inclusion of CCT services during national immunization campaigns.
7. The program supported capacity building and training of 121 HCWs to offer HIV counseling and testing both at facility and community levels in accordance with national and international standards.

Objective 5: Increase the capacity of the MoH to improve its health related policies and health facilities

Planned targets/activities

1. Sub-grant to five Government institutions for better ownership
2. Rehabilitation and minor renovations of health facilities
3. Improve HIV care at community level
4. Strengthen SDSMAS and DPS human resources
5. Pre-service training of 30 MCH nurses
6. 60 community activists trained in provision of care for HIV+ at community level

Realized

1. The program provided sub grants to the four district health authorities it supported. These funds enabled the districts to carry out their routine activities which otherwise couldn't have been possible due to lack of financial resources from the central government. The activities supported with these funds include hiring and paying

salaries of key staff positions for HIV service centers, in-service training, supervision and purchase of hospital consumables.

2. In order to create a more conducive working environment and to meet clients' needs, in line with MoH treatment expansion, the program supported renovation of ten health facilities. These health facilities included: the laboratory and surgical blocks of Vilanculos Rural Hospital, four blocks in Mapinhane Health Center, pregnant women waiting houses in Muabsa and Zimane Health Centers, Mabote Health Center, Doane Health Center, Inhassoro Health Center, Jofane Health Center and Pambarra Health Center.
3. The program developed partnerships with five community-based organizations and signed sub-grant agreements with them to provide home-based care services for PLHIV and to track individuals lost to follow up. These measures have helped improve adherence and reduce the number of clients that abandon treatment.
4. Through sub grants to district health authorities, Mais Vida was also able to support the salaries of 28 HCWs in the four districts it supported.
5. In line with the strategy to increase health human resource capacity in the province, the program supported the complete training of 34 MCH nurses who were posted to different health facilities within the province. It is expected that these nurses will alleviate the problem of excess workload on the existing staff, thereby improving the quality of service delivery.
6. 199 community activists were trained to provide home based care for HIV+ clients, more than tripling the set target. Trainings were provided on adherence counseling, common signs and symptoms of opportunistic infections, general hygiene and nutrition.

Objective 6: Increase the capacity of the MoH to manage functional laboratories with comprehensive services

Planned targets/activities

1. Five laboratories will have the capacity to perform HIV testing, TB screening, and hemoglobin estimation
2. 16 laboratory technicians trained in the provision of laboratory related activities
3. Three laboratories accredited according to national and international criteria

Realized

1. The program supported five existing laboratories and, working in conjunction with Vilanculos District Health Authority, the program equipped and opened a new laboratory for Mapinhane Health Center.
2. The program supported the training of 76 laboratory technicians (which represented about 475% of the set target) in carrying out laboratory investigative procedures of national standard. Trainings were provided on hematology, biomedical prevention and TB diagnosis.
3. The program was unable to support accreditation of any of the laboratory it supported for reasons outside of its control. The supported laboratories fell outside the criteria used by the MoH in selection of laboratories for the initial phase of accreditation.

Objective 7: Increase HCW awareness on biomedical prevention including injection safety and prophylactic treatment for those accidentally exposed in facilities and the community

Planned targets/activities

1. Expansion and institutionalization of biomedical prevention (BP) and injection safety within the workplace
2. Appropriate waste disposal units/equipment installed/utilized in health facilities
3. 78 individuals receive post-exposure prophylaxis (PEP) including care and treatment of STIs whenever necessary
4. 50 HCWs are to be trained on injection safety and biomedical prevention in work place as well as providing PEP

Realized

1. The program supported the MoH to institutionalize BP through hiring of a point person for this activity and providing in-service training, mentorship and on the job capacity building for HCWs at six health centers.
2. Apart from renovation of the waste dump in Vilanculos Rural Hospital, the program provided individual protective kits, autoclave machines, and waste bins for appropriate waste disposal. In collaboration with the provincial department for infection prevention and control (IPC), Mais Vida also supported the MoH implementation of standard operating procedures regarding sharps disposal in all the sites supported with capacity building on PCI for different cadres of HCWs.
3. A total of 60 individuals received PEP services during the reporting period. The result represented 77% of the set target. This result was lower than the set target because of the efforts put into the institutionalization of injection safety, which led to a reduction of accidental needle pricks.
4. A total of 104 HCWs were trained in injection safety and BP. Trainings included capacity building on PEP, IPC and biomedical prevention.

Objective 8: Increase the capacity of the MoH and communities to strengthen and scale up sexual prevention including positive prevention messages among PLHIV

Planned targets/activities

1. Mainstreaming of prevention with positives (PwP) activities in health facilities providing ARV care and treatment
2. Support the MoH to manage STIs more effectively by building capacity and providing job aids
3. 22,338 PLHIV reached with complete PwP messages both at facility and community levels based on MoH guidelines
4. 180 HCWs trained to provide PwP messages to PLHIV at both facility and community levels

Realized

1. CARE assisted all ARV treatment facilities in the program to provide PwP messages to PLHIV attending clinics. Additionally, all five CBOs were trained to provide PwP messages at the community level. PwP was also integrated into existing HIV services including antenatal care, post-test counseling, pre- and post-ART adherence counseling and TB/HIV care and treatment.
2. The program provided job aids, capacity building and monitoring tools for STI screening in all supported ART service centers.
3. 33,217 PLHIV were reached with complete six PwP messages (of sexual risk, alcohol and drug use behaviors, family planning availability, partner disclosure and use of condom and referral to other support services) at facility and community levels using the MoH guidelines during the lifetime of the program. This represented 149% of the target. Individuals reached may have been double-counted because there isn't a patient database for tracking messages provided over a long period of time, where a client might receive messages twice during an annual reporting period.
4. 229 HCWs were trained to provide PwP messages to PLHIV both at facility and community levels. These trainings ensure institutionalization of PwP in the districts supported by the program.

Performance and effectiveness

Going by the above listed objectives, planned activities/targets and results, the program was able to achieve most of its objectives and targets. In terms of institutional capacity improvement, the program was able to support the MoH in providing relevant training as appropriate for each objective. Capacity building was always provided on new MoH guidelines and tools for care and treatment for HIV+ individuals at provincial, districts and health facility levels to maximize adherence to treatment standards and protocols in all the sites supported by the program. CARE's support to expand care and treatment services for HIV has successfully transformed most of these health facilities to provide a wider range of services to the communities they serve.

Relevance

In the context of developing countries like Mozambique, there is still a long way to go in health financing by the central government and resources are not equitably distributed. The central government enjoys a large portion of distributed resources with little reaching the districts where they are the most needed. In that regard, this type of intervention was highly relevant and continued support remains needed while advocacy should continue to have the Mozambique government allocate more resources to health and HIV at decentralized level. Within the program, the types of services that were emphasized met a real need of the population, particularly around access to treatment. Looking at the current rate of new infections in Mozambique, it becomes evident that positive prevention efforts also met a gap and need to be reinforced in the future.

Challenges, solutions and lessons learned

The program encountered some challenges in implementation of its activities, which also served as lessons learned as various mechanisms were adopted to overcome some of these challenges. Some of the challenges faced and solutions proffered in implementation of the program are as follows:

1. **Human resources:** Most of the health facilities supported by the program have staff deficit, which resulted in varying service quality due to excess workload. In order to address this deficit, CARE trained 34 MCH nurses in pre-service training through a sub-grant with the School of Health in the provincial capital of Inhambane. This helped alleviate the problem by increasing the number of staff in health facilities. However, shortage of qualified, experienced and well trained staff continues to be a big challenge, not only in the districts supported by the program, but in the national health system. The program also had its share of human resource challenges. Qualified personnel hired to fill in positions in the Mais Vida team tended not to stay for long due to the remoteness and isolation of the region where the program was implemented. Getting qualified M&E personnel was particularly challenging. In the end CARE had to revert to hiring a consultant to support the M&E team. Difficulty to recruit senior M&E national staff is also a general problem in Mozambique, affecting other sectors, in addition to health.
2. **Infrastructure:** With a growing population and no concurrent infrastructural expansion in health facilities, lack of physical structures and space is an important challenge faced in most district hospitals in Mozambique, and program supported districts were no exception. Lack of physical space hindered rapid expansion of some program activities including ART, CT and TB. The renovation and amplification of existing facilities helped, but much greater renovation is required to meet national needs. The program also faced difficulty in identifying

trustworthy contractors who adhered to their contract deliverables and timelines. Despite various quality control strategies (i.e. hiring of independent experts to give a reference quotation, having a public and transparent bidding process, checking references of contractors, hiring architectural consultants to scrutinize and monitor the works of the contractors, etc.), it was very difficult to implement infrastructural work. Contractors changed prices along the way, arguing that, at the time of making the quotation, it was impossible to know or see certain things. They would sometimes incur significant delays without strong justifications, etc. Infrastructure-related interventions might need to be standalone to avoid the risk of diverting too much time and attention from the program team.

3. **Electronic Patient Tracking System (EPTS):** CARE installed databases for EPTS in all of the ARV service centers it supported. This system stores information for each client receiving care and treatment in ART service centers and, with this, patients are easily monitored for medication uptakes, laboratory tests and adherence. There were, however, some challenges in getting the best out of this system, such as: lack of electric power or oscillating power in some health facilities, which frequently breakdown the hardware; initial resistance among the facility-based clinicians to use information available in the system to monitor patients. The program provided quarterly capacity building for data entry personnel and clinicians to address some of these problems. The involvement of clinicians in the quarterly evaluation of “standard of care” using the EPTS, has also helped in showing the relevance of the system for patient care. Notwithstanding, there has been progress among clinicians in the use of this system; an official takeover of the system by the MoH will go a long way in institutionalizing them.
4. **Community participation in health:** Community follow-up of PLHIV remains a challenge in Mozambique as most of the MOH efforts are aimed at strengthening facility-based care with few resources for community participation from the national health system. There are no functioning departments at the district level that oversee the activities of community-based organizations, TBAs, and community DOT activists. Most community support comes through the non-governmental organizations supporting the MoH. CARE supported five community-based organizations through sub-grants to provide home-based care and tracking of loss to follow up. However, there are instances of poor collaboration among HCWs in providing supervision and mentorship for these community activists.
5. **Quality of service delivery:** Ensuring service delivery of standard quality is still a challenge due to different factors including: poor infrastructure, excess workloads (inadequate human resources), lack of necessary materials and equipment to work with and low salaries. All these factors have contributed to a lack of motivation among HCWs, resulting in an increasing but inconsistent service delivery quality. In its last year, Mais Vida, in partnership with Cornell University, initiated a small-scale performance-based incentive pilot with the aim of improving quality of care, focusing particularly on PMTCT. While the main Mais Vida activities funded by PEPFAR through CDC closed by mid May 2013, this pilot funded through CARE and Cornell’s own resources, continues until July 2014. Results obtained and lessons learned will be shared with relevant stakeholders to help inform motivation strategies leading to more consistent quality of health service delivery.
6. **Commodity stock-out:** because of centralization of purchase of consumables, hospital equipment and medications, there are occasional stock-out of consumables that the program has to support the purchase after obtaining appropriate approval from the donor. Although poor planning and late requisitions also contributed to these stock-outs. In alleviating this, the program supported the DPS in training pharmacy technicians on use of electronic system in monitoring medications available in the district, as well as making request on-line to reduce the time it takes for medications to be available upon request from the province. The program also provided the

computers necessary for the implementation of the system. The strategy has improved communication with the province, however frequent breakdown of computers hardware remain a challenge to the system.

Sustainability

To ensure sustainability, CARE facilitated active participation of the district and provincial health directorates in all program activities and provided pre-service, formal and on-the-job training to healthcare givers. This increased local ownership and built capacity. Furthermore, funding to the Health Training Institute through a sub-grant, ensured the pre-service training of 34 students in MCH and increased the workforce of the national health system. The program was also responsible for paying the salaries of some key personnel in the health facilities through sub-grants to the SDSMAS. Of the 28 personnel supported by the program, six have been absorbed into the national health system and are now paid by MOH, ensuring that these positions continued upon the exit of the program. The remaining positions that were still being supported by CARE at the time of closeout will be taken over by the in-coming organization.

CARE used sub-grants to the SDSMAS and CBOs as an opportunity to promote transparent management and accountability among MoH staff & CBOs through capacity building in finances, budget planning and implementation as well as financial reporting. This accompaniment better positioned recipients to manage larger amounts of funds in the future.

The program held joint annual planning meetings, quarterly program evaluation meetings and supervision with partners both at the provincial and district levels. These activities were also aimed to transfer and institutionalize technical skills to MoH staff, thereby increasing the ability of the program to continue post-closeout further bolstering sustainability.

Analysis of final financial report

As a five-year program with budgets allocated yearly, the program activities were implemented based on the annual budget approvals by CDC. Delays in approval of these budgets sometimes resulted in delay in implementation of program activities and budget redirections because of the time the funds are made available. In the no-cost extension year, the program had challenges of staff retention since it was the last year of the program, some key staffs left the program as early as first quarter of the year, making implementation of some activities challenging. Recruitment and replacement of these staffs also posed some challenges as no one want to sign a contract for less than a year. All these challenges made the program to have some unspent balance as at the closeout of the program.

Conclusion

Despite ambitious objectives and a complex and challenging environment, Mais Vida yielded a number of positive results and transformed the lives of tens of thousands of the most vulnerable people in target districts in Inhambane Province. CARE is also glad that HIV/AIDS services will continue to be supported through Center for Collaboration in Health (CCS), the local NGO that has taken over from CARE, ensuring progress to date is built upon and expanded to benefit even more vulnerable people infected and/ or affected by HIV. CARE would like to close this

report by expressing its gratitude to the US Government for extending its financial support, technical expertise and trust to CARE to implement Mais Vida.