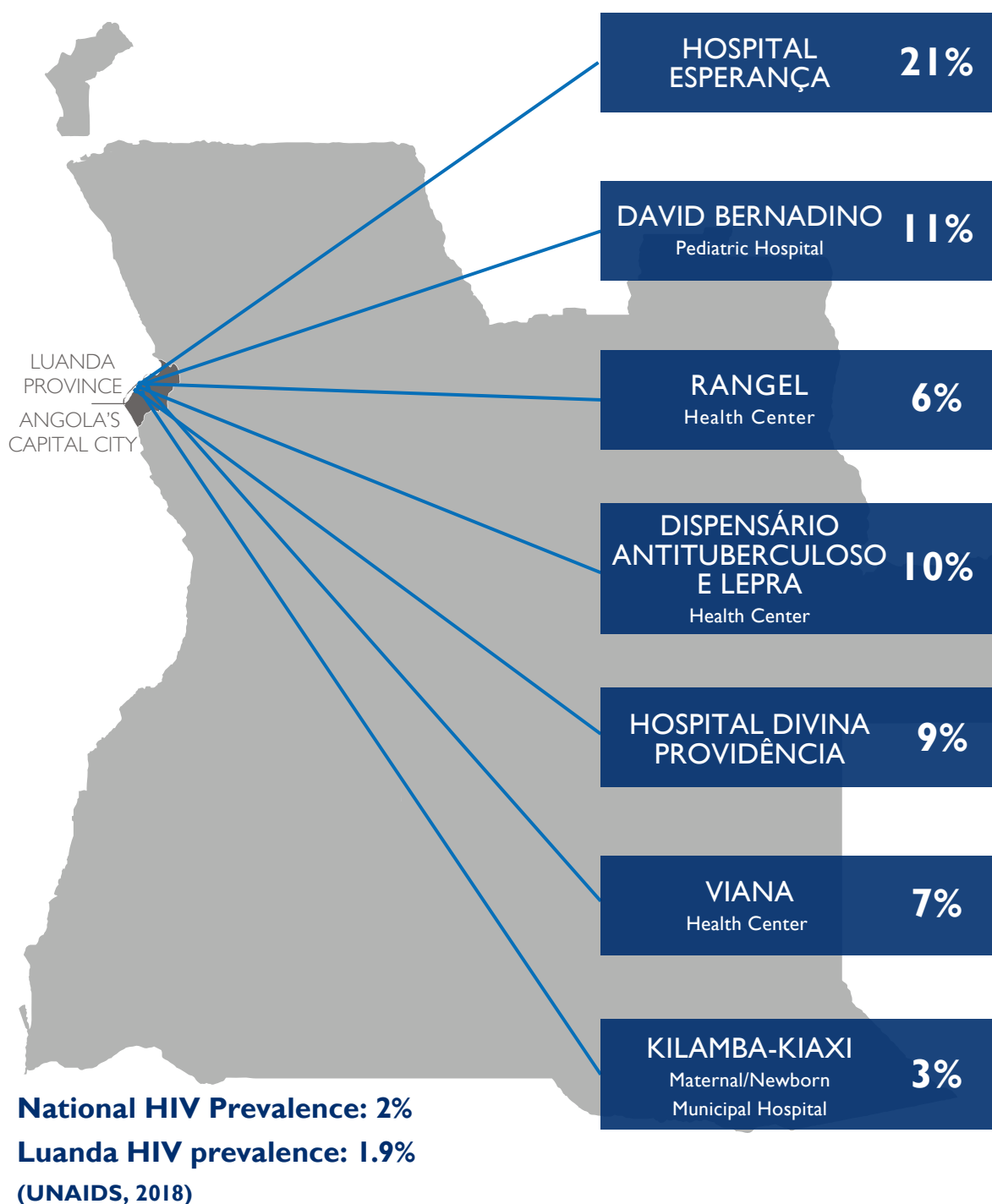**HEALTHFORALL**

REACHING THE THREE 90s: ESTABLISHING A SUSTAINABLE MODEL FOR HIV PREVENTION, CARE, AND TREATMENT IN ANGOLA

FIGURE 1. HIV POSITIVITY RATE IN EACH OF THE SEVEN HEALTH FACILITIES SUPPORTED BY HFA, BASED ON PROGRAMMATIC DATA, FISCAL YEAR (FY) 2017–2019

LUANDA PROVINCE

ANGOLA'S CAPITAL CITY

| HOSPITAL ESPERANÇA | 21% |

| DAVID BERNADINO Pediatric Hospital | 11% |

| RANGEL Health Center | 6% |

| DISPENSÁRIO ANTITUBERCULOSO E LEPRA Health Center | 10% |

| HOSPITAL DIVINA PROVIDÊNCIA | 9% |

| VIANA Health Center | 7% |

| KILAMBA-KIAXI Maternal/Newborn Municipal Hospital | 3% |

National HIV Prevalence: 2%

Luanda HIV prevalence: 1.9%

(UNAIDS, 2018)

CONTENTS

BACKGROUND

Angola, a coastal country in southern Africa bordering Namibia, Botswana, Zambia, and the Democratic Republic of the Congo, has made considerable gains in strengthening its health system since the end of a nearly 30-year civil war in 2002. However, the country continues to face challenges in reaching people living with HIV (PLHIV) with quality services, preventing new infections, and achieving HIV epidemic control.

Angola has a relatively low adult HIV prevalence of 2% when compared to surrounding countries.[1] An estimated 330,000 PLHIV[2] reside in Angola, with higher proportions living in urban areas. Nearly two-thirds of PLHIV are women, and new infections among young women aged 15–24 years in 2018 were more than triple those among young men. Between 2010 and 2018, there was a 33% increase in AIDS-related deaths and an increase in the number of new HIV infections.[3]

Angola's health system is overburdened, under resourced, and lacks adequate space and sufficient staff to provide quality HIV services, contributing to suboptimal case finding and poor adherence to life-saving antiretroviral therapy (ART) and retention in care. Angola is among the eight countries in sub-Saharan Africa where more men than women are on ART,[4] but across age groups and age bands, ART coverage was low at 28% of adults and 13% of children aged 0–14 years in 2018. Among pregnant women, coverage of antiretroviral drugs for the prevention of mother-to-child transmission was just 34%, and early infant diagnosis—the percentage of HIV-exposed infants tested for HIV before eight weeks of age—was just 1.4%.

PROJECT CONTEXT

The *Saúde para Todos* (Health for All [HFA]) Project in Angola, funded by the US Agency for International Development (USAID) and led by Population Services International (PSI), was launched in January 2017 to support the government's efforts to increase quality health service delivery in the country. The five-year project targets major improvements in health through sustainable approaches and increased country ownership. Delivered in partnership with Management Sciences for Health (MSH) and local partners Rede Mulher Angola and the MENTOR Initiative, the project is delivering a package of health interventions to bring malaria, HIV and AIDS, family planning (FP), and reproductive health services to select municipalities and provinces throughout the country, reaching the poorest and most vulnerable citizens of Angola.

In line with Angola's National Institute for the Fight Against AIDS (INLS) and PEPFAR objectives, MSH supported the Government of the Republic of Angola (GRA) to establish a sustainable model for providing high-quality HIV and AIDS services. Between 2017-2019, the project improved the quality of service delivery across the entire continuum of care, from prevention to linkage to care and treatment to viral suppression, in close collaboration with the GRA and in support of its aims to maintain the country's relatively low HIV prevalence and expand coverage of services for PLHIV.

Through this work, HFA supported the GRA in its efforts to achieve sustainable control of the HIV epidemic and reach the ambitious 90-90-90 goals of the Joint United Nations Programme on HIV/AIDS (UNAIDS): 90% of PLHIV diagnosed, 90% of diagnosed PLHIV on ART, and 90% of PLHIV currently on ART virally suppressed.

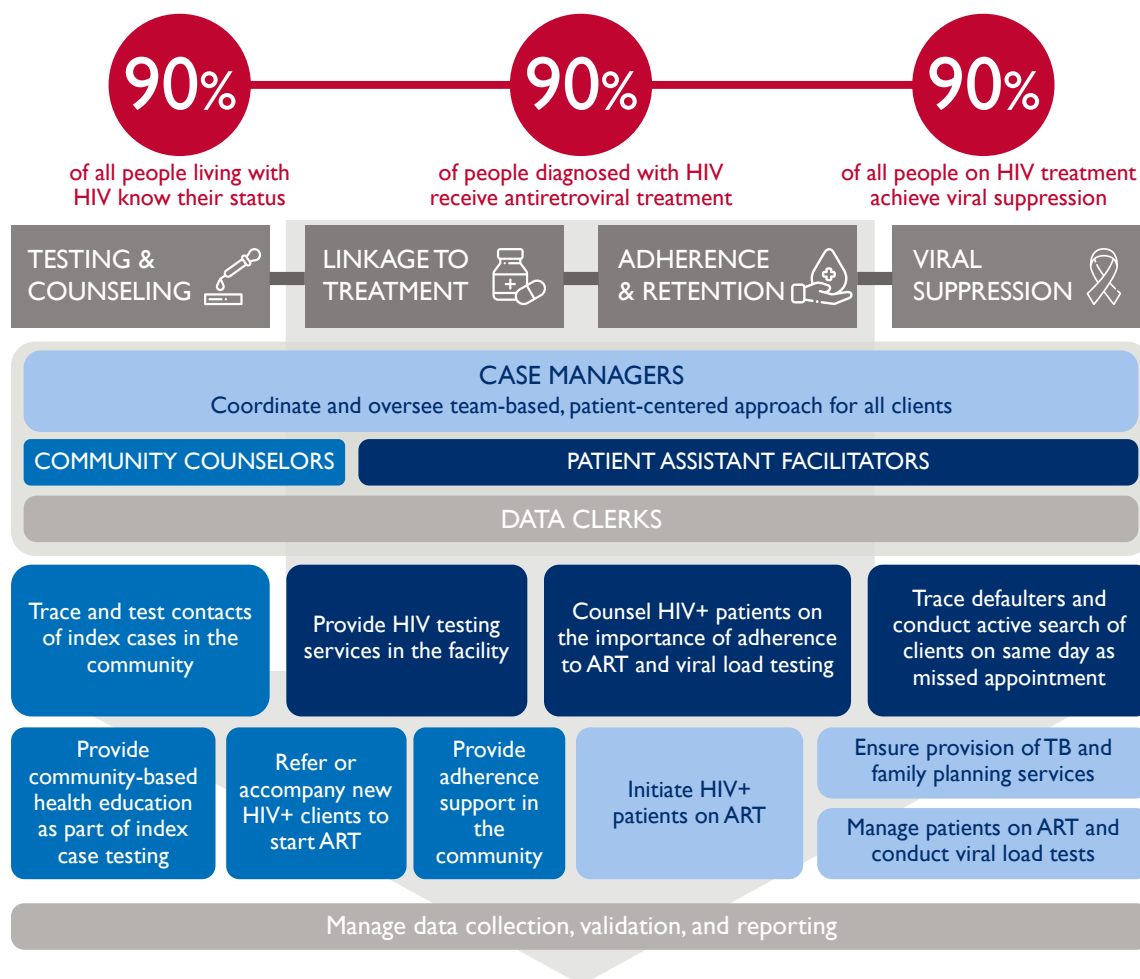Photo by Health for All Project Staff/USAID Angola

PROJECT APPROACH

To guide Angola's response to HIV, the project developed a continuum of care (CoC) service model in close collaboration with the INLS, drawing from global and Angolan evidence-based interventions and tools. The model considers a person's journey through the HIV treatment cascade and recognizes the various steps necessary for everyone who needs HIV care to remain engaged in it—from the initial stage of getting tested for HIV to suppressing the virus through treatment. The CoC model provides a sustainable approach for delivering effective and high-quality services including:

- HIV testing services, including index case testing (ICT)
- Linkage to ART
- Adherence to ART and retention in care support
- Tuberculosis (TB)/HIV co-infection management
- Viral load testing
- Integrated sexual and reproductive health services, including FP
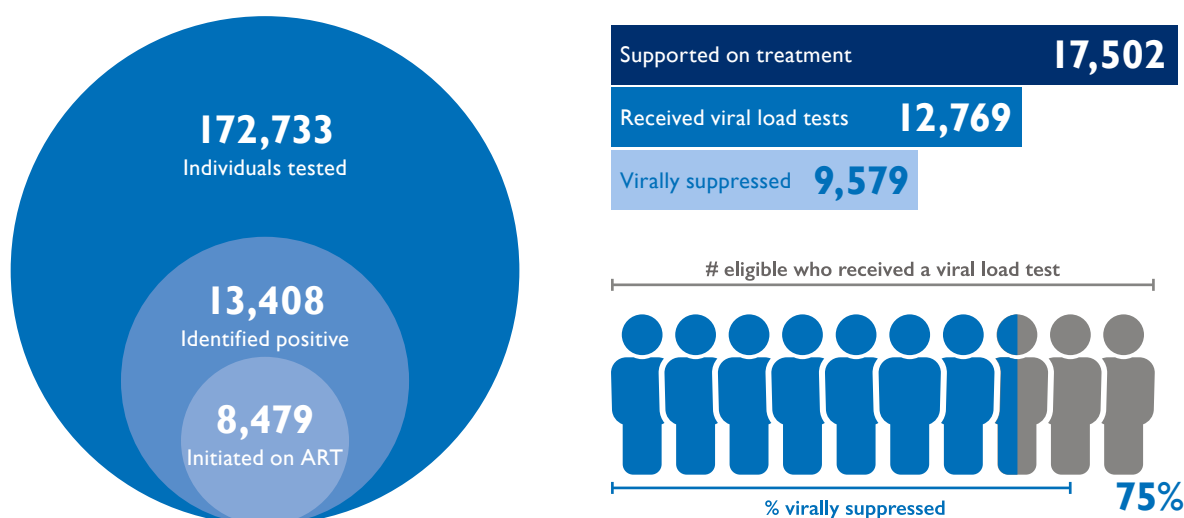- HIV prevention and treatment services tailored to key populations

The CoC model was intended to be dynamic and contextualized. HFA supported seven health facilities in Luanda to deploy the CoC model: Hospital Esperança, Dispensário Antituberculoso e Lepra Health Center, Hospital Divina Providência, Kilamba-Kiaxi Maternal/Newborn Municipal Hospital, David Bernadino Pediatric Hospital, Rangel Health Center, and Viana Health Center. The project worked closely with management teams in each facility to tailor the CoC to the specific needs of the patients accessing services and targeted technical assistance to address facility-specific gaps or weaknesses, both urgent and systemic.

FIGURE 2. HFA'S CONTINUUM OF CARE MODEL, IMPLEMENTED ACROSS SEVEN HEALTH FACILITIES: 2017–2019

90%
of all people living with HIV know their status

90%
of people diagnosed with HIV receive antiretroviral treatment

90%
of all people on HIV treatment achieve viral suppression

| TESTING & COUNSELING | LINKAGE TO TREATMENT | ADHERENCE & RETENTION | VIRAL SUPPRESSION |

CASE MANAGERS
Coordinate and oversee team-based, patient-centered approach for all clients

COMMUNITY COUNSELORS | **PATIENT ASSISTANT FACILITATORS**

DATA CLERKS

Trace and test contacts of index cases in the community

Provide HIV testing services in the facility

Counsel HIV+ patients on the importance of adherence to ART and viral load testing

Trace defaulters and conduct active search of clients on same day as missed appointment

Provide community-based health education as part of index case testing

Refer or accompany new HIV+ clients to start ART

Provide adherence support in the community

Initiate HIV+ patients on ART

Ensure provision of TB and family planning services

Manage patients on ART and conduct viral load tests

Manage data collection, validation, and reporting

RESULTS

FIGURE 3. KEY HFA RESULTS ACROSS SEVEN HEALTH FACILITIES: APRIL 2017-JULY 2019

172,733
Individuals tested

13,408
Identified positive

8,479
Initiated on ART

Supported on treatment	**17,502**
Received viral load tests	**12,769**
Virally suppressed	**9,579**

eligible who received a viral load test

% virally suppressed

75%

FIRST 90

By 2020, 90% of all people living with HIV will know their HIV status.

FIGURE 4. NUMBER OF PEOPLE TESTED BY QUARTER
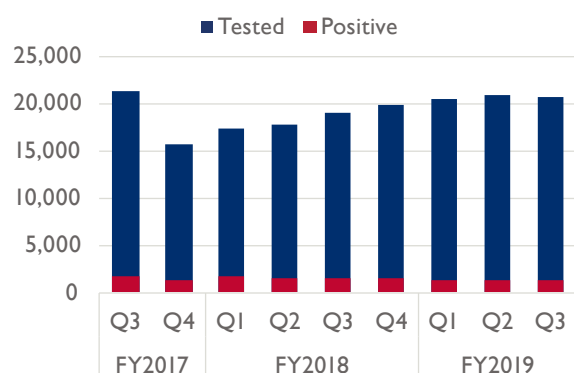
Over the life of the project, HFA tested 172,733 people and identified 13,408 new PLHIV. To improve HIV testing efficiency, HFA piloted ICT in three facilities and later scaled it to six of the seven project-supported facilities. The purpose of ICT is to identify the contacts of PLHIV, including sexual partners, children, and people with whom they have been sharing needles, and offer HIV testing and counseling services. ICT proved to be HFA's highest yielding testing modality. Positivity rates are depicted in Figure 5.

FIGURE 5. INDEX CASES, TESTED CONTACTS, POSITIVES, AND POSITIVITY RATES
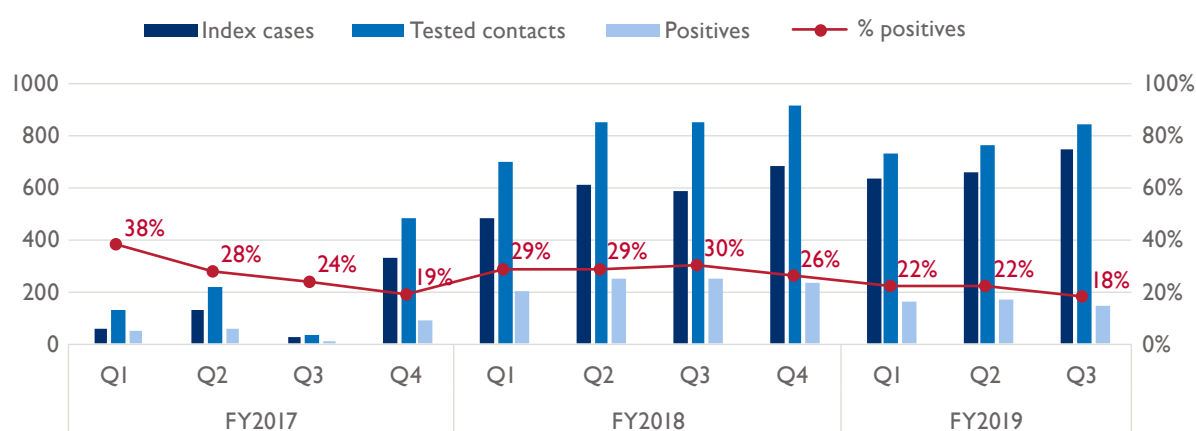
INDEX CASES, TESTED CONTACTS, POSITIVES, AND POSITIVITY RATES

	FY 2017				FY 2018				FY 2019		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Index cases	60	135	25	333	484	608	590	687	638	663	744
Tested contacts	131	221	34	483	697	853	848	912	732	762	841
Positives	50	61	8	90	204	248	251	239	164	168	148
% positives	38	28	24	19	29	29	30	26	22	22	18

TRACING HIV CONTACTS, SAVING LIVES

When Maria's* 15-month-old child showed signs of malnutrition, she sought care at Viana Health Center, one of seven HFA-supported facilities in Luanda. In-line with clinical guidelines, Maria's child was tested for HIV. Following a positive diagnosis, Maria was immediately tested and learned she was also living with HIV.

A Patient Assistant Facilitator at the health center introduced Maria's case to Eva Hadi Dos Santos, a Community Counselor. Maria told Eva that she was very worried about the health of her child but lacked the courage to face her husband with the news. Eva explained the importance of revealing her status to her husband and family, provided her phone number, and reassured Maria of her support.

Later that day, Maria called with a shaking voice, asking Eva to come quickly; Maria's husband had tried to kill himself. Eva asked to speak with Maria's husband, Carlos*, and managed to keep him calm until she arrived.

As she counseled the couple, she explained the stages of HIV and the differences between HIV and AIDS. She discussed topics such as transmission, the strain it can have on a couple, what HIV meant for their child, and the advantages of appropriate care and treatment. Eva's counseling stressed how important their support for each other would be and she reassured them of her own support and confidentiality. She also provided information on proper nutrition and breastfeeding practices for their child.

Carlos agreed to be tested. His result was negative. He committed himself to care for his wife and young child, thanks to support from Eva. Three weeks later, during their next visit to the health center, their child had recovered from malnutrition, was feeding well, and gaining weight.

Names changed to protect privacy

SECOND 90

By 2020, 90% of all people diagnosed with HIV infection will receive sustained antiretroviral therapy.

HFA initiated 8,479 newly diagnosed HIV-positive patients on ART and followed up with 17,502 current ART users to ensure treatment adherence. The project increased the percentage of new HIV-positive individuals linked to HIV treatment from less than 40% to more than 70% in three years, achieving a 78% linkage rate in the final quarter. Linkage was highest among PLHIV identified through index case testing; these results are presented in Figure 6. The hard work of Patient Assistant Facilitators and Community Counselors contributed to high linkage rates.

Strengthening HIV and TB Integration

The project identified 13,445 new and recurring TB patients between October 2017 and June 2019, 12,172 (91%) of whom now know their HIV status. Figure 7 shows achievements by quarter.

FIGURE 6. LINKAGE TO CARE RATE OF PATIENTS IDENTIFIED THROUGH INDEX CASE TESTING
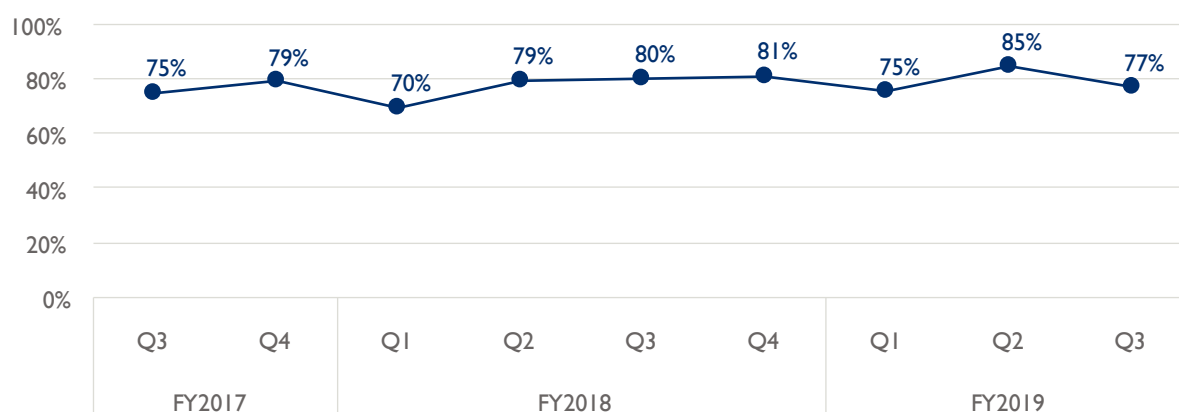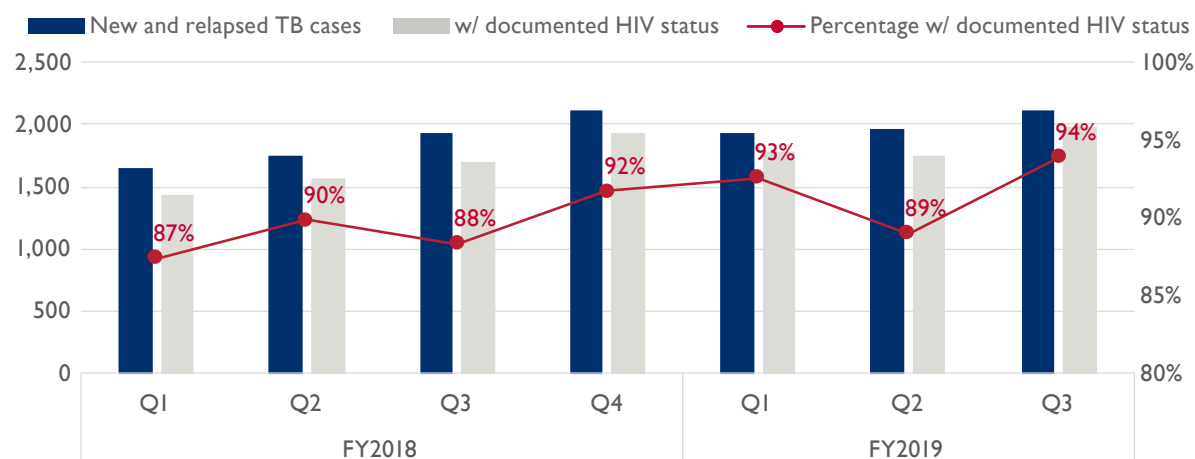

FIGURE 7. TB PATIENTS WHO KNOW THEIR HIV STATUS

WORKING TOGETHER TO IMPROVE QUALITY OF LIFE

Elizabeth Alberto's headaches and dramatic weight loss were ceaseless. Over six months, the 26-year-old student and mother lost nearly 18 pounds and suffered persistent pain from an unidentified illness.

Her condition worsened: high fevers, dysentery, vomiting. After visiting four different health facilities, and being hospitalized, her condition failed to improve. Elizabeth then sought care at a health unit supported by the HFA Project. An HIV test determined she was positive. A true diagnosis had finally been identified, and Elizabeth became deeply depressed, fearful of her future and the stigma she would face. The HFA team initiated counseling to help educate Elizabeth about her diagnosis and encouraged her to embrace treatment.

Through HFA's innovative approach involving a team of dedicated advocates and educators, contact with Elizabeth continued when she returned home. Frequent home visits by Maria Francisco, a Community Counselor, created a deeper understanding and relationship with Elizabeth, who eventually agreed to start treatment.

Once at the health facility, she met with Patient Assistant Facilitator Elizabeth Fernandez and an HIV-positive mother, who shared her own experience of adherence to treatment; it can lead to a healthy and productive life. Within weeks of beginning her treatment, Elizabeth had a new outlook on life. Her headaches subsided, and she was regaining weight. Today, she reflects on her story, hoping that it will help others struggling with an HIV diagnosis to seek and adhere to treatment: *"Go forward! Forgetting suicide as a solution and accepting that you are carriers of the virus are the first steps to receiving the treatment you need to improve the quality of your life."*

THIRD 90

By 2020, 90% of all people receiving antiretroviral therapy will have viral suppression.

As of June 2019, more than 17,000 Angolans were receiving ART in the seven HFA-supported health facilities. More than 73% of patients on ART had their viral load tested, and 75% of those had an undetectable viral load, making them much less likely to pass the virus to their partners or children.

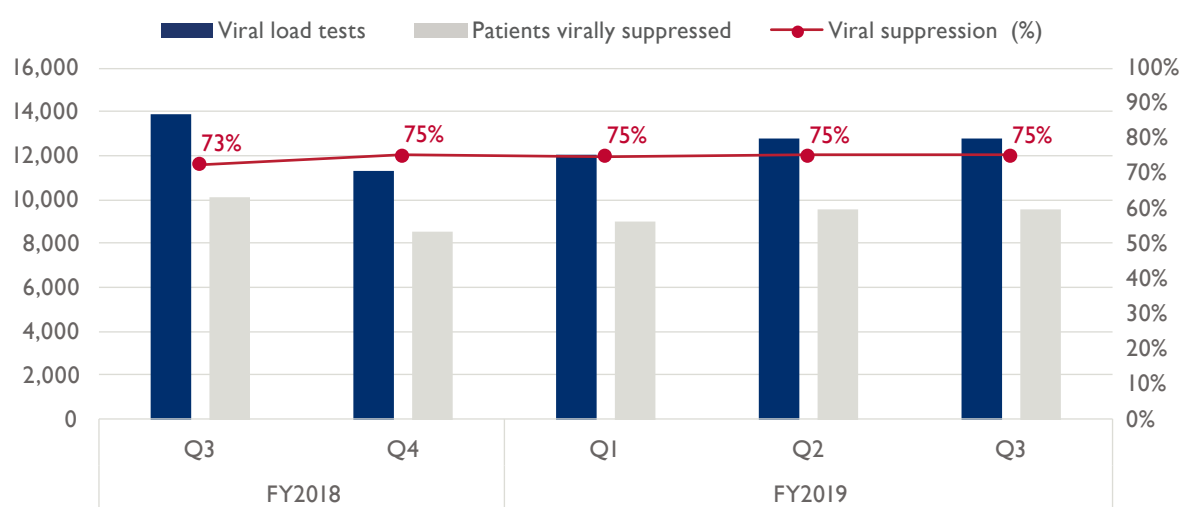FIGURE 8. PATIENTS WITH VIRAL LOAD TESTS AND VIRAL SUPPRESSION

LINKING MOTHERS AND COUPLES TO HIV TESTING AND CARE

A decade since her HIV positive diagnosis, Manuela dos Santos shares her story with people who struggle to cope with an HIV positive diagnosis. After years of adherence to antiretroviral treatment, she has had an undetectable viral load for six years, and her partner remains HIV negative. "Sharing my story helps people cope with a positive diagnosis and get the treatment they deserve and need to fulfill their lives," says Manuela.

As a Patient Assistant Facilitator trained under HFA, she accompanies couples to HIV testing and provides counseling and support to people living with HIV. Happily expecting her third child, Manuela counsels pregnant women to protect their children from the virus by learning their status as early as possible and beginning treatment immediately if they test positive.

Like Manuela, many of the Patient Assistant Facilitators trained under HFA are themselves living with HIV, acting as role models for sustained adherence and HIV management.

STRENGTHENING HEALTH SYSTEMS FOR SUSTAINABLE SERVICE DELIVERY

To support high quality service delivery, HFA strengthened the health system at the facility level with a focus on human resources for health, management of health information, and procurement of equipment and supplies.

Human Resources for Health

Throughout the life of the project, HFA worked in close collaboration with the INLS and health facility directors to optimize the health workforce for delivery of the CoC and increase the capacity of both clinical providers and lay cadres. Operationalizing task-sharing to ensure high-quality service provision, reduce the workload of overburdened clinical providers, and extend services into the communities and homes where PLHIV live was an important component of HFA's approach. HFA deployed case management and a team-based care approach to support integrated patient-centered care and navigation support across the CoC.

HFA integrated Patient Assistant Facilitators (PAFs) to work with clinical teams at each of the seven sites to conduct active case finding, ensure adherence to treatment and retention in care through support services, and track those lost to follow up through phone calls. Many of these PAFs were PLHIV themselves, acting as role models for sustained adherence and HIV management. HFA also engaged Community Counselors (CCs) to deliver ICT by tracing and testing index case contacts in the community. CCs also performed essential services, such as community-based health education sessions on topics such as sexual and reproductive health, hygiene, and TB, as well as HIV prevention and treatment, in order to protect against inadvertent disclosure of an index case's HIV status and extent health messaging beyond the health facility.

To strengthen the quality of HIV service provision, HFA trained 228 facility staff in all services in the CoC model. The team also provided weekly supportive supervision and mentoring visits to the seven health facilities. HFA developed tools to guide better management of HIV positive patients accessing health facilities under the leadership of the INLS and with participation from national and international partners. These included facility-specific standard operating procedures (SOPs) for each of the CoC services, as well as job aids, screening tools, and in-service trainings.

Health Information Management

The timely collection of accurate data is fundamental to client case management. HFA recruited, trained, and supervised nine data clerks to support data management in the seven facilities. The project also facilitated monthly data review and planning meetings for each facility, in collaboration with provincial and district-level counterparts.

Equipment and Supplies

To enable effective delivery of services, the project occasionally provided medical equipment to facilities to address critical shortages. HFA supported the expansion of Angola's diagnostic capacity in three sites across Luanda, where the HIV and TB burden is highest: Viana, Kilamba-Kiaxi, and Esperança. The procurement and installation of three GeneXpert machines in 2018 expanded the GRA's network of 12 GeneXpert machines supported by Global Fund, strengthening the nation's fight against TB and drug-resistant TB. HFA also procured select laboratory equipment, including refrigerators, centrifuges, and air conditioning units. The project partnered with Angola's National Tuberculosis Control Program, the National Institute of Public Health, and the African Field Epidemiology Network (AFENET) to provide a hands-on training for staff from government programs and hospitals, including clinicians, nurses, and laboratory technicians, on the use of GeneXpert to quickly and accurately diagnose patients with TB and initiate treatment.

Transition Planning

HFA embedded strategies to strengthen local capacity and support sustainability from the onset of the project. For example, the project integrated supportive supervision of facility staff with national health staff from the INLS, the National Tuberculosis Control Program, Provincial Health Cabinet of Luanda, and Municipal District of Health. However, planning for a full transition had to be accelerated when PEPFAR announced a change in strategy that resulted in early closure of the project at the

end of year three. To facilitate a rapid and smooth transition, HFA developed facility-specific transition plans which comprised the following key activities: training, mentorship, joint supportive supervision, transference of tools (including SOPs), and strategic documentation. These activities, implemented between April and August 2019, were designed to ensure that all lessons learned and best practices developed over the life of the project were transferred to GRA counterparts, along with all of the systems, tools, and processes required to sustain them.

LESSONS LEARNED

HFA's success was due to the patient-centered CoC model, which considered a person's journey through the HIV treatment cascade. PAFs, CCs, and case managers provide patient-centered testing, counseling, and treatment for HIV and recognize the various steps necessary for everyone who needs HIV care to remain engaged in it—from the initial stage of getting tested for HIV to suppressing the virus through treatment. Task-sharing activities implemented through HFA brought services closer to clients, enhanced the understanding of local challenges, and tailored the program to individual needs.

■ CCs served as an essential nexus between the health facility and the community.

■ PAFs greatly contributed to linkage and adherence to care by following up with patients to initiate ART as soon as they learn their status and following up on the same day as a missed appointment to ensure adherence.

■ Lay counselors (CCs and PAFs) alleviated medical staff shortages by allowing professional cadres, such as nurses and clinicians, to focus on clinical case management. As a result, more clients and patients have been reached and provided with services.

SOPs and clinical referral pathways demonstrated the feasibility and benefits of integrating FP services and HIV care and treatment in Angola. Integrating HIV and FP services allowed for more testing points and opportunities to identify new cases. Increasing the number of testing points in both types of facilities provided HIV services and established clear referral mechanisms in facilities providing only FP services. This is another opportunity to identify new HIV cases and link them to care.

Integrating HIV and TB services in Angola also requires effective coordination and collaboration with national stakeholders. Health facilities need the necessary infrastructure and human resources to provide quality services, training to improve health providers' competencies to treat both diseases, alterations to clinic flows and management processes, and ongoing mentorship and supervision of TB staff on ART care and HIV staff on TB screening.

CONCLUSION

Client trust in the health care system is a critical element if Angola is to reach the 90-90-90 goals. HFA's model was centered on trust, which ensured that each person had a tailored, patient-centered approach to best meet his or her needs and preferences. HFA's comprehensive CoC model approach contributed to retention and quality care services for PLHIV and patients co-infected with HIV and TB, viral load suppression testing, and ICT and tracing by understanding a client's experience in care.

CCs were the linchpin to quality case finding and linkage to treatment. Frequent home visits by CCs help to ensure a deep understanding of the context in which newly diagnosed patients live, tailor services and counseling to their specific needs, and develop trust with patients, ultimately resulting in cases and contacts agreeing to initiate ART at health facilities. Complemented by PAFs, the model resulted in higher rates of adherence to ART and viral suppression. Coordination among case managers, CCs, and PAFs along the HIV continuum of care supported clients to receive the right services in the right places and at the right time. Data clerks play a vital role in monitoring and evaluation to ensure the work realized in the health facilities show results and demonstrate the impact for PLHIV. The active presence of data clerks in each health facility enabled improved data collection and analysis throughout the project.

The ICT approach was crucial role in identifying new contacts who may be infected with HIV but do not yet know their status. It is an effective approach that increases the early identification of PLHIV to ensure timely enrollment in HIV care and treatment services and improve coverage of counseling and referral to prevention services among HIV-negative contacts. Targeted index case contact testing was a high-yield strategy for identifying PLHIV and linking them to ART services.

Growing evidence highlights the importance of integrating FP and HIV services. HFA found pathways for FP/HIV services to be integrated even when they were at different health facilities. The integration of TB/HIV services through a one-stop shop model is also feasible and can lead to increased uptake of ART among PLHIV.

RECOMMENDATIONS

Significant opportunities remain in Angola for improved health outcomes and integration of services. The CoC model—which includes CCs, PAFs, case managers, and data clerks—should be prioritized as a key investment strategy to contribute to the GRA's goal of HIV epidemic control. CCs and PAFs should be prioritized for continued investment as a key strategy to contribute to the National Strategic Plan.

Integration of services such as HIV and FP demonstrated feasibility, but implementation of this approach will require continued collaboration between the INLS and the National TB Control Program, as well as close coordination and planning at the provincial level and across national and international stakeholders.

Photo by Health for All Project Staff/USAID Angola

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