



# Improving **Retention in HIV Care and Treatment** through Nurse-led, Home-based Care in **Central Asia**



## BACKGROUND

HIV incidence continues to rise in Central Asia and Eastern Europe. Between 2010 and 2015, there was an estimated 57 percent increase in new infections each year.<sup>1</sup> By 2015, there were 1.5 million people living with HIV in the region, only 20 percent of whom were accessing antiretroviral therapy (ART).<sup>2</sup> Access to ART and retention in care is particularly low among key populations facing high levels of stigma and discrimination, such as people who inject drugs, sex workers, and men who have sex with men. Challenges to retention and adherence include stigma, discrimination, lack of family support, and the opportunity costs related to health care (travel time and costs, clinic wait times, income loss, etc.). Increasing retention in care and adherence to ART requires people-centered services that are organized around the health needs and preferences of people living with HIV.<sup>3</sup> Home-based care is an intervention that has the potential to reduce many of these barriers to sustained HIV care and treatment. Nurses often have the most direct contact with patients and have proven to be the most effective home-based caregivers.

### WHAT WAS ACHIEVED

The following key achievements resulted from the support ICAP provided to local partners in Kazakhstan, Kyrgyzstan, and Tajikistan in 2015 and 2016:

- Increased the proportion of people living with HIV still on treatment 12 months after starting ART:
  - In Kazakhstan's East-Kazakhstan Oblast, the proportion increased from **54 percent** to **72 percent**
  - In Kyrgyzstan, the proportion increased from **55 percent** to **82 percent**
- Trained **39** home visiting nurses
- Conducted over **15,230** home visits
- Conducted **49** facility-based mentorship visits
- Developed and introduced a training manual/ curriculum for nursing schools at postgraduate universities in Kazakhstan and Kyrgyzstan

*"Low adherence to regular HIV care and treatment and high numbers of patients lost to follow-up are among the key challenges to effective epidemic control in Central Asia. The outcomes of the Home Visiting Nurse Program are encouraging and can be applied to help improve the situation."*

Anna Deryabina  
ICAP country director in Central Asia

Assisted  
**163**  
people  
living  
with HIV  
to restart  
ART



PROVIDED HIV  
COUNSELING TO

**340**

SEXUAL PARTNERS

AND TESTED

**166**

RE-ENGAGED

**134**

previously

lost-to-follow-up patients in treatment



<sup>1</sup> Prevention Gap Report. UNAIDS; 2016.

<sup>2</sup> Fact Sheet 2015. UNAIDS; 2015.

<sup>3</sup> Policy Brief: Consolidated Guidelines on the Use of Antiretroviral Drugs for Treating and Preventing HIV Infection: What's New. Geneva: WHO; 2015.

Figure 1: Location and Number of ICAP-Trained Home Visiting Nurses



## PROJECT SUMMARY

Since 2011, with funding from PEPFAR through the Centers for Disease Control and Prevention (CDC), ICAP has worked with ministries of health and local partners at HIV facilities in Kazakhstan, Kyrgyzstan, and Tajikistan to improve the quality of medical services available to people living with HIV. By supporting comprehensive, patient-centered HIV services, ICAP is also working to increase rates of patient retention in HIV care and adherence to treatment. As of December 2016, ICAP was supporting 20 health facilities that provide HIV care and treatment services across Kazakhstan, Kyrgyzstan, and Tajikistan. A key component of ICAP's support has been the Home Visiting Nurse Program, which uses a home-based care model to train and mentor nurses from health facilities who then extend services into the community, targeting patients who are not able or willing to attend appointments at HIV care and treatment clinics.

The Home Visiting Nurse Program, which began in 2015, is being implemented at all 20 ICAP-supported health facilities

in Kazakhstan, Kyrgyzstan, and Tajikistan (see Figure 1). The program is being implemented in close partnership with the ministries of health and the Republican AIDS Centers in each country, as well as local health education institutions. To date, ICAP's support has included training home visiting nurses in comprehensive HIV management, providing mentorship and clinical supervision to home visiting nurses, creating linkages to other services for people living with HIV, and institutionalizing the identification of treatment supporters. The Home Visiting Nurse Program is part of ICAP's broader work in the region, which includes the revision of national clinical protocols in the three republics, strengthening HIV management nursing curricula, providing regional training on the clinical management of HIV and TB/HIV co-infection, and supporting adherence counseling, data analysis, disease monitoring, laboratory activities, the development and roll-out of an electronic HIV case management system, and medication assisted therapy and risk reduction programming for people who inject drugs.

## CORE PROJECT APPROACHES

At the start of the Home Visiting Nurse Program, 39 of the most highly qualified nurses were selected from ICAP-supported sites across the three countries, in consultation with the ministries of health and Republican AIDS Centers, to be trained as home visiting nurses. To improve the quality of medical care and increase patient retention in care and adherence to ART, ICAP utilized the following approaches:

### Targeting the Most At-Risk Patients for Home-based Care

Using data extracted from the electronic HIV case management system, clinic HIV care and treatment supervisors identified and prioritized patients with whom home visiting nurses should connect. The aim was to reach patients most at risk of falling out of care and those who had already discontinued treatment or were no longer in contact with the clinic. To maximize the impact of the home visits, patients who had previously initiated ART were prioritized for home-based visits.

### Developing a Cadre of Well-Trained Nurses Equipped with HIV Management Skills

ICAP found that a considerable number of nurses in clinical departments were unable to perform basic HIV management tasks, such as adherence assessments. Nursing schools in the region offer little in the way of HIV clinical management training, leaving most graduates ill-equipped to take on more than basic clinical roles. Most nurses are not included in HIV capacity building programs and receive little or no formal, HIV-specific postgraduate training. ICAP's wider program in the region focuses on addressing this training gap in a number of ways, including through curriculum development, training, and clinical mentoring support. The new home visiting nurses were included in many of the national and on-the-job HIV trainings ICAP was providing in Kazakhstan, Kyrgyzstan, and Tajikistan. This included receiving general HIV training and targeted training on ART adherence, tuberculosis (TB) symptom screening, opioid substitution therapy, and home-based care.

*"When we started to work with people living with HIV, many of us did not have enough skills and knowledge to work with this category of patient. ICAP staff provided us with training, guidance, and regular support."*

Zuhra Ryskeldieva  
Home Visiting Nurse, Chui Oblast, Kyrgyzstan

### Task Shifting

Physicians in the region are often overburdened and ensuring that nurses are properly trained can help alleviate some of their workload. ICAP supported clinical supervisors to review which tasks could be transferred to the home visiting nurses, which freed up physicians' time to see additional patients in the clinic. As part of this task-shifting, home visiting nurses in Kazakhstan now conduct TB symptom screening and adherence monitoring, tasks that were previously done by physicians.

### Embracing a Holistic View of Adherence Barriers

ICAP encouraged nurses to use home visits as an opportunity to understand patients' living situation and apply that knowledge to improve patient care. For example, home visiting nurses can get a first-hand look at patients' routines and support systems, working with them to address adherence challenges and tailoring their ART regimen if needed. Similarly, nurses can see if stigma is a cause of non-adherence and work with patients to develop strategies to minimize stigmatizing circumstances in the future.

### Ensuring Robust Supervision of Home Visiting Nurses

ICAP developed quality improvement tools that helped health facility managers oversee the day-to-day management of home visiting nurses, including helping them determine which patients the nurses should visit and to delegate specific tasks to nurses based on indicators and problem areas (e.g., increase adherence work, provide ART education, refer for CD4 count or viral load testing). ICAP also built the capacity of health facility managers to effectively monitor and evaluate the work of home visiting nurses, providing monthly mentorship and support visits to each facility as well as additional support when needed.

### Identifying Treatment Supporters

It has been shown that actively involving friends or relatives in a patient's medical care increases adherence. To enhance the Home Visiting Nurse Program, ICAP introduced the practice of identifying treatment supporters to help patients follow their care and treatment plan. Once identified, the treatment supporter signs a mutual support agreement with the patient, promising to take on support responsibilities, such as reminding the patient to take his or her medications and to attend scheduled clinic appointments.

**Table 1: Increase in Patients Accessing HIV Care and Treatment Services in Kazakhstan, Kyrgyzstan, and Tajikistan**

	Number of Patients in Care		Number of Patients on ART		Number of Patients on ART with Viral Load >1000 copies/ml	
	2015	2016	2015	2016	2015	2016
<b>Kazakhstan</b>	1,715	2,520	705	1,075	467	631
<b>Kyrgyzstan</b>	1,010	1,307	664	1,050	315	521
<b>Tajikistan</b>	1,111	1,293	870	1,191	-	-
<b>TOTAL</b>	<b>3,836</b>	<b>5,120</b>	<b>2,239</b>	<b>3,316</b>	<b>782</b>	<b>1,152</b>

**Providing an Entry-Point for Comprehensive Care**

Nurses were trained to use home visits as an opportunity to cover a range of topics related to HIV and staying healthy, including nutrition and sexual health. Nurses were also trained to conduct routine symptom screening for TB, the largest cause of mortality among people living with HIV in the region. Spending time with patients in their homes enabled nurses to get to know a patient’s symptoms and challenges and to provide referrals for additional health services when needed.

**Providing Financial Support for Home Visiting Nurses**

Financial constraints are a limiting factor in the expansion of home-based care programs in the region. To enable nurses to travel daily to visit patients, ICAP provided financial support that went toward the salaries and travel reimbursements of home visiting nurses.



*“With the implementation of the comprehensive patient-centered care and treatment service delivery model, we can see an improvement in the HIV services provided to patients. The team-based approach is supporting continuous improvement in patient retention, as well as adherence to ART.”*

Dr. Zhanna Mustafina  
Head of the Clinical Department  
at Karaganda Oblast AIDS Center, Kazakhstan

## LESSONS LEARNED

The following lessons were learned during the implementation of the Home Visiting Nurse Program:

- **Nurses need targeted training to enable them to manage HIV care and treatment effectively.**
- **Care from home visiting nurses can improve patient retention in care and adherence to treatment.** Home visiting nurses spent significant time with patients, often more than would be the case in a clinic environment. As such, they had a unique opportunity to gain a more complete understanding of the patient's needs, discuss a wider spectrum of issues related to the patient's health, and improve patient retention in care and adherence to treatment (see Table 1).
- **Home visits can reduce care delays and interruptions by bringing services directly to patients' homes.**
- **Social stigma can be overcome through home-based care.** Patients affected by social stigma demonstrated improved adherence to medication when provided with health services in the privacy of their own homes.
- **Well-functioning health facilities are needed for successful home-based care.** The home-based care model is not effective if home visiting nurses cannot refer patients to health facilities that are functional for needed follow-up testing and care. This includes clinics that can provide speedy CD4 and viral load tests and are well-stocked with HIV test kits and needed medications.
- **Home visiting nurses require support.** Providing HIV care is demanding and emotionally exhausting work. It is important that home visiting nurses be linked to support services to ensure that they have the continued energy and capacity to provide quality care to people living with HIV in the community.

*"There was a 53-year-old patient residing in the city of Khorog with clinical stage four HIV infection. Due to profound immunosuppression, the patient developed Kaposi's sarcoma. The patient started treatment in 2014, but treatment was interrupted twice. The second time, we examined the patient at home and changed the regimen. We further talked to the patient about adherence and counseled family members on how to provide support to the patient. Home visiting nurses started to visit the patient regularly at home, provided the necessary medications, and advised the patient on his medical condition. Soon after, he started to take his medication without interruption and his condition improved. Soon, he even got a job. Through our efforts, his CD4 count rose from 87 to 170 in six months. This is due to the work and persistent support of the visiting nurses."*

Mansurdjon Dodarbekov  
Care and Treatment Specialist, Tajikistan





## THE WAY FORWARD

ICAP's experience demonstrates that home visiting nurses can successfully reach patients disconnected from health care services, improving both retention in care and adherence to treatment. Going forward, ICAP will continue to work closely with the ministries of health in Kazakhstan, Kyrgyzstan, and Tajikistan, as well as with CDC, to scale up the Home Visiting Nurse Program. The goal is that each facility providing HIV care and treatment in the three countries will have at least one home visiting nurse working with patients at the community level. Selected nurse mentors from the home visiting nurse team will support new nurses entering the program, sharing key lessons learned and creating a sustainable induction process. The nurse mentors will also train nurses and peer counselors on how to better target services to specific key populations, such as people who inject drugs.

To continue to improve the program, ICAP is planning an assessment that will evaluate the experiences, satisfaction, and outcomes of clients served by home visiting nurses. Learning from this assessment will help shape the program going forward and may be useful in advocating for increased resources to continue to expand the program throughout the Central Asian region.



## ABOUT ICAP

ICAP was founded in 2003 at Columbia University's Mailman School of Public Health. Now a global leader in HIV and health systems strengthening, ICAP provides technical assistance and implementation support to governments and non-governmental organizations in more than 21 countries. ICAP has supported work at more than 5,200 health facilities around the world. More than 2.2 million people have received HIV care through ICAP-supported programs and over 1.3 million have begun antiretroviral therapy.

**Online at [icap.columbia.edu](http://icap.columbia.edu)**

*This publication was made possible by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the Centers for Disease Control and Prevention (CDC) under the terms of cooperative agreement number 5U2GPS003074. Its contents are solely the responsibility of ICAP at Columbia University and do not necessarily represent the views of the U.S. Government.*



**ICAP**

GLOBAL. HEALTH. ACTION.

Columbia University  
Mailman School of Public Health