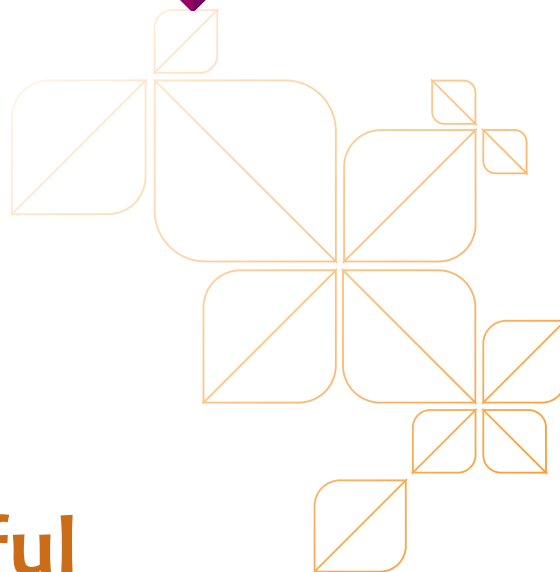




**RESPOND**



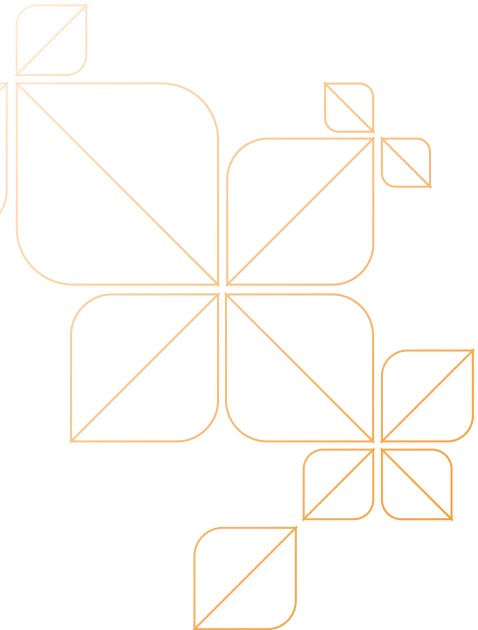
# Successful Quality Improvement Changes

Examples from seven  
RESPOND Priority Regions

**DECEMBER 2016**



# 1 SUCCESSFUL QI CHANGE, KYIV REGION



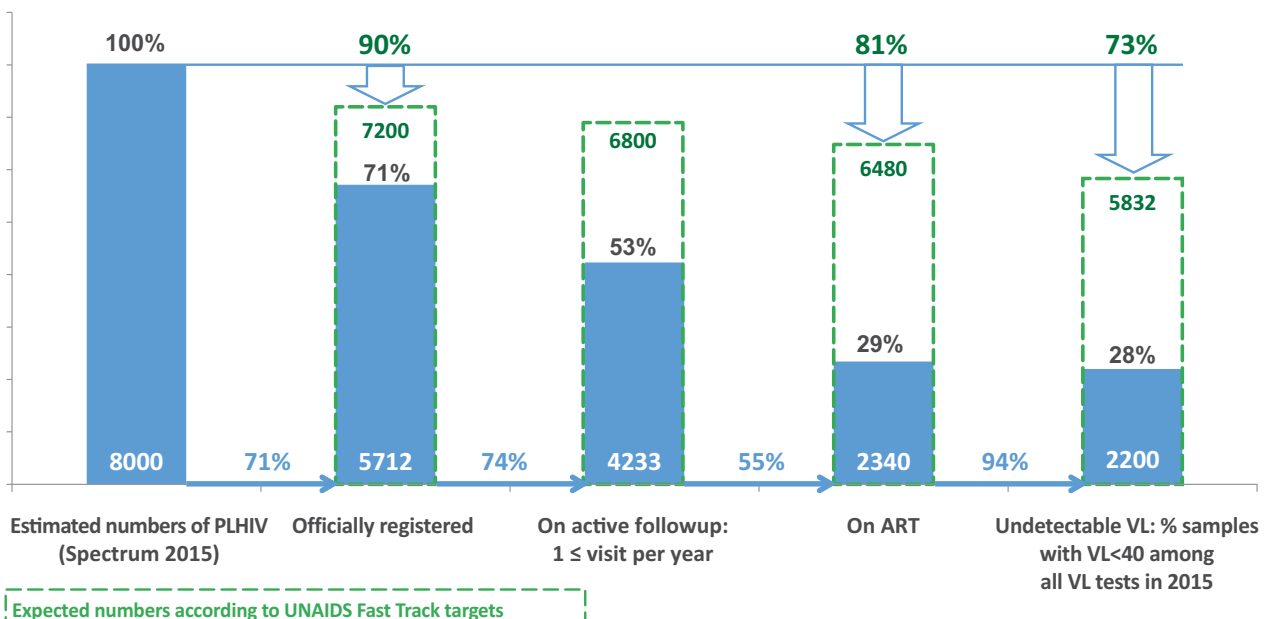
**Change:** HIV risk assessment by specialty physicians and provider-initiated HTS  
**Gap:** HIV Testing and Referral Services

## Problem Statement & Improvement Objectives

According to official estimates, 8,000 people are living with HIV in the Kyiv region. As of January 1,

2016, 5,700 (71%) of PLHIV know their HIV status and have been registered with AIDS services in the region. This demonstrates a 19% detection gap to reaching the target of 90% of PLHIV knowing their status.

**Cascade services for PLHIV in Kyiv region, as of 01.01.2016**





### Systems issues and changes tested

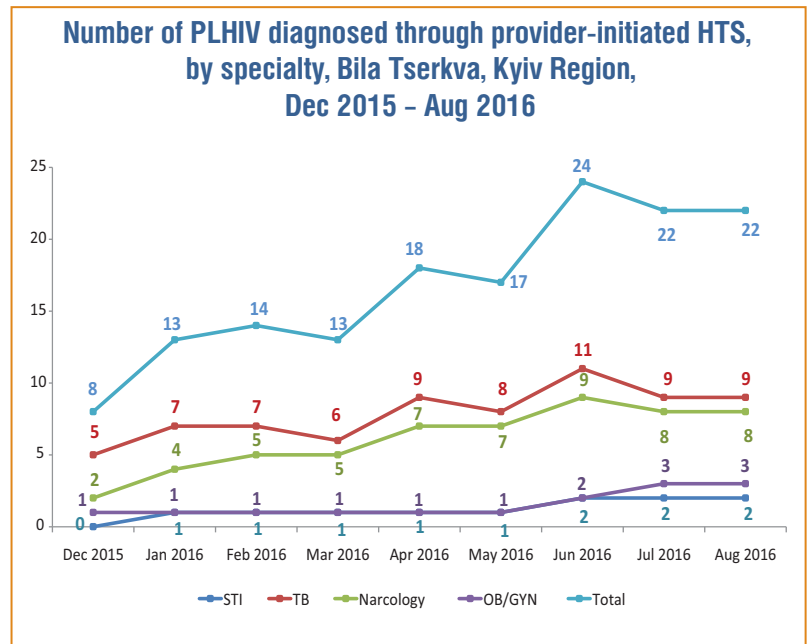
One of the main drivers of the detection gap identified by QI teams in Kyiv region was lack of HIV risk assessment and provider-initiated HTS by specialty services (such as TB, STI, narcology and OB/GYN). To address this challenge, local QI teams in the Kyiv Region, with support from RESPOND implemented the following changes: (1) Trained specialty service providers on clinical indications and HIV behavior risk screening; (2) Trained specialty providers on HTS; (3) Distributed job aids for HIV risk screening to specialty providers; and (4) Developed or updated local protocols and patient pathways to reflect the role of specialty services in HTS.

### Scale of the improvement effort

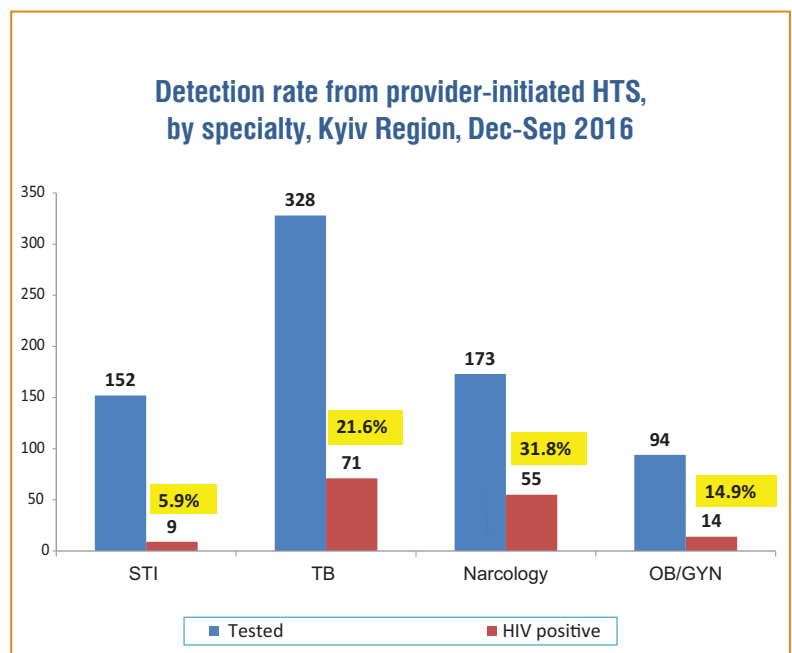
All 13 QI teams in the Kyiv region were involved in implementing these changes, including ART site physicians, TB, STI, narcology and OB/GYN specialists. With support from RESPOND, 43 specialists from the Kyiv region were trained on HIV risk screening and provider-initiated HTS.

### Improvement measures, results and interpretation

The implemented changes brought an increase in PLHIV diagnosed through provider-initiated HTS by specialists, as demonstrated on the run-chart below from the Bila Tserkva QI site in the Kyiv Region. The implemented changes allowed testing people both according to medical indications and risky behavior.



Region-wide, HTS initiated by specialists yielded high detection rates, between 6% for STI specialists and 32% for narcologists (see graph below).



### Learning & Next Steps

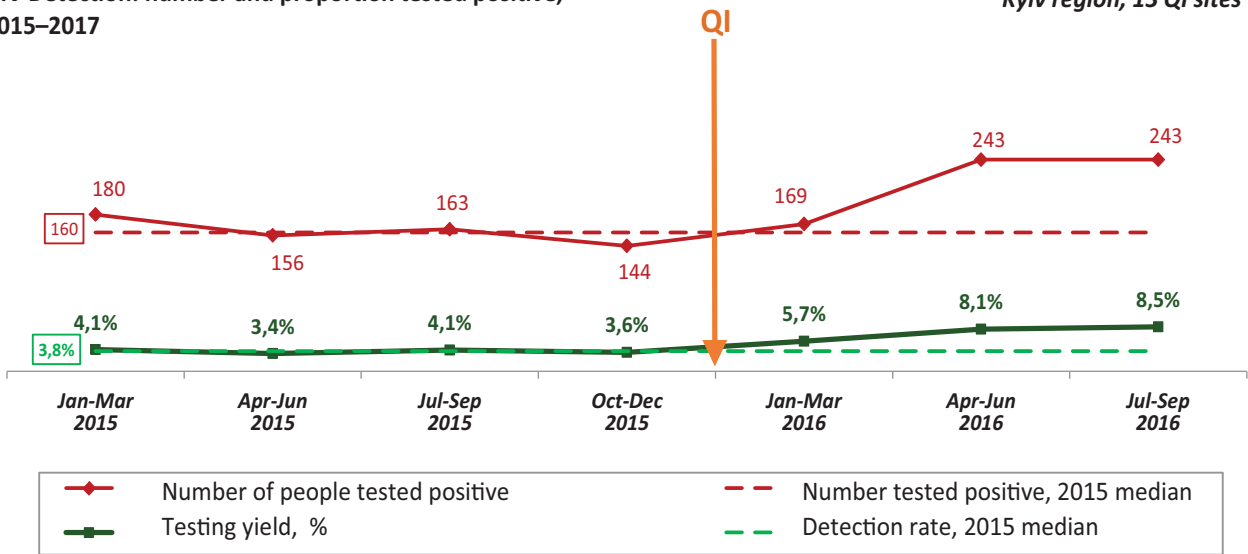
The implemented change improved the HIV testing yield and increased the number of patients testing positive in Kyiv Region, compared to 2015 medians (see graph below). The changes piloted have shown their effectiveness, and will be institutionalized in the existing and new ART sites, which the region is planning to establish in the near future, through the order of the regional department of health signed in August 2016.



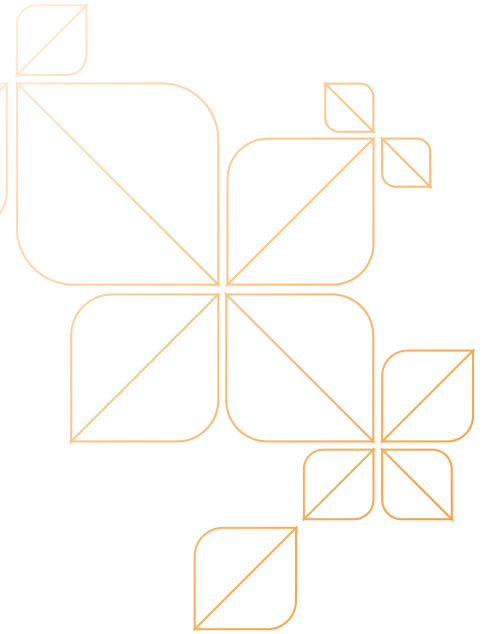
## Number and proportion of patients tested HIV positive, Kyiv Region, 2015-2016, by quarter

HIV Detection: number and proportion tested positive, 2015-2017

Kyiv region, 13 QI sites



## 2 SUCCESSFUL QI CHANGE, DNIPROPETROVSK REGION



**Change:** Linking PLHIV with AIDS service before they are discharged from TB and narcology hospitals

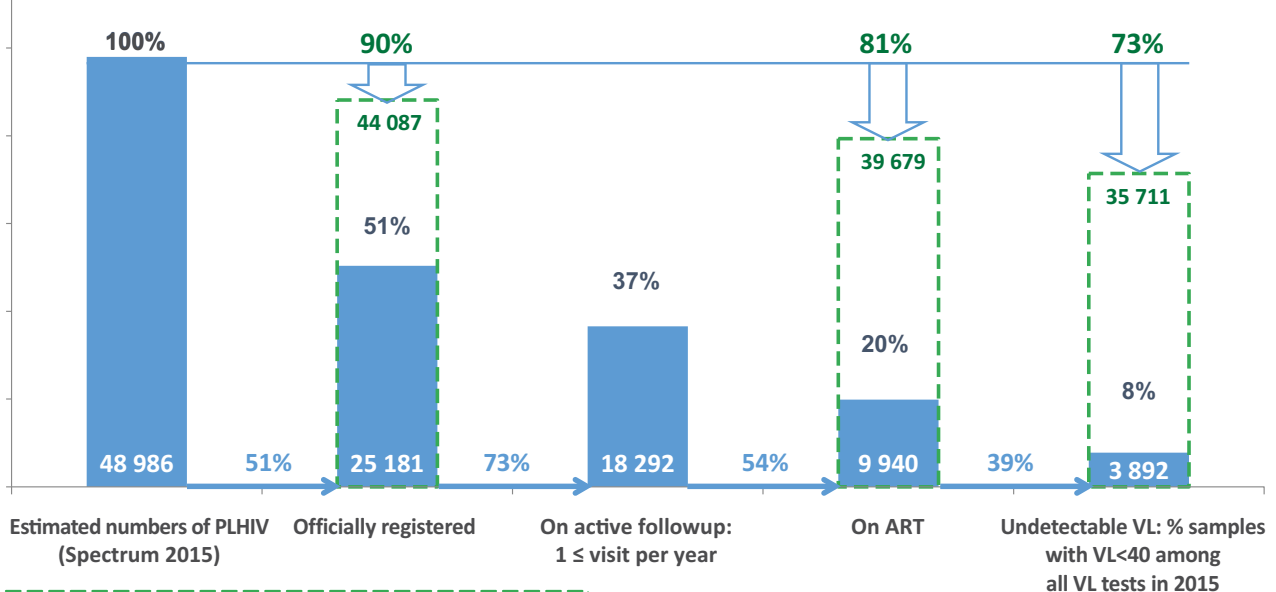
**Gap:** Linkage to Care

### Problem Statement & Improvement Objectives

According to official estimates, 49,000 people live with HIV in Dnipropetrovsk region, of whom 25,200 (51%) have been registered with AIDS services as of

January 01, 2016. With support from RESPOND, 37 service delivery teams (including ART sites, specialists, PHC providers and NGOs) started a Quality Improvement (QI) effort to achieve a 60% registration (linkage and enrollment) rate by March 2017.

**Cascade services for PLHIV in Dnipropetrovsk region, as of 01.01.2016**





### System issues and changes tested

One of the reasons for the gap in linkage and enrollment identified by the regional QI team is loss to follow-up of PLHIV identified in TB, narcological and other hospitals after discharge from the facility. This loss happens due to the absence of a unified PLHIV registry between these facilities and the AIDS service, the lack of collaboration of the facilities with the AIDS service, and patient confidentiality requirements when transfer of patient information between medical facilities is not possible without patient informed consent.

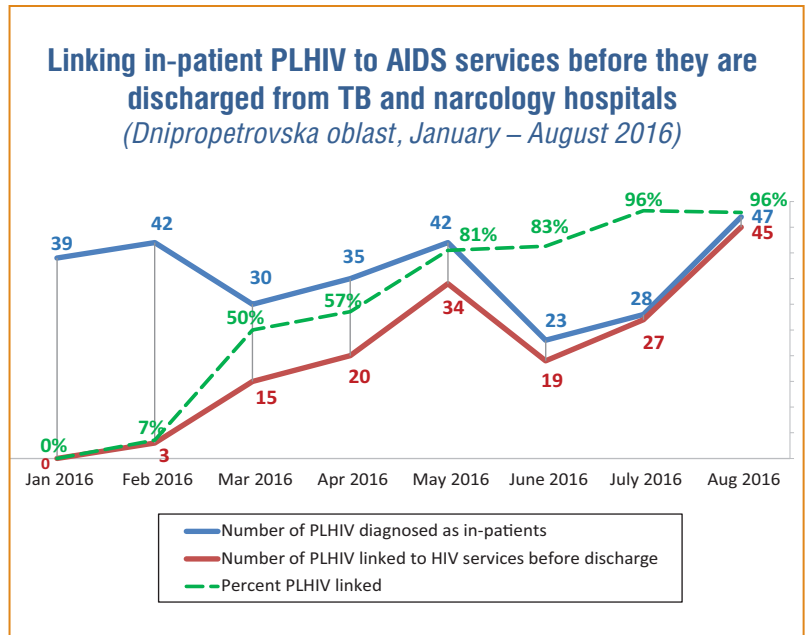
To address this issue, QI teams identified specific changes to test within the region, and the following steps were taken: (1) Requesting newly identified in-patient PLHIV to sign informed consent form allowing transfer of their personal data to the AIDS service during their treatment in TB and narcology hospitals; (2) Completing the paperwork by in-patient facilities required for linking in-patient PLHIV to treatment and care at the AIDS service ; (3) Ensuring the in-patient facilities hand over the completed registration forms to the AIDS service closest to the patient’s residence before s/he is discharged from the hospital; and (4) Introducing the position of the HIV specialist (infectionist) within TB and narcology hospitals.

### Scale of the improvement effort

Seven ART sites in DP region were involved in the implementation of this change. They include regional and city TB and narcology hospitals in Dnipro, Kryvyi Rih, Nikopol and Pavlograd cities.

### Improvement measures, results and interpretation

Results of the change were tracked monthly. The proportion of in-patient PLHIV who were linked to AIDS services before discharge from the seven participating TB and narcology facilities over eight months of 2016 improved from zero to 96% (see chart below).



### Learning & Next Steps

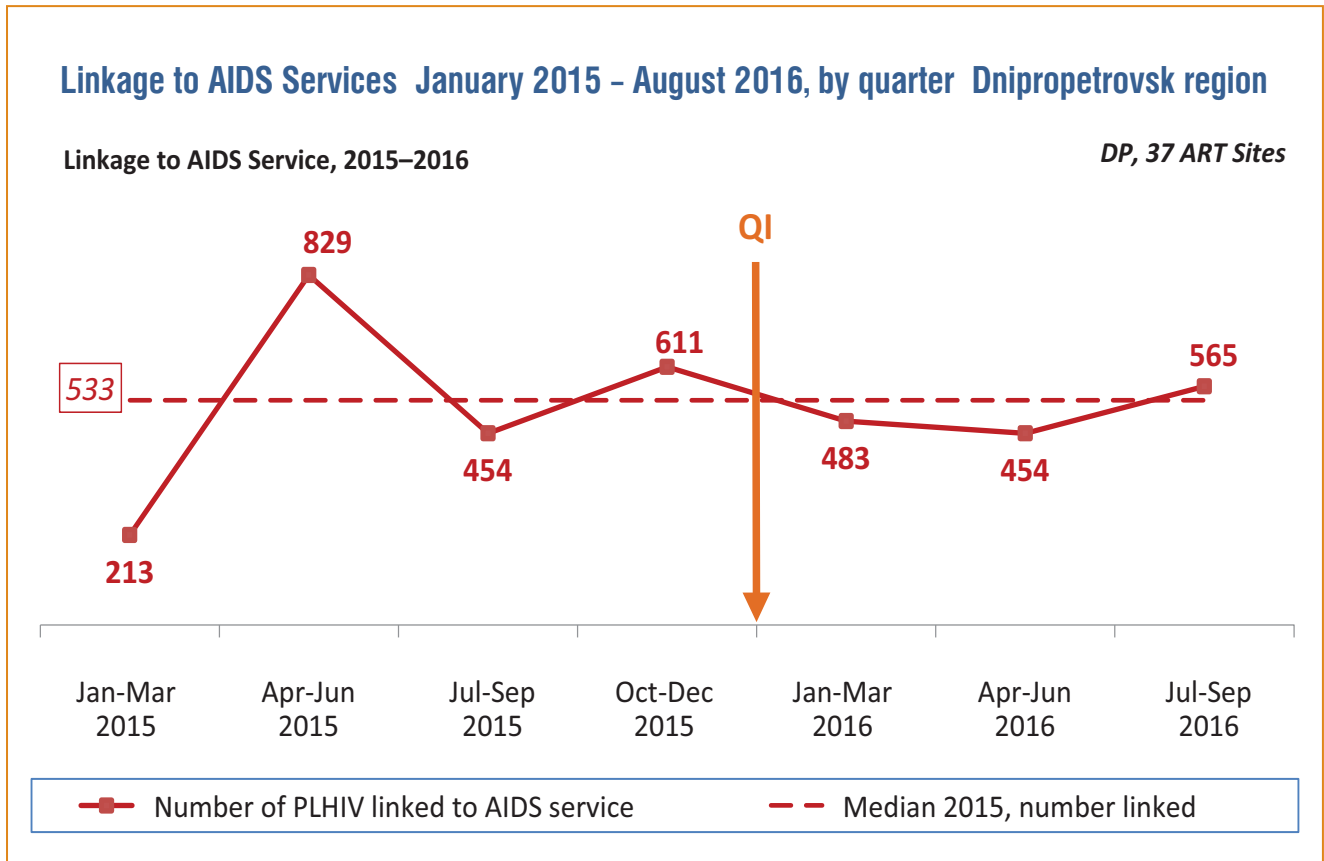
The implemented change contributes to closing the PLHIV linkage gap in Dnipropetrovsk region by linking in-patient PLHIV to the AIDS service at the place of residence before discharge from TB or narcology hospitals. If PLHIV do not access the AIDS service upon discharge from the hospital, the local ART site is enabled to track them using the contact information from the registration paperwork, which has been provided by the hospital. If PLHIV start ART during hospitalization, the local ART site can plan the required ARV supply in advance. As a next step, the regional QI team plans to implement this change in Dnipropetrovsk regional general hospital.

This change, however, had only a limited impact on the regional level linkage to care data (see chart below). The total number of PLHIV linked to HIV services in 2016 in DP remains around the 2015 median. This limitation is explained



by the fact that in January-August 2016, there was a shortage of lab supplies for confirmatory ELISA tests. This shortage impeded linkage of PLHIV to care and treatment in most settings as they were unable to enroll in care without the confirmatory

ELISA test. Dnipropetrovsk regional partners expect a significant increase in the number of PLHIV diagnosed and linked to care in Q1 of FY17, as the lab supplies for confirmatory ELISA tests became available in September 2016.



# 3 SUCCESSFUL QI CHANGE, MYKOLAYIV REGION



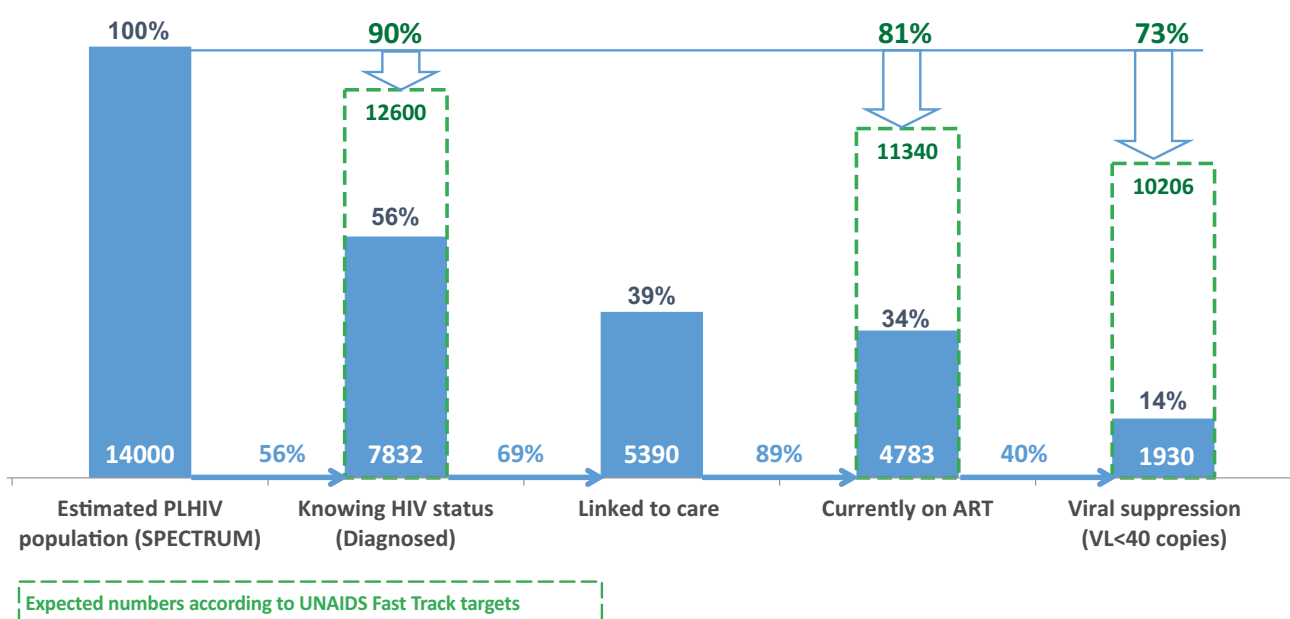
**Change:** Provide reminder text messages, phone calls or letters to patients  
**Gap:** Linkage to Care

## Problem Statement & Improvement Objectives

Official estimates state that 14,000 people live with HIV in the Mykolaiv region as of January 1, 2016. Of them, 7,800 (56%) have been registered at the Regional AIDS center, and only 5,400 (39%) regularly visit the AIDS

center and ART sites for check-ups. With support from RESPOND, nine local QI teams comprised of ART site staff, specialist physicians, PHC providers and NGOs started a QI effort to achieve 73% of PLHIV linked to care (defined as registered with the AIDS service and attending regular appointments) by March 2017.

Cascade services for PLHIV in Mykolaiv region, as of 01.01.2016







## Systems issues and changes tested

One of the main reasons for the linkage to care gap identified by local QI teams in Mykolayiv was patients forgetting about their appointments. This happens due to lack of follow-up by ART site, and competing priorities in patients' lives. To address this challenge, a set of communication activities was developed and tested by local QI teams at ART sites, which included text messages, phone calls or letters to patients. These communication activities were aimed at patients who had been tested positive but did not get registered, and those who are registered but do not attend at least annual follow-up visits.

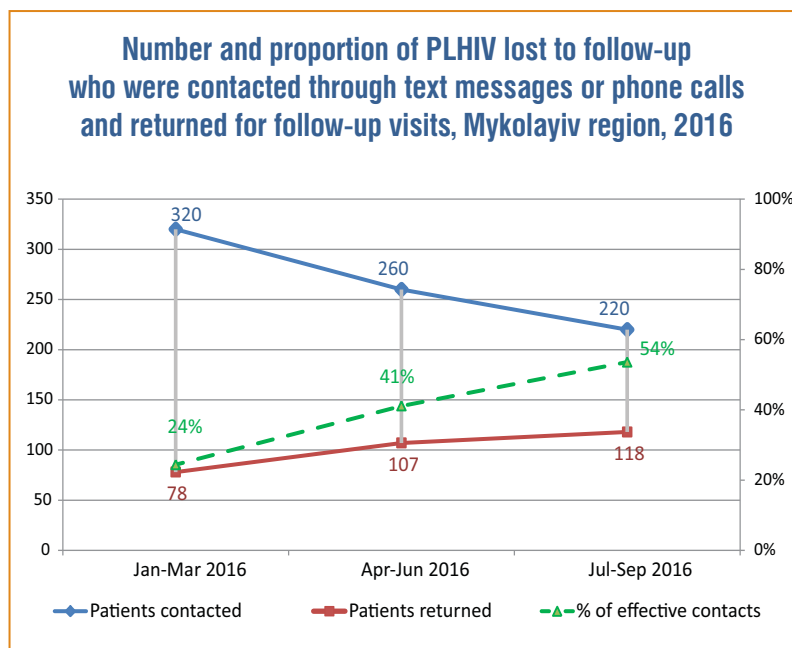
To implement this change, local QI teams first compiled names and phone numbers of patients lost to follow-up (never registered or missed appointments). Then QI teams developed the text for short messages and call scripts to prevent inadvertent dissemination of confidential information if someone unintended read the message or picked up the phone. Then either medical staff or NGO social workers, where available, communicated these messages as reminders to patients. The last activity to implement the change is updating the list of patients lost to follow-up on an on-going basis.

## Scale of the improvement effort

All nine ART sites of Mykolaiv region were involved in the implementation of the changes. Each site adapted the change to their resources: six sites sent short text messages, and three sites called patients on mobile phones and one site in addition to calls sent letters.

## Improvement measures, results and interpretation

The linkage to care gap was tracked quarterly through run-charts on the number of text messages sent or phone calls made, and the number of patients who came to follow-up appointments after these reminders. The graph below demonstrates the effectiveness of text messages and phone call over time.



## Learning & Next Steps

The changes implemented in Mykolayiv region contributed to closing the gaps in the number of people linked to HIV/AIDS services, either by having them registered, or bringing back for at least annual follow-up visits. As demonstrated on the graph below, the number of PLHIV registered with AIDS services in the region in 2016 has been above the 2015 mean since implementation of the change. The number of people registered in 2016 by far exceeded the number of people tested positive, because a significant proportion of those registered was returned to follow-up.

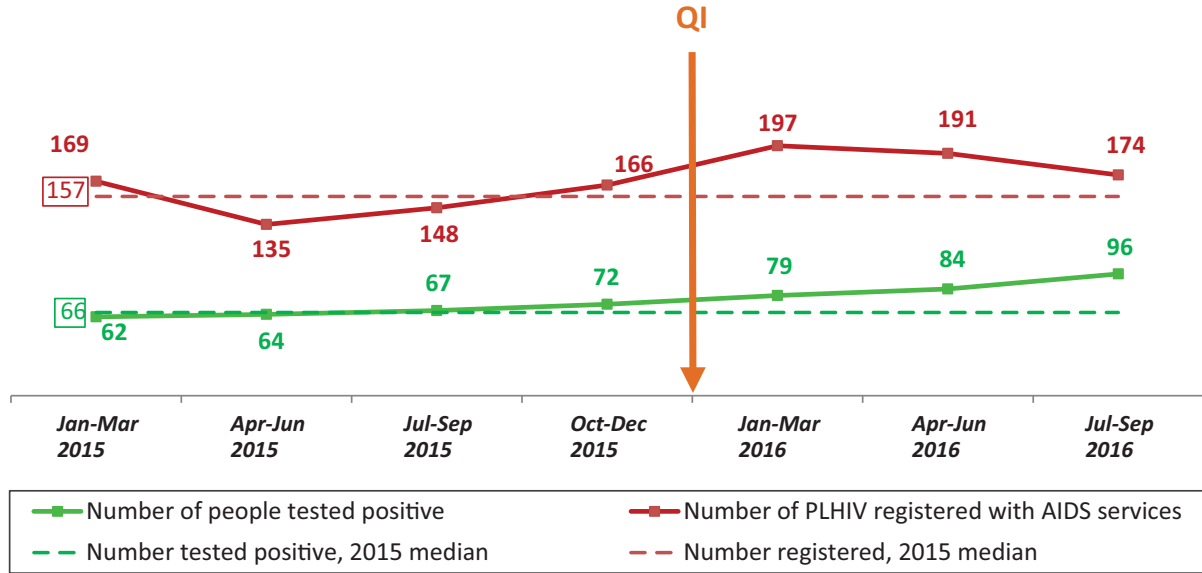
To institutionalize the mobile reminder services, the informed consent form was updated to allow follow-up messages and phone calls for all newly identified PLHIV. The cost of mobile services remains a challenge for institutionalization, as currently these costs are reimbursed to individual providers by RESPOND.



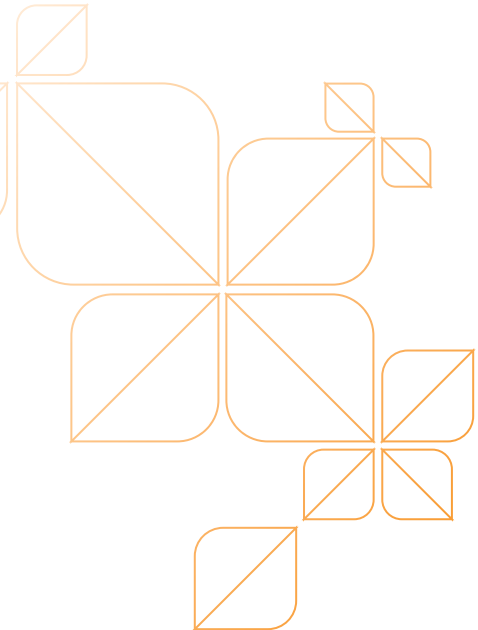
### Number of patients screened HIV positive and registered with AIDS services, Mykolayiv Region, 2015-2016, by quarter

Testing yield and registration with AIDS services, 2015-2017

Mikolayiv region, 9 QI sites



# 4 SUCCESSFUL QI CHANGE, KHERSON REGION



**Change:** Provide the required lab tests (ELISA, CD4 and blood chemistry) over one patient's visit to the Trust Office/ART site

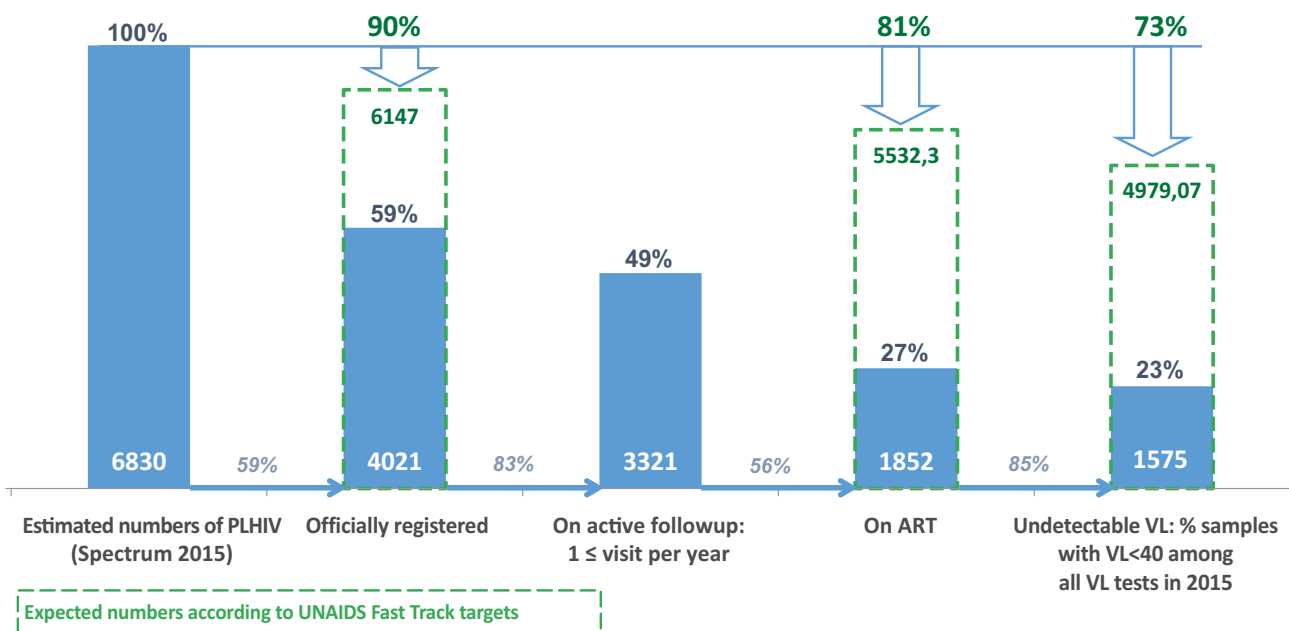
**Gap:** Linkage to Care

## Problem Statement & Improvement Objectives

According to the official estimates, there were 6,800 people living with HIV in Kherson region as of January 1, 2015, of whom only 4,000 (59%) have

been registered with AIDS services. With support from RESPOND, 11 local QI teams comprised of the staff of ART sites, specialist physicians and PHC providers started a quality improvement effort to link at least 65% of the estimated number of PLHIV to AIDS services by April 2017.

**Cascade services for PLHIV in Kherson region, as of 01.01.2016**





### System issues and changes tested

The regional QI team identified the following reasons for poor registration rates among patients screened positive for HIV: (1) Registration with the AIDS services (AIDS Center or ART sites) requires several types of lab analyses: a confirmatory ELISA test, CD4 test, and blood chemistry; (2) These tests are done at different points in time, one after another, requiring multiple patient visits. Patients are oftentimes lost in process of laboratory work-up before they are registered and eligible for ART.

To address this issue, the QI teams changed their local protocols to provide the required lab tests within one visit to the Trust Office/ART site at the

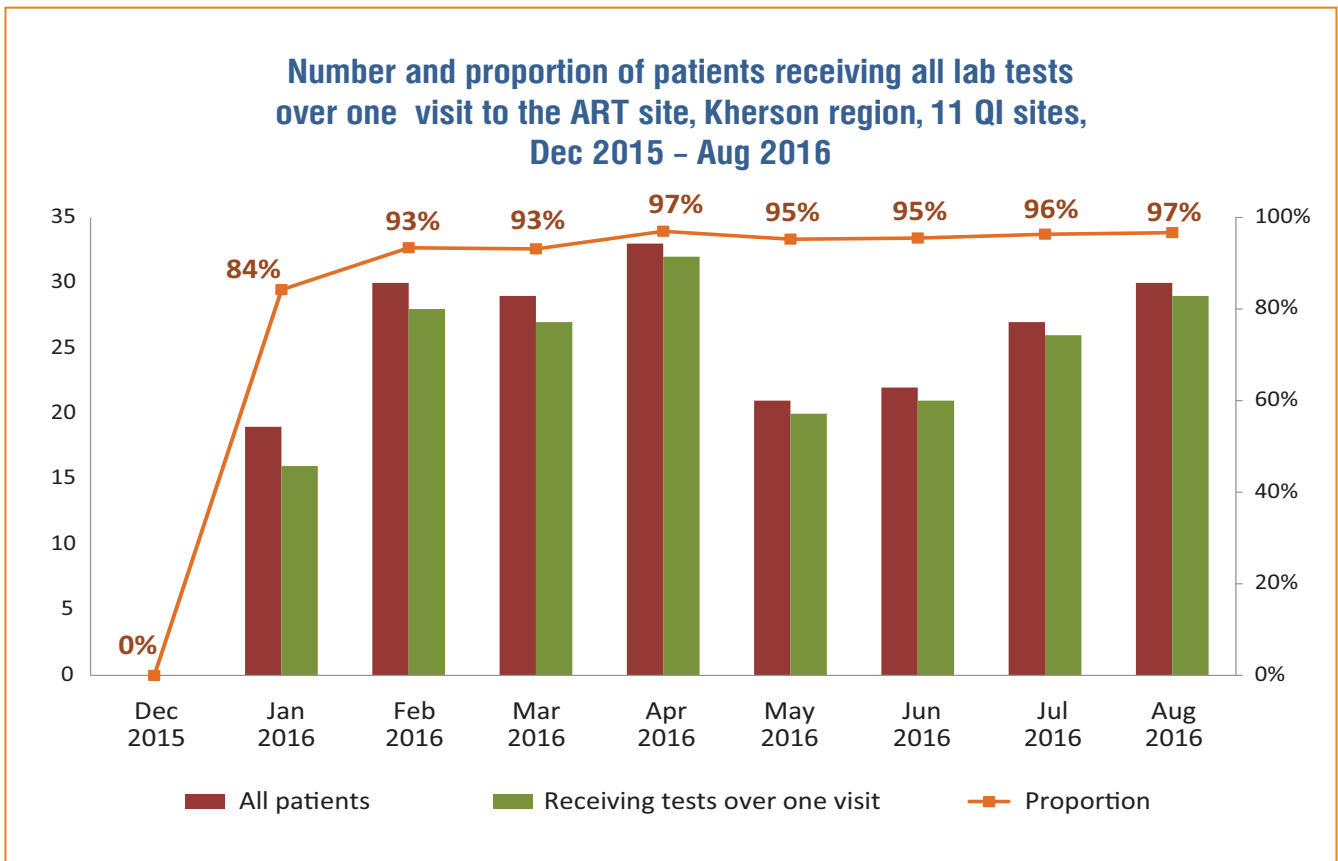
time when positive HIV screening result is received.

### Scale of the improvement effort

Ten local QI teams started to implement this change beginning in January 2016, with the eleventh one joining in April 2016.

### Improvement measures, results and interpretation

The implementation of the change was tracked monthly. The run chart below demonstrates that an average of 94% of patients received all tests in one visit over 8 months of 2016.



### Learning & Next Steps

The implemented change allowed an increase in the enrollment rate of PLHIV with AIDS services. The quarterly numbers of people registered in 2016 have been above the 2015 median (see graph below). This can be partially explained by the number of new PLHIV identified increasing through other changes.

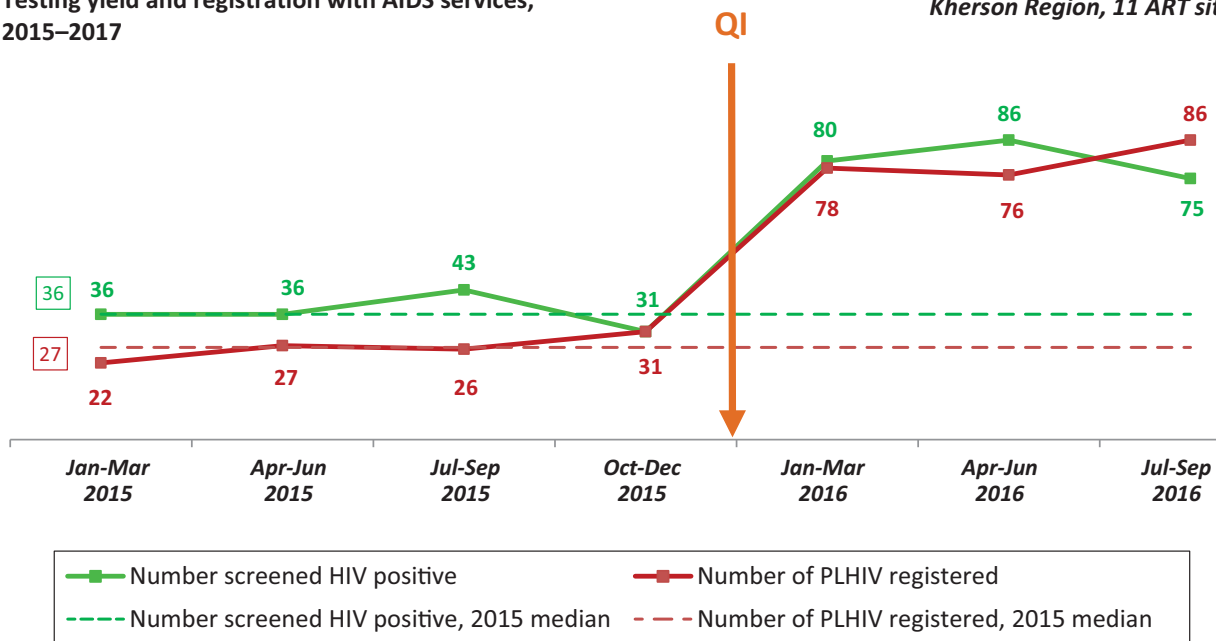
However, the narrowing gap between the number of people testing positive and the number of PLHIV registered can only be explained by improved registration practices.

Based on these results, the regional AIDS center implemented the change in two new sites which were established in the region in 2016.

### Number of patients screened HIV positive and registered with AIDS services, Kherson region, 2015-2016

Testing yield and registration with AIDS services, 2015-2017

Kherson Region, 11 ART sites



# 5 SUCCESSFUL QI CHANGE, ZAPORIZHZHYA REGION



**Change:** Extending working hours of ART sites, providing lab services within a single patient visit and improving logistics between ART sites and the lab

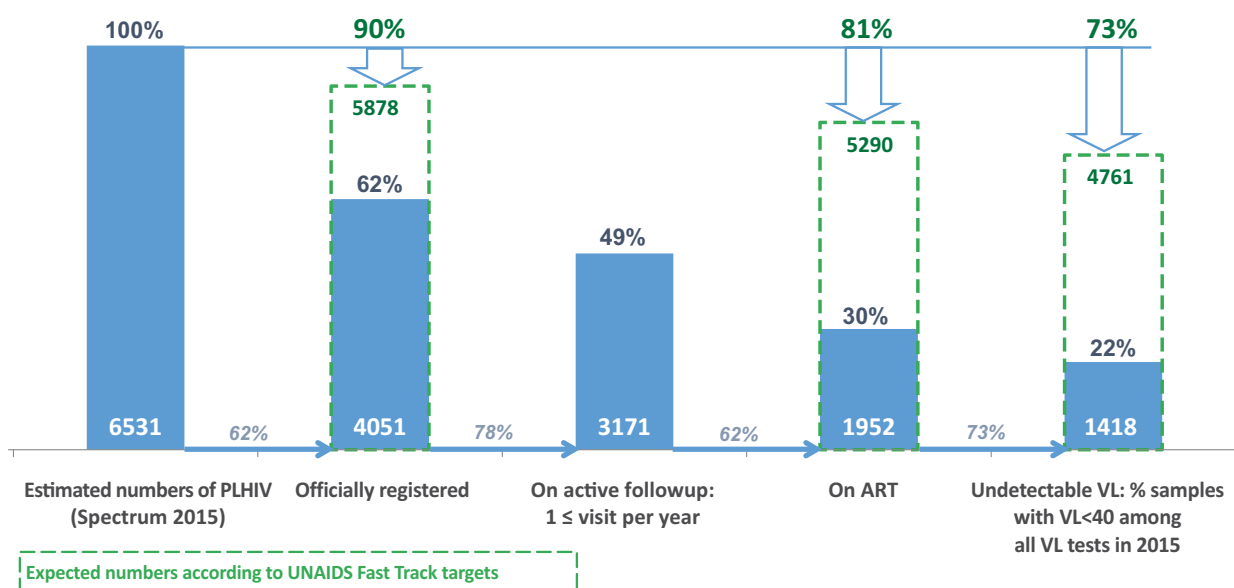
**Gap:** Linkage to Care

## Problem Statement & Improvement Objectives

The estimated number of PLHIV in Zaporizhzhya region is over 6,500. As of January 1, 2016, 4,000 PLHIV (62%) have been registered with the AIDS service, and 3,200 (49%) have been linked to care

with at least annual follow-up. With support from RESPOND, 12 local QI teams (including ART sites, specialists, PHC providers and NGOs) started a Quality Improvement (QI) effort to achieve an 80% registration target of PLHIV by March 2017 within 30 days of the positive HIV screening result.

**Cascade services for PLHIV in Zaporizhzhya region, as of 01.01.2016**



## System issues and changes tested

The main drivers of the gap of linking to care identified by Zaporizhzhya QI teams are: (1) Short working hours of ART sites, which limits access to services by PLHIV; (2) Multiple patient visits are required to obtain various lab tests; and (3) A long wait time for the results of HIV testing and other lab tests caused by infrequent transportation of materials to the central lab.

To close the gap of linking PLHIV to care, QI teams in Zaporizhzhya implemented the following package of changes:

- (1) Extended the working hours of Trust Offices/ART sites from 2 hours to 8 hours a day;
- (2) Optimized transportation of biomaterial to the lab to ensure transport on at least a weekly basis;
- (3) Established communication of HIV-positive test results from central lab to district ART sites via e-mail within one day;
- (4) Started providing lab tests required for registration (confirmatory ELISA, CD4 and blood chemistry) within a single patient visit to the Trust Office/ART site.

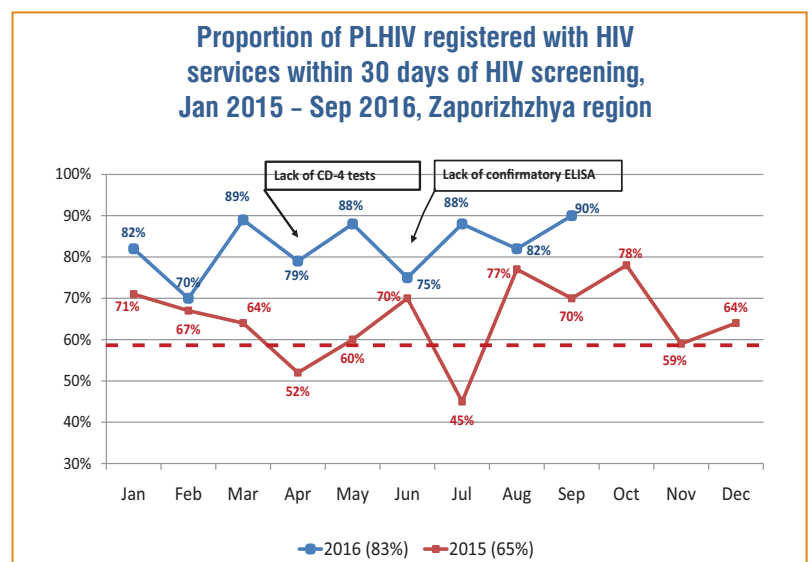
## Scale of the improvement effort

All twelve QI teams across Zaporizhzhya region (including ART sites along with TB, STI, narcology and OB/GYN specialists, PHC providers, two NGOs and patient representatives) have been implementing the changes to close the linkage gap. Nine QI teams in Tockmack, Energodar, Vasylivka, Pology, Andriyivka, Kuybyshev, Melitopol

TB clinic, Berdiansk TB clinic and Zaporizhzhya TB clinic implemented changes (1)-(3), and QI sites Berdiansk city hospital, Melitopol city and Zaporizhzhya regional AIDS centers implemented change (4).

## Improvement measures, results and interpretation

Change results over time are demonstrated on the run-chart below. Monthly proportions of PLHIV registered with AIDS services within 30 days from HIV screening in 2016 are all above the 2015 median, thus demonstrating improvement. Certain known factors limited the 2016 improvements, such as lack of lab supplies for CD4 count and confirmatory ELISA tests in April and June, respectively.

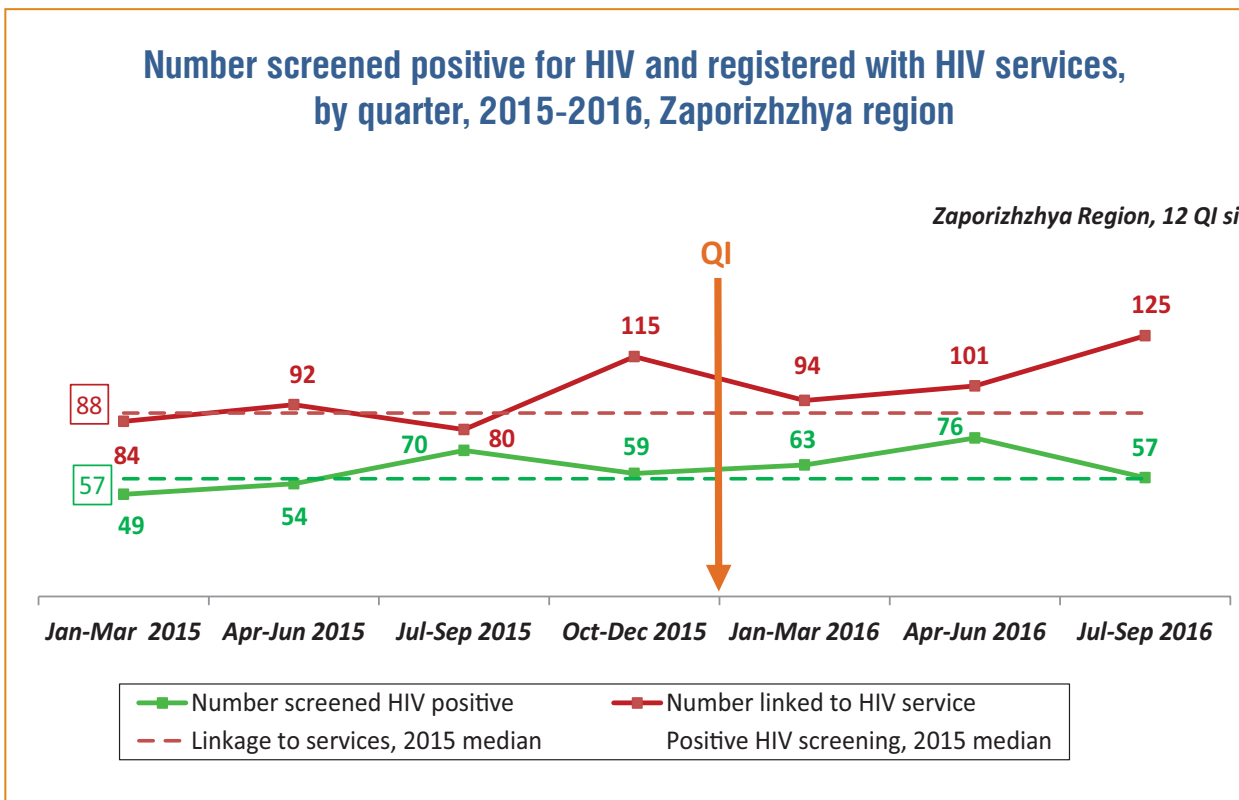


Similarly, the numbers of people who tested HIV positive and registered with HIV services over three quarters of 2016 are above the 2015 medians, demonstrating improvement.

## Learning & Next Steps

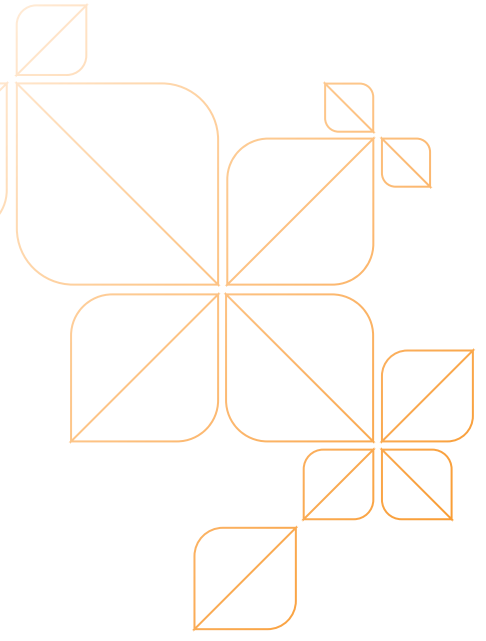
The changes implemented in Zaporizhzhya region are reflected in the outcome indicator, number of PLHIV registered with AIDS services, which in 2016 remains above the 2015 median demonstrating an improvement (see run chart below).

These changes considered successful in linking PLHIV to services will be institutionalized at all the existing and four new ART sites scheduled to open by the end of 2016. Institutionalization will be achieved by updating regional regulations on ART sites and including those changes as requirements to SOPs for ART sites.





# 6 SUCCESSFUL QI CHANGE, KYIV CITY



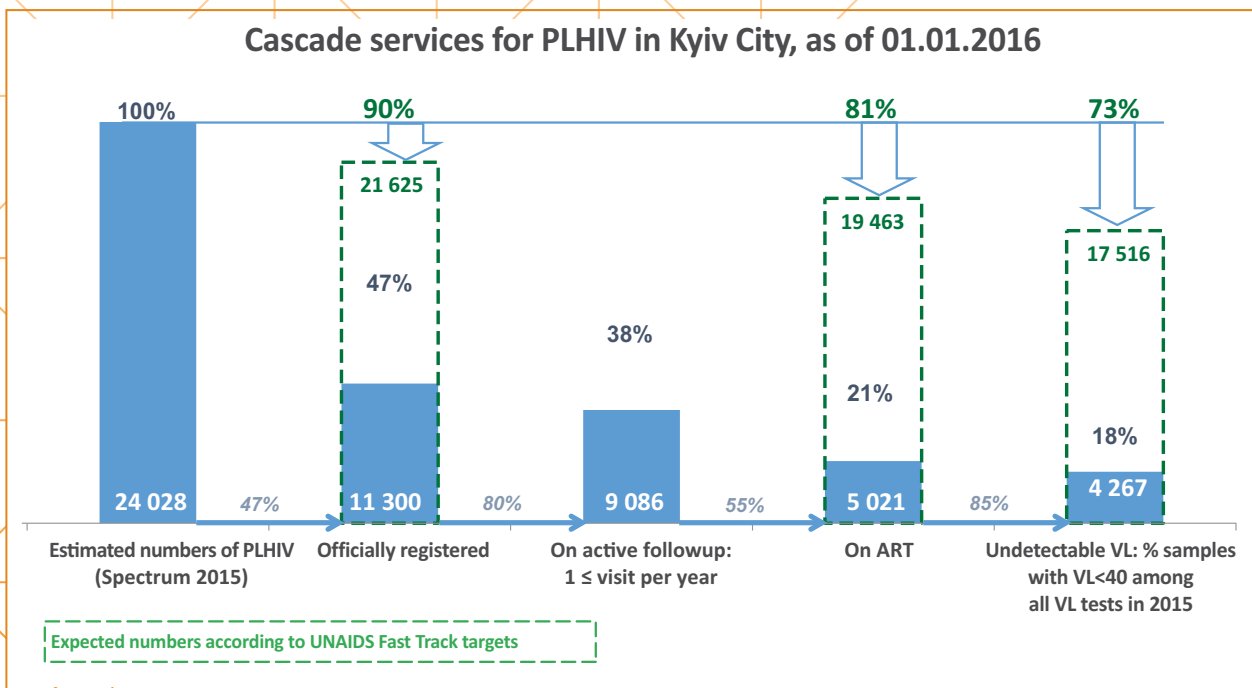
**Change:** Increase the network of local ART sites and transfer patients from the AIDS Center

**Gap:** Antiretroviral treatment

## Problem Statement & Improvement Objectives

According to official estimates, there are about 24,000 PLHIV in Kyiv City, of whom only 5,000 (21%) were receiving ART as of January 1, 2016.

With support from RESPOND, four local QI teams comprised of staff at the ART sites, specialist physicians and NGO representatives started a quality improvement effort to increase the number of PLHIV receiving ART to 72% by March 2017.





### System issues and changes tested

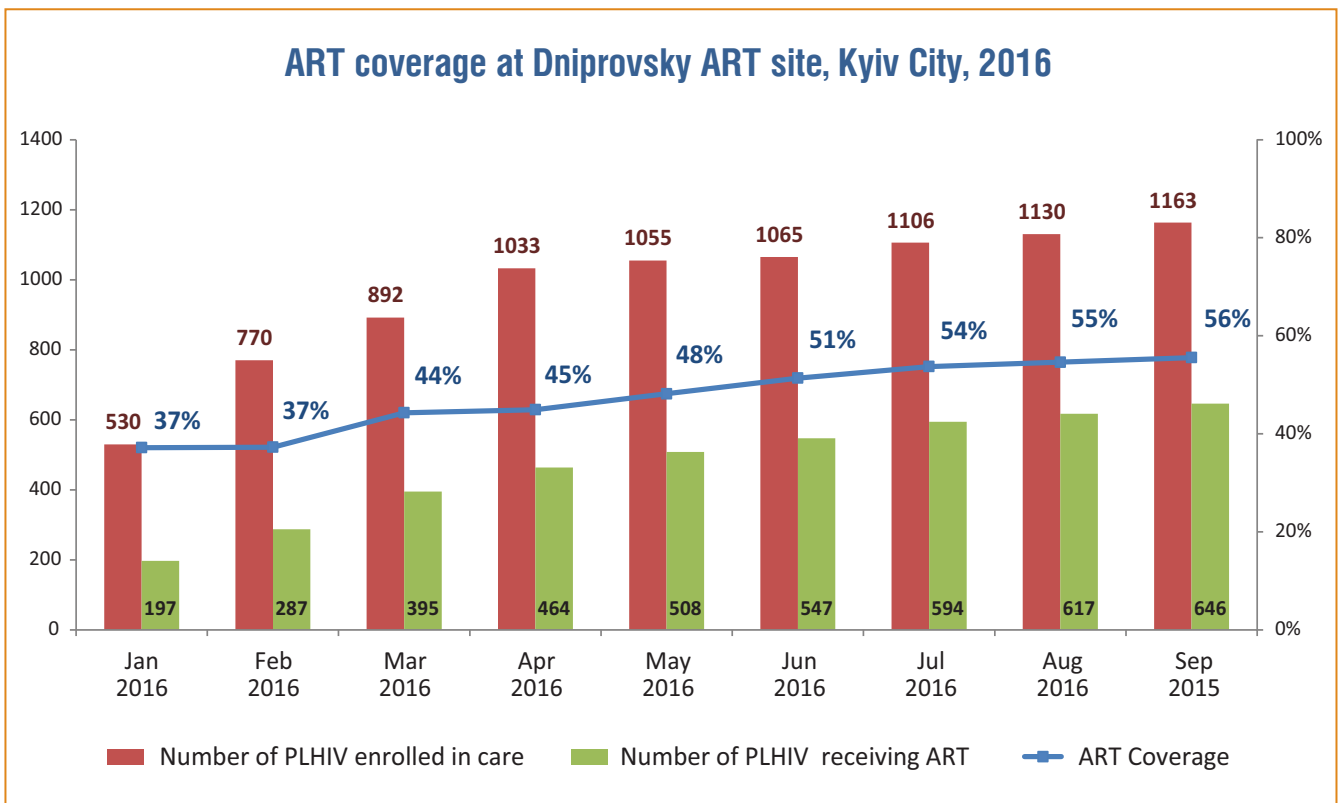
The regional QI team identified the following main reasons for low ART coverage in Kyiv city: (1) Patient-to-physician ratio the highest in the country: over 1,600 PLHIV per ART site physician; (2) High proportion of ART patients per physician; and (3) Concentration of services at the City AIDS Center requiring patients to travel across the city. The City AIDS center with its resources of seven ART site physicians on staff reached its saturation point: long patient lines, short time for patient visit, and deteriorating quality of services. To put more people on ART, as expected under the Kyiv City Fast Track initiative, decentralization of services was required. In January 2016, a new ART site was opened in Dniprovisky district of Kyiv with one full-time physician, two nurses, one medical phycologist and NGO social worker on staff. Consenting patients from the district and nearby areas were transferred from the AIDS Center to the new site, where ART was initiated to those not yet on treatment. The decreased workload on physicians at the AIDS Center also allowed them to initiate treatment to new patients.

### Scale of the improvement effort

One new ART site, in addition to the Kyiv City AIDS Center and two other district sites, was the focal point of this change. Transfer of patients to the new sites, however, alleviated the case burden on physicians at the AIDS Center, which also allowed them to put additional patients on ART.

### Improvement measures, results and interpretation

The performance of the implementation of the change at the Dniprovisky district site was tracked monthly by the number of PLHIV transferred from the AIDS Center or newly registered, the number and proportion of PLHIV on ART. While doubling the number of patients registered at the site between January and September 2016, the proportion of patients on ART also increased from 37% to 56% (graph below).

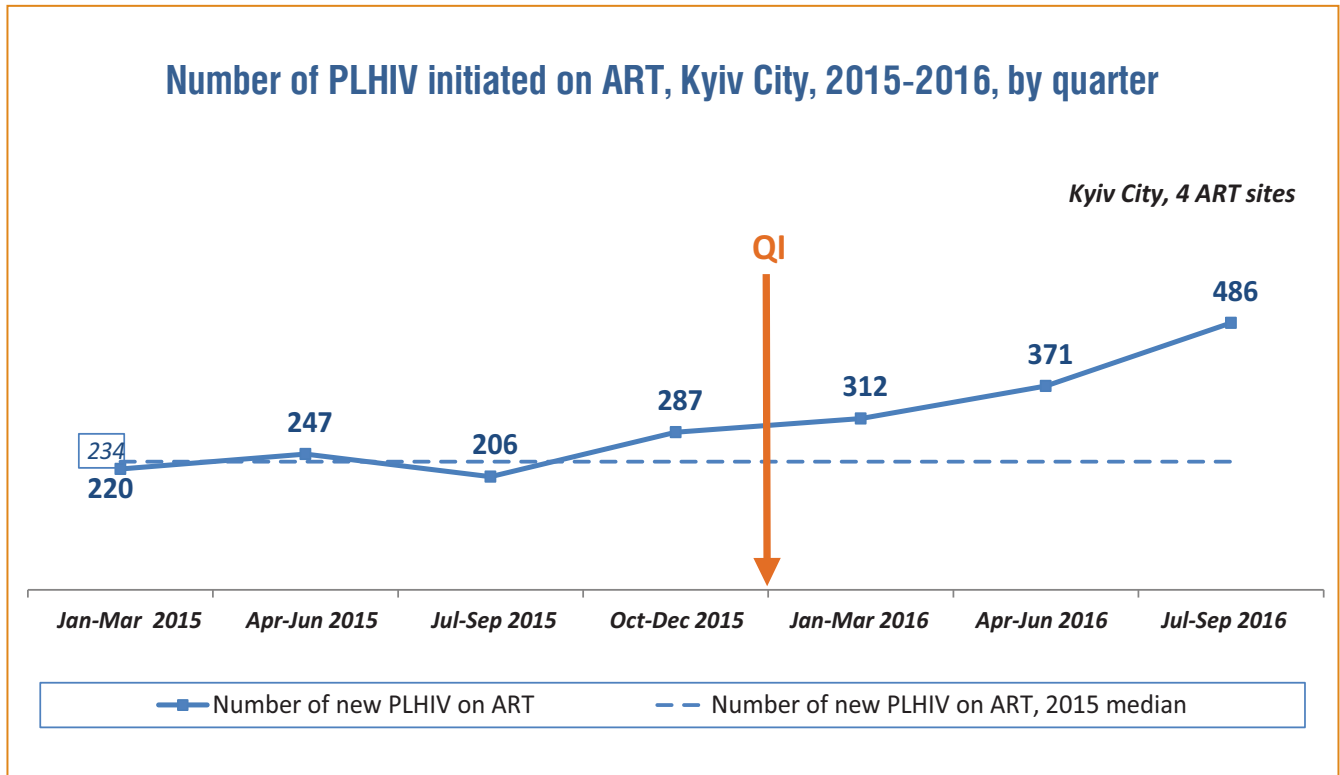




## Learning & Next Steps

Almost 40% of new patients initiated on ART in Kyiv city (449 out of 1,169) can be attributed to the newly

opened ART site. Overall, the number of patients initiated on ART in Kyiv city over the past three quarters exceeded the 2015 median demonstrating an improvement over last year (see graph below).



Decentralization of AIDS services in Kyiv City has been long overdue. It will continue in FY17 as part of the Kyiv City Fast Track initiative, either by opening new ART sites, or delegating PLHIV management to district infection

disease specialists, or both. To support this change, in Q1 of FY17, RESPOND will provide training on ART basics to over 50 infection disease specialist in Kyiv City.

# 7 SUCCESSFUL QI CHANGE, ODESA REGION



**Change:** Decentralizing ART initiation and management from the regional AIDS Center to local ART sites

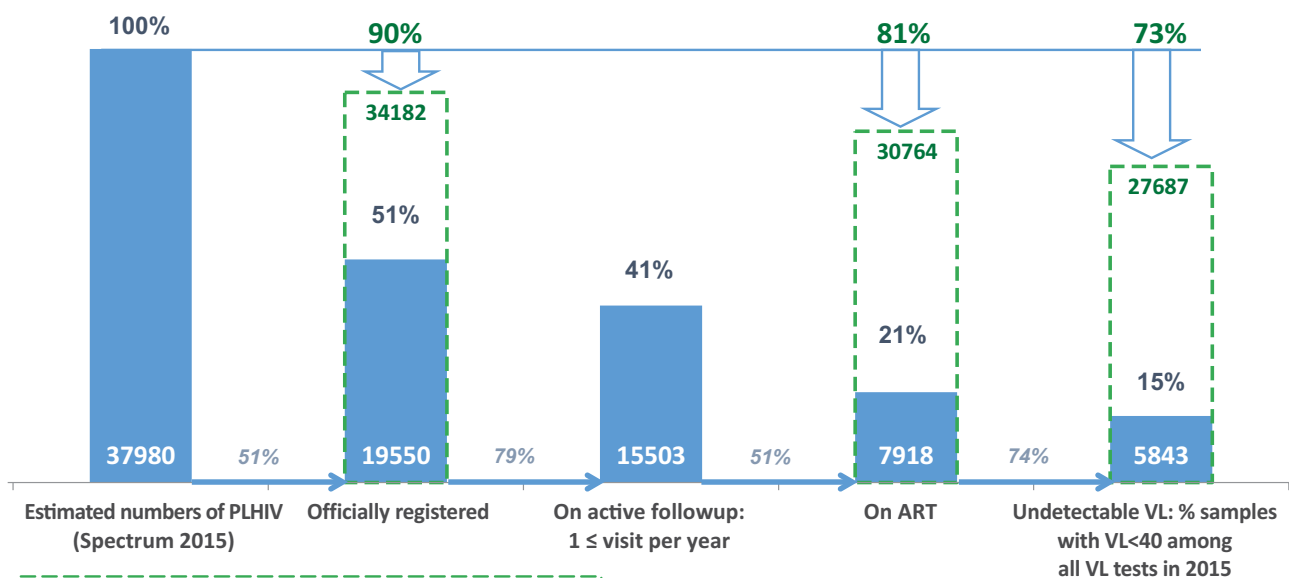
**Gap:** Antiretroviral Treatment

## Problem Statement & Improvement Objectives

According to official estimates, 38,000 people live with HIV in Odessa region. Of them, only 8,000 (21%) were on ART as of January 1, 2016. With support from RESPOND, 41 HIV service delivery

sites (including the Regional AIDS Center, 14 sites of the Odessa City AIDS center, two TB facilities and 24 local ART sites) started a Quality Improvement (QI) effort with an objective to put 1,250 new patients on ART by October 1, 2016.

**Cascade services for PLHIV in Odesa region, as of 01.01.2016**





## System issues and changes tested

The regional QI team identified low accessibility of HIV services to patients living outside of the regional capital as the key reason for low ART uptake by PLHIV already linked to care. Causes of low accessibility of services include: (1) Limited number of the ART sites at the district level; (2) Local ART sites only dispense ARVs, while clients must travel to the regional AIDS Center for ART initiation and management; (3) Limited and inconvenient working hours for patients of the local ART sites as physicians are only available part-time.

To address these challenges, the regional QI team implemented the following changes: (1) Trained infection disease specialists at local ART sites on ART initiation and management; (2) Updated regional and local protocols to allow ART management at all local ART sites; and (3) Worked with chief physicians of central district hospitals to ensure

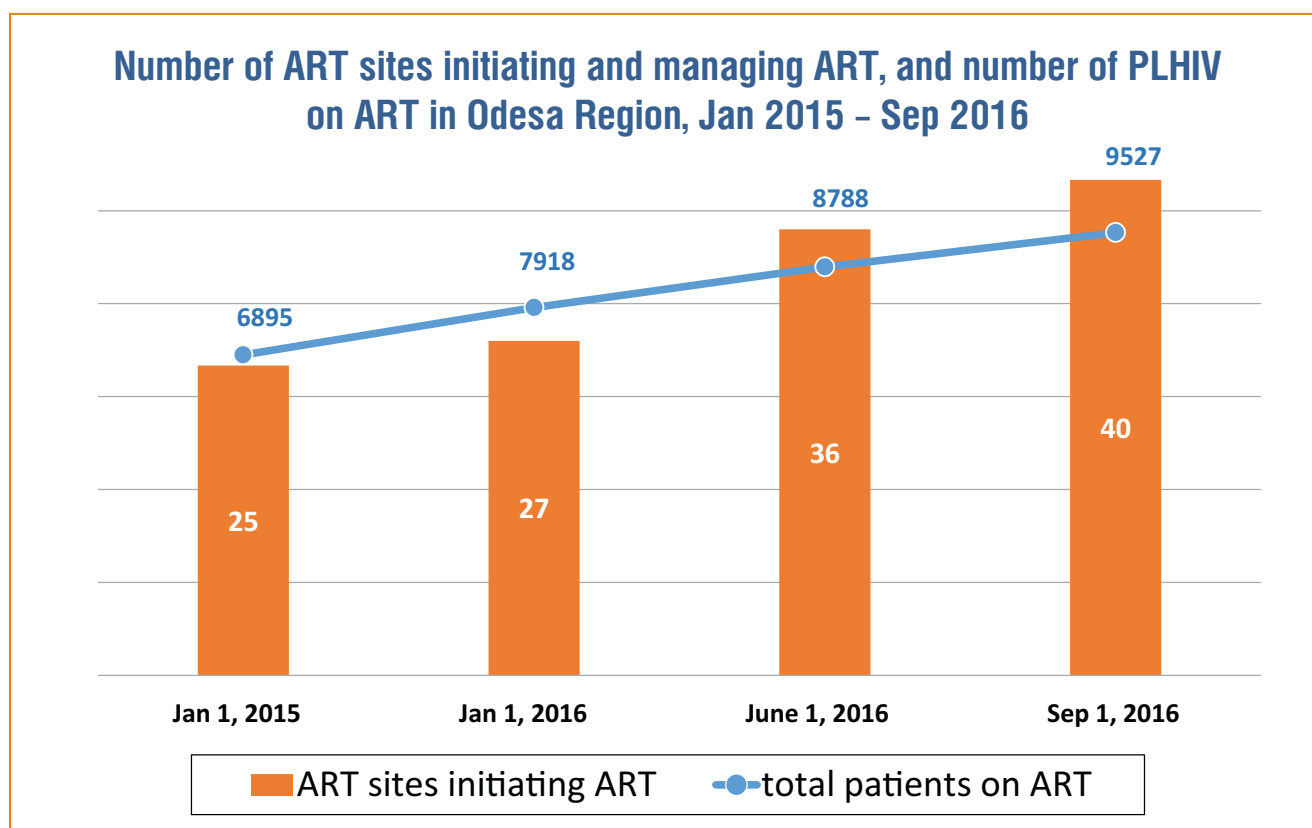
full-time physician staffing at local ART sites.

## Scale of the improvement effort

The improvement effort on ART initiation covered 13 ART sites: 12 ART sites across Odesa region, and one ART site in Odesa city. Of these, six sites improved physician staffing, although only three of them ensured full-time physicians on staff.

## Improvement measures and results

The number of ART sites initiating and managing ART clients in Odesa region increased from 27 in January 2016 to 40 in August 2016 (see figure below). The number of PLHIV on ART increased by 16%, from 7,918 to 9,179 from January 1 to October 1, 2016.

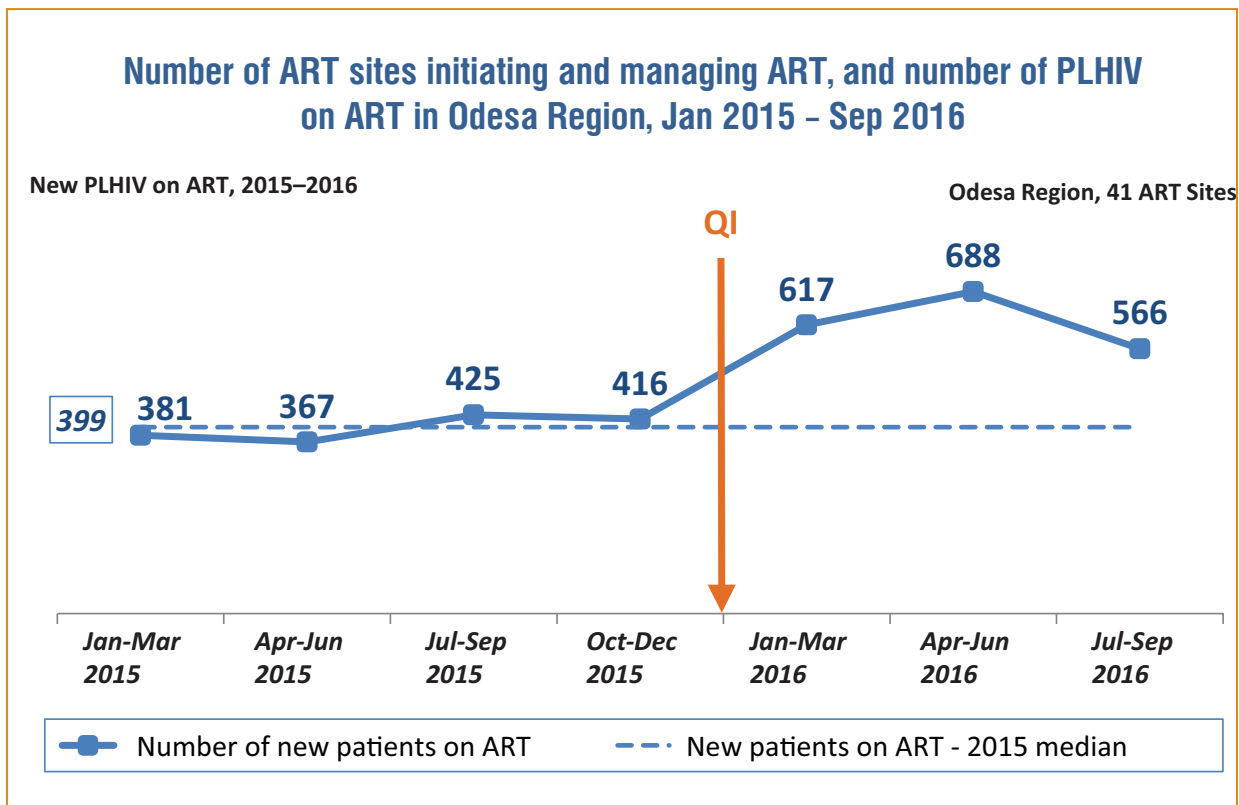


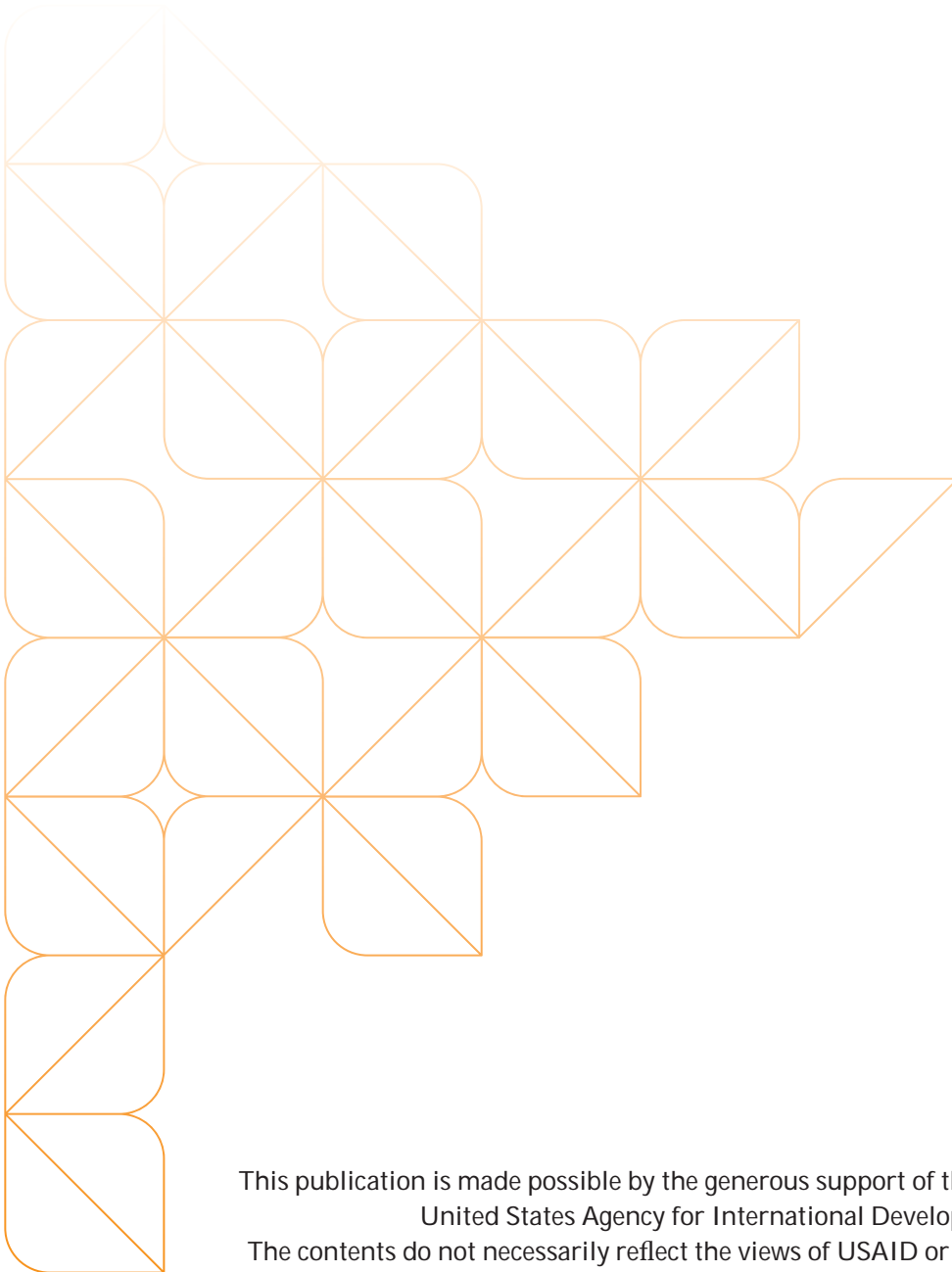
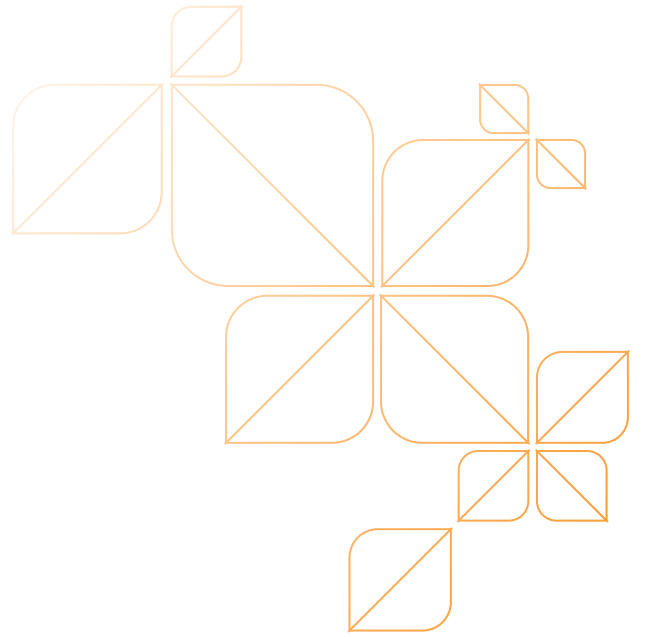


### Learning & Next Steps

The implemented changes contributed to putting an increased number of new patients on ART as compared to the same period in 2015 and closing the treatment gap in the Odesa region (see graph below). Other factors contributed to the results observed. These include: (1) Changes in the national ART protocol in December 2015 lifting the requirement of CD4<350 for initiation of ART; and (2) Improved ARV supply through PEPFAR and

Global Fund emergency funding procurement as previously the supply of ART was unstable in the region. To further improve access to ART, by the end of 2016, the Odesa region staff plans to open **eight additional ART sites** at the district level and enroll 2,500 new patients on ART between October 1, 2016 and March 1, 2017. The tested changes will be incorporated into the management practices or policies of the newly opened sites.





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