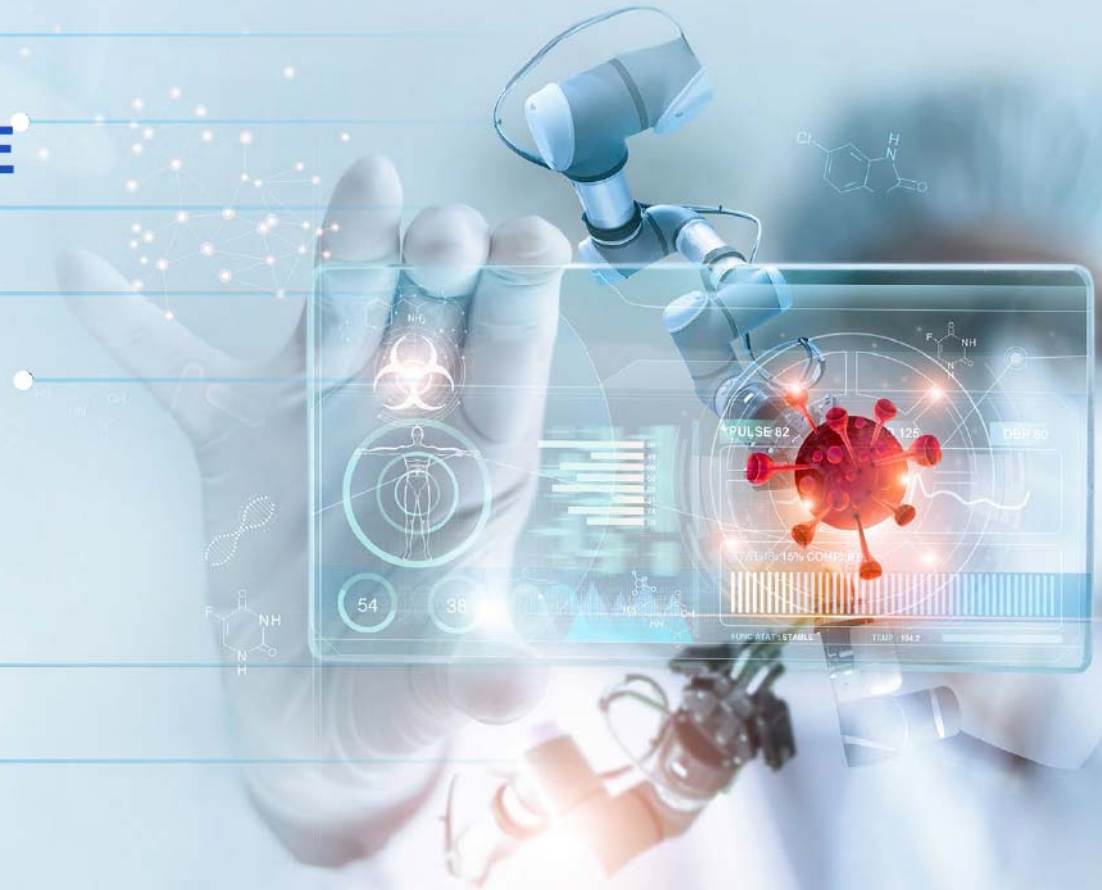




# IMPLEMENTATION OF RECENT HIV INFECTION SURVEILLANCE IN UKRAINE

Data from the Quarterly  
Recent HIV Infection  
Surveillance Digest

Digest #2 – through October 1, 2024



Dear readers,

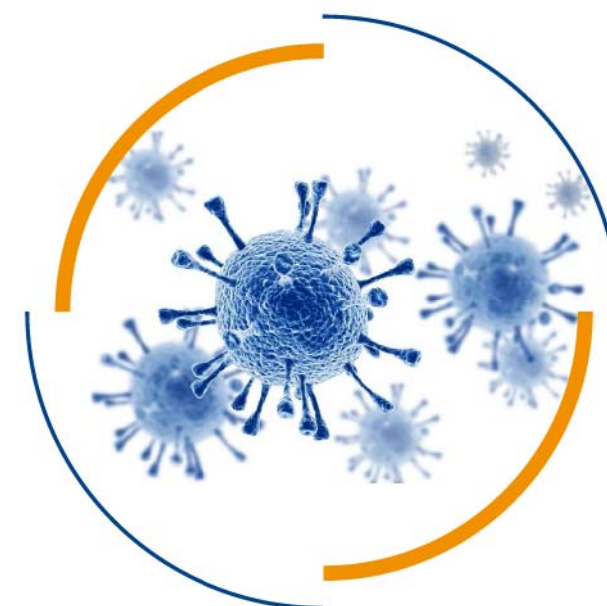
We are pleased to present to your attention the second issue of the digest, dedicated to **the analysis of data from HIV recent infection surveillance in Ukraine** for the period of 2021-2024 fiscal years (October 1 – September 30).

This edition provides the information about results of Recent HIV Infection Testing in **dynamic and across epidemiological groups**, as well as identified **locations of active HIV transmission** and rapid response—"hotspots."

Additionally, it includes an overview of main events in 2024 aimed at developing Recent HIV Infection Surveillance and **strengthening HIV Case-Based Surveillance** in Ukraine .

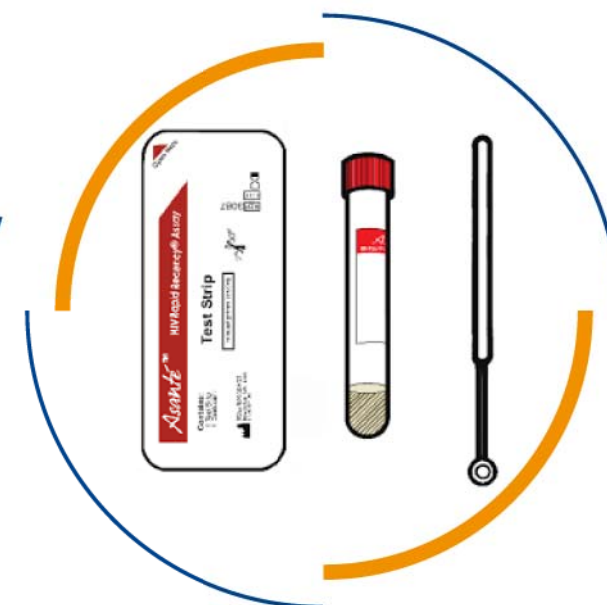
We hope that this edition will serve as a valuable tool for all those involved in the HIV-response activities and programs in Ukraine and contribute to ensuring an effective and coordinated actions.

Thank you for your attention and continued commitment to this critical endeavor!



## Understanding Recent HIV Infection (RHI/RI)

- Recent HIV infection (RHI) is characterized as an HIV infection that has occurred within a relatively short time frame, typically **within the preceding 12 months**.
- The detection of RHI is imperative for elucidating **the dynamics and velocity of epidemic acquisition**, as well as for identifying geographic regions and populations experiencing active virus transmission. Such insights are essential for formulating and implementing timely public health interventions
- In Ukraine, surveillance for RHI has been systematically conducted since late 2020, focusing on **individuals aged 18 years and older who have been diagnosed with HIV for the first time** and have no prior history of antiretroviral therapy (ART).
- This surveillance operates within the framework of routine HIV testing services (HTS).
- The process for ascertaining RHI in Ukraine adheres to the Recent Infection Testing Algorithm (RITA), which encompasses the following methodological steps:
  - > **Initial Testing:** A **rapid test for recent infection (RTRI)** is performed to distinguish between recent HIV infection and long-term infection;
  - > **Viral Load Measurement:** Following a positive RTRI result, the viral load of HIV in the individual's blood is assessed. If the viral RNA level exceeds 1,000 copies per milliliter of plasma, the case is confirmed as a recent HIV infection.



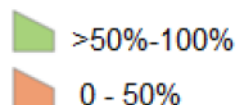
## Geographic Implementation of Recent HIV Infection (RHI) Testing as of October 1, 2024



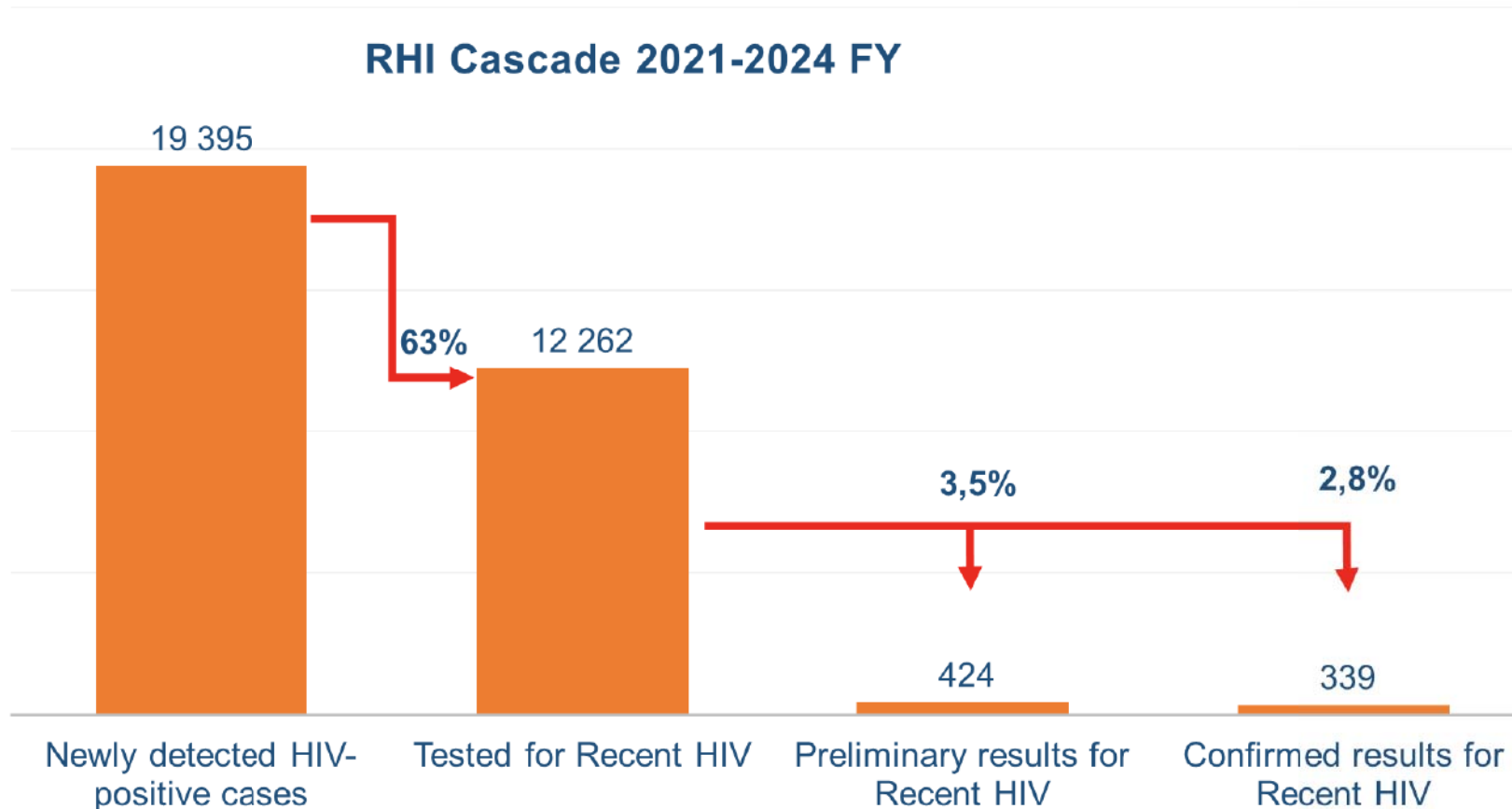
At present, the surveillance program for recent HIV infections (RHI) is operational in **13 regions**, encompassing **52 designated testing sites**

In **7 of these regions**, the testing coverage for RHI **exceeds 50%** of the total newly diagnosed HIV cases.

coverage for RHI of the newly diagnosed HIV cases



Between 2021-2024 FY, over 12,000 individuals with newly diagnosed HIV were tested for RHI, and 2.8% of them were identified as having recent infections



\*Fiscal Year (FY) in the PEPFAR Program : October 1 – September 30)

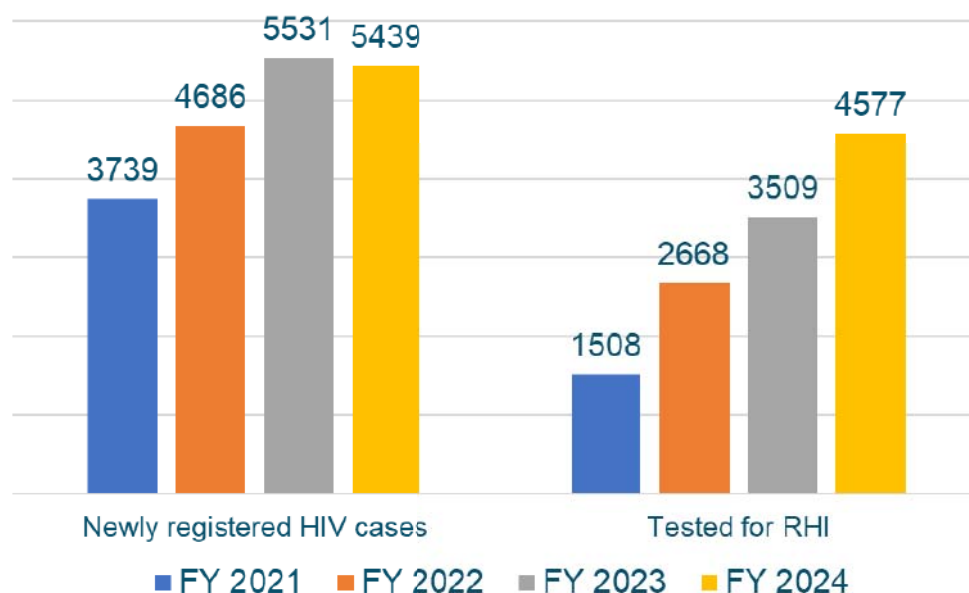
Digest "Implementation of the Monitoring and Response System for Recent HIV Infection in Ukraine"

## Trends in Recent HIV Infection Testing (2021-2024 FY)

Over the past four years, the volume of RHI testing has increased threefold. In the 2024 FY, the coverage of RHI testing for newly diagnosed HIV cases reached 84%. The highest number of RHI tests are performed in Dnipropetrovsk and Odesa Oblast, as well as in Kyiv City



Trends in Recent HIV Infection Testing  
2021-2024 FY (abs. count)



The number of RHI tests by region  
in 2024 FY (abs. count)



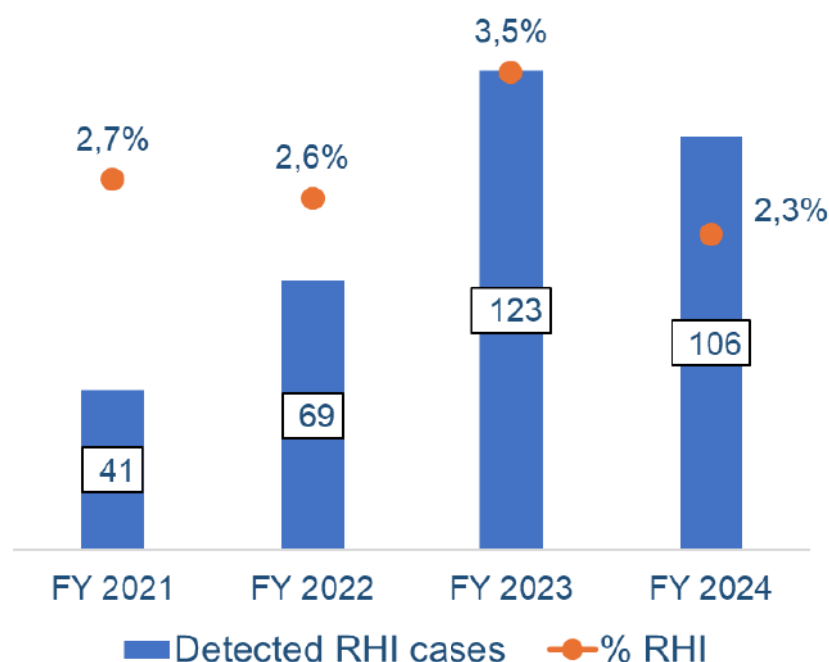
\*Fiscal Year (FY) in the PEPFAR Program : October 1 – September 30)

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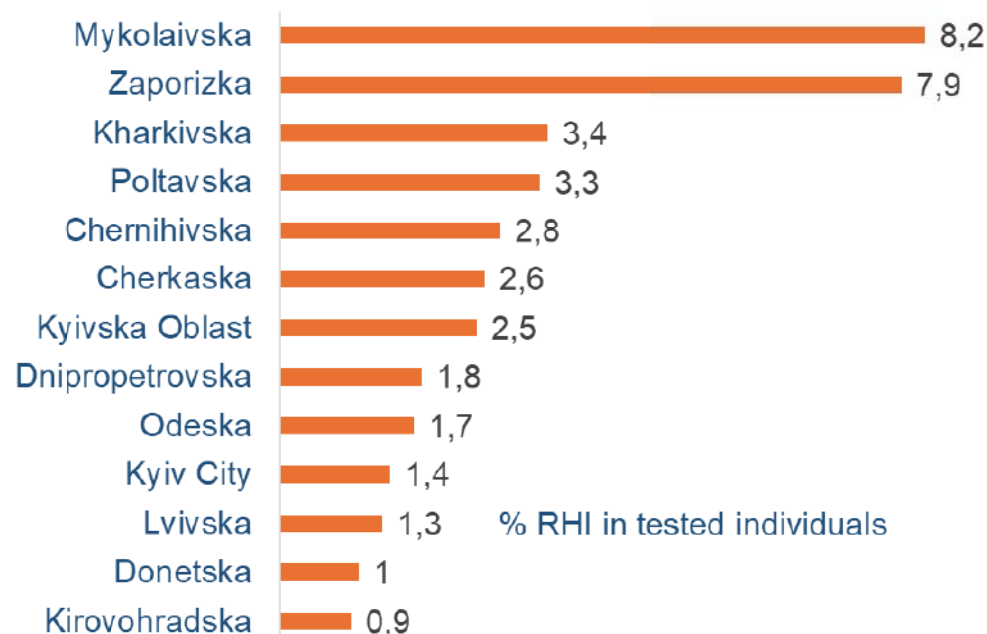
## Trends in Recent HIV Infection Detection (2021-2024 FY)



The highest number of RHI cases was recorded in the 2023 fiscal year, with 123 individuals (3.5%) identified



According to the results of the 2024 FY, Mykolaiv and Zaporizhzhia Oblasts ranked highest in terms of the percentage of RHI among tested individuals



\*Fiscal Year (FY) in the PEPFAR Program : October 1 – September 30)

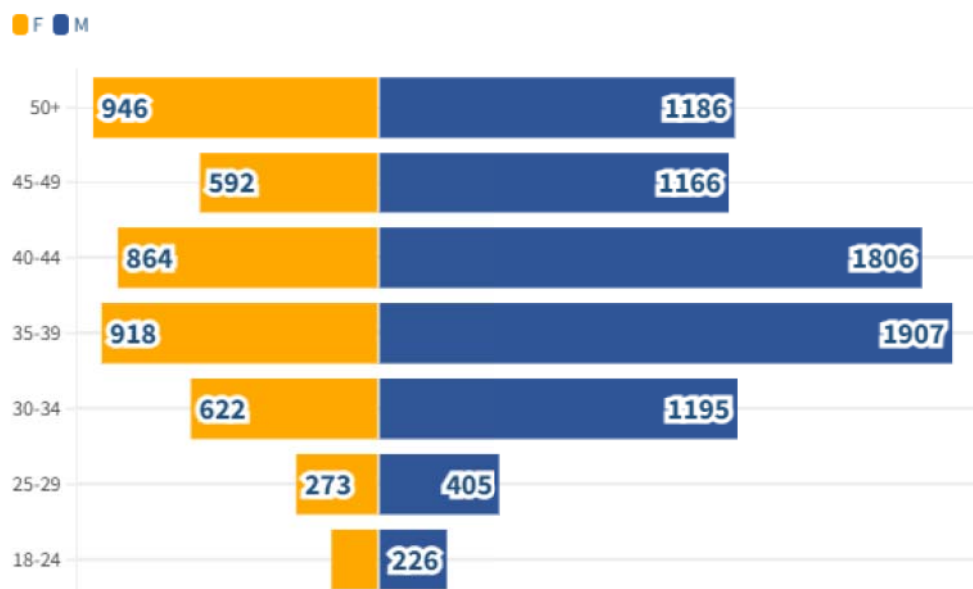
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## Demographic distribution by age and gender (abs. count)

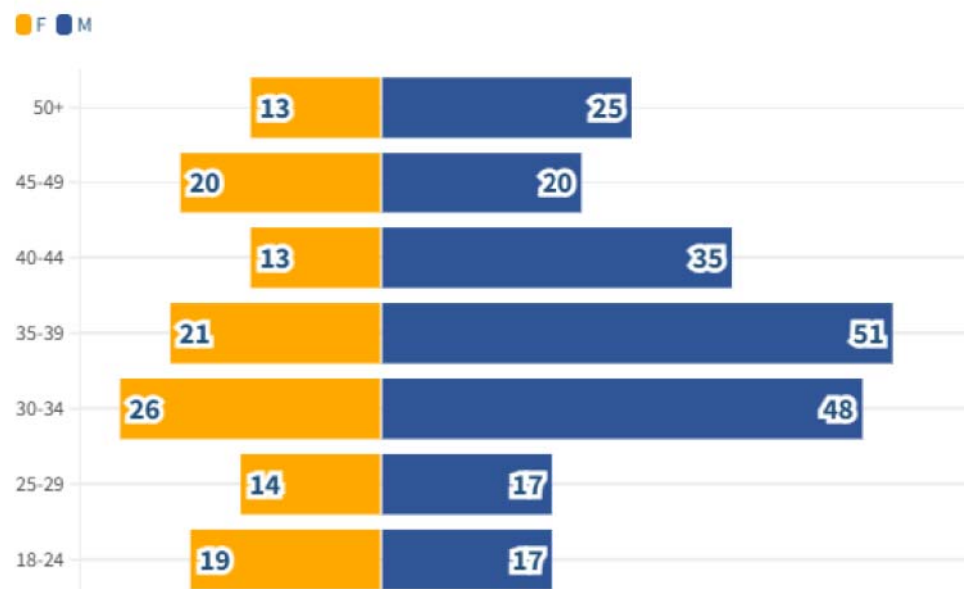
Men aged 35–44 and women aged 35–39 and 50+ were more frequently involved in RHI testing. Most RHI cases, among both men and women, were identified in the 30–39 age group



Age and Gender structure of individuals tested for RHI in absolute numbers (2021-2024 FY)



Age and gender structure of RHI cases in absolute numbers (2021-2024 FY)



\*Fiscal Year (FY) in the PEPFAR Program : October 1 – September 30)

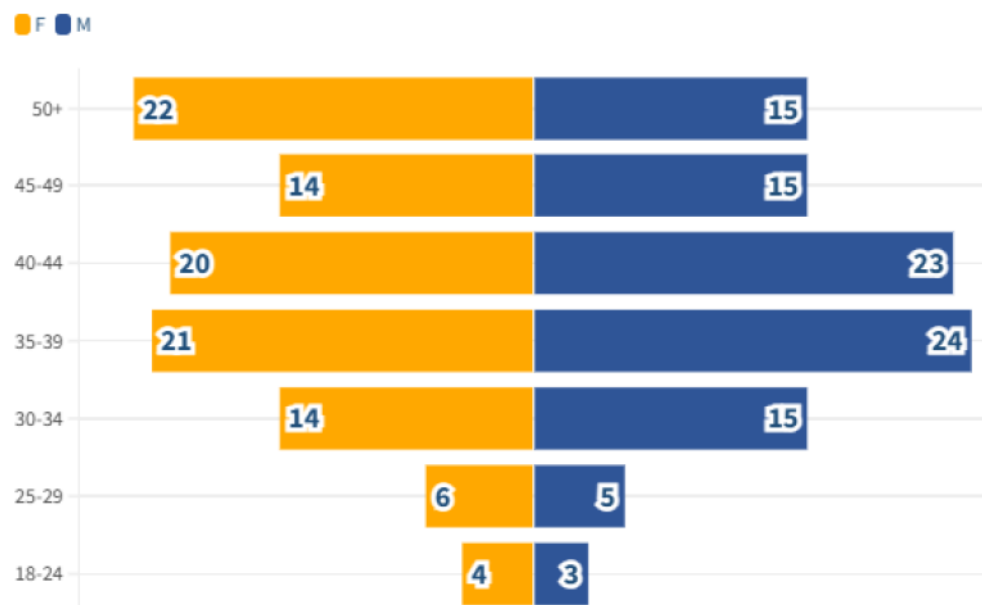
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## Demographic distribution by age and gender (%)

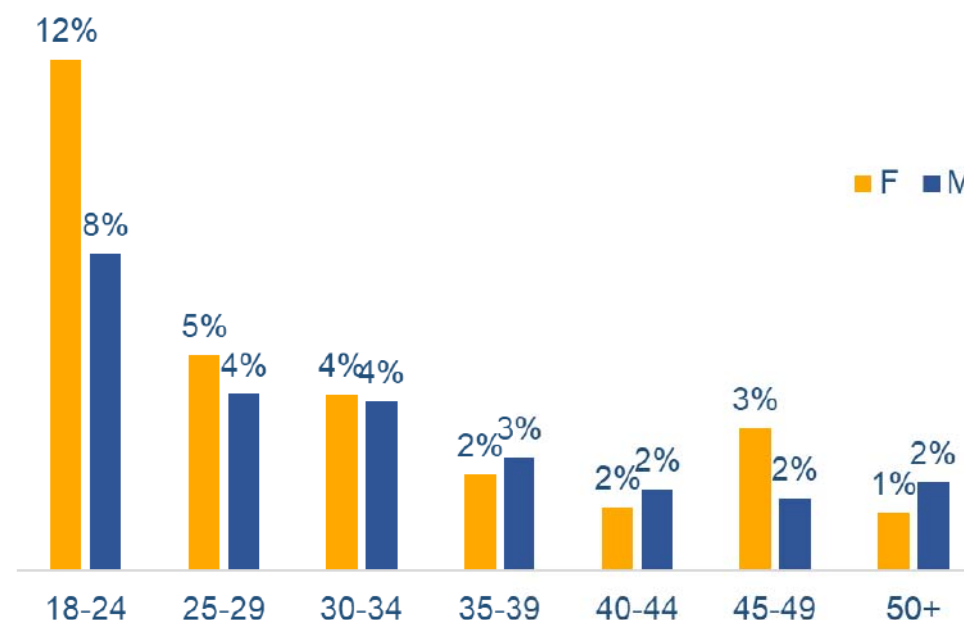
The proportion of individuals tested for RHI in the 18-24 age group is the lowest both among women (4%) and men (3%). However, the percentage of detected RHIs in this age group is the highest, at 12% among women and 8% among men



Age and Gender structure of individuals tested for RHI in %  
(2021-2024 FY)



% RHI cases in tested individuals by age and gender (2021-2024 FY)



\*Fiscal Year (FY) in the PEPFAR Program : October 1 – September 30)

Digest "Implementation of the Monitoring and Response System for Recent HIV Infection in Ukraine"

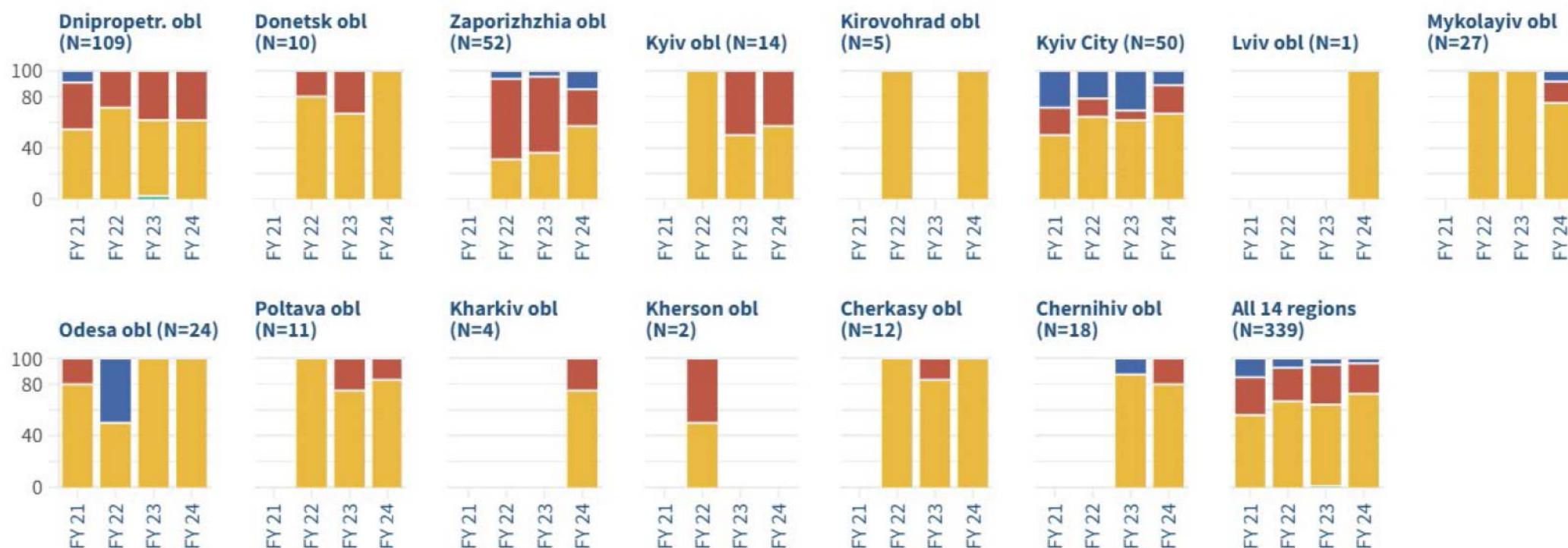
## Distribution RHI by key population and Oblasts

The highest proportion of PWID among RHI cases is observed in Zaporizhzhia, Dnipropetrovsk, and Kyiv Oblasts. The highest proportion of MSM in RHI cases is in Kyiv city



## The dynamics and the structure of RHI by KP across regions, 2021-2024 FY

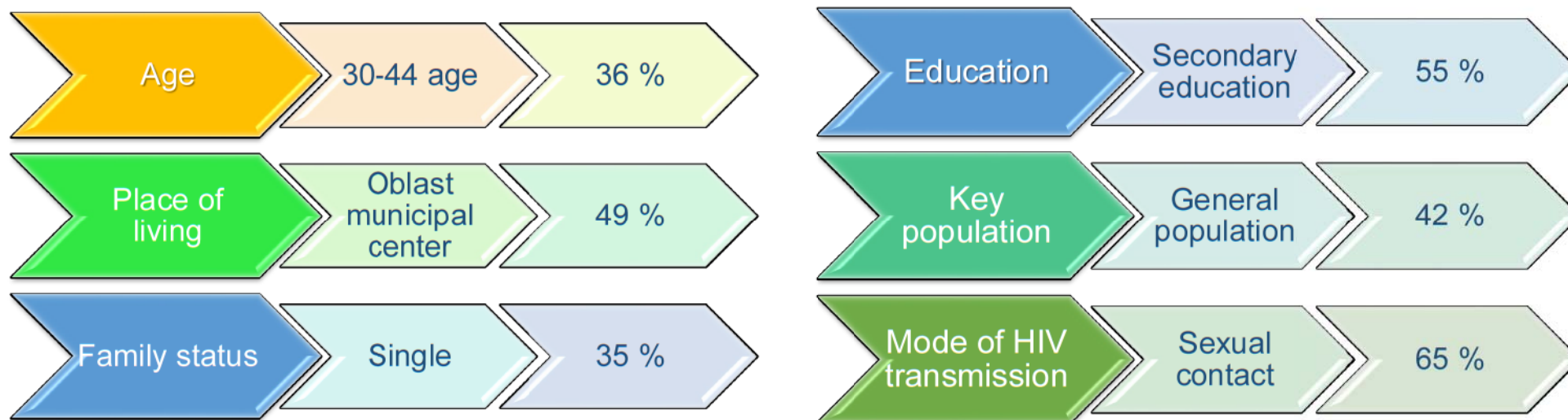
SW Other, non KP PWID MSM



\*Fiscal Year (FY) in the PEPFAR Program : October 1 – September 30)

Digest "Implementation of the Monitoring and Response System for Recent HIV Infection in Ukraine"

## An overview of the "profile" of an individual with recent HIV infection\*, 2024 FY (N = 106)



\* The summarized profiles of men and women with recent infections (RI) based on the specified characteristics are similar

\*Fiscal Year (FY) in the PEPFAR Program : October 1 – September 30)

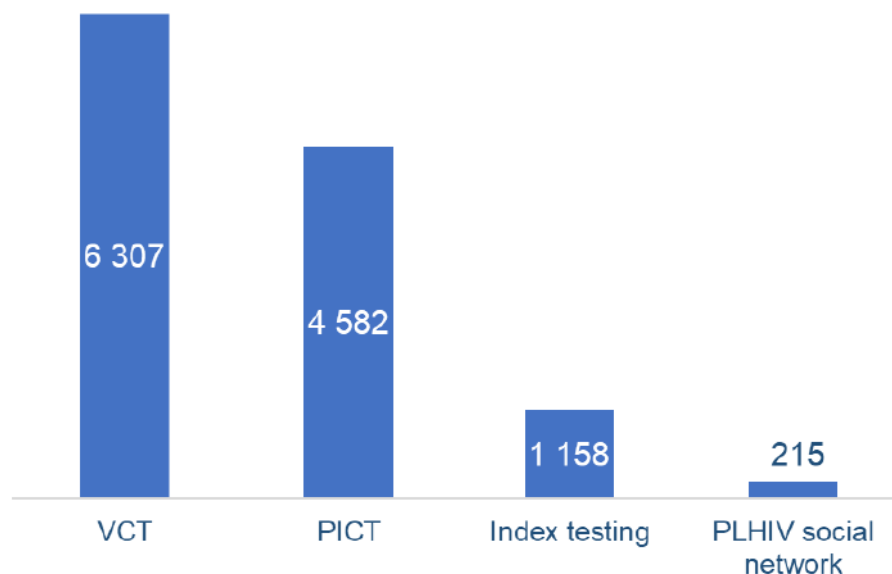
Digest "Implementation of the Monitoring and Response System for Recent HIV Infection in Ukraine"

## Analysis by Testing Modalities

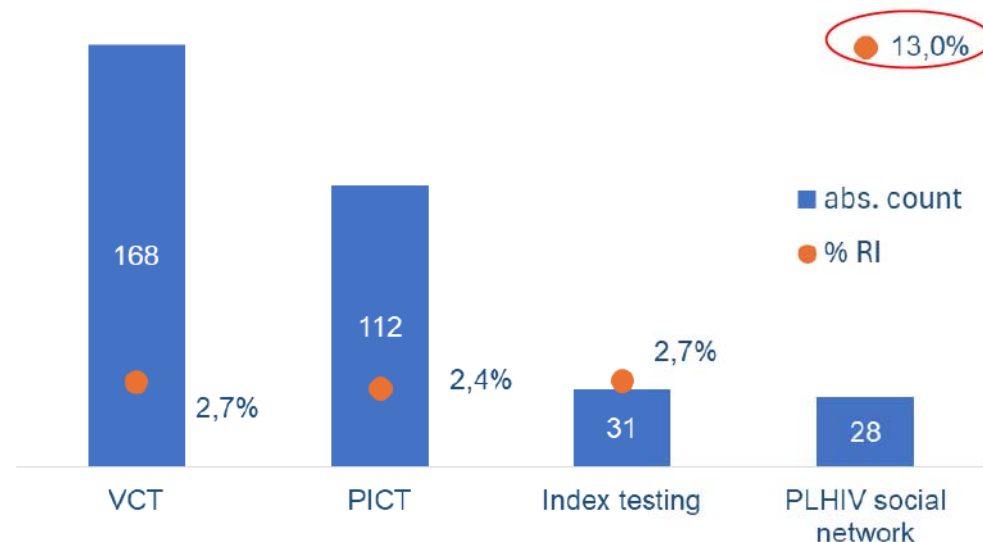
The highest number of individuals tested and identified with RHI were among those who received HIV testing services either voluntarily or at the initiative of a healthcare worker. The highest percentage of RHIs was found in the social environment of people living with HIV (PLHIV social networks)



RI Testing by modalities  
2021-2024 FY



Results of RI Testing by modalities  
2021-2024 FY



\*Fiscal Year (FY) in the PEPFAR Program : October 1 – September 30)

Digest "Implementation of the Monitoring and Response System for Recent HIV Infection in Ukraine"

## Defining 'Hot Spots' in Recent HIV Infection Surveillance



In the context of recent HIV infection surveillance, a "**hot spot**" is defined as a location where a significant number of recent HIV infection cases have been detected within a specified timeframe. The identification of such hot spots may indicate ongoing transmission of the virus in that locale or among specific population groups

Recency surveillance "hot spots" are identified according to the following criteria:

- **Local Level:**  $\geq 2$  new recent HIV infection (RHI) cases within 30 days (monthly analysis).
- **Regional Level:**  $\geq 5\%$  of new RHI cases within a quarter (quarterly analysis).
- **National Level:** An increase in RHI cases over 6 months by  $\geq 2$  standard deviations (biannual analysis).

These hot spot criteria are reviewed annually, and the analysis periods may be adjusted as case numbers decline.

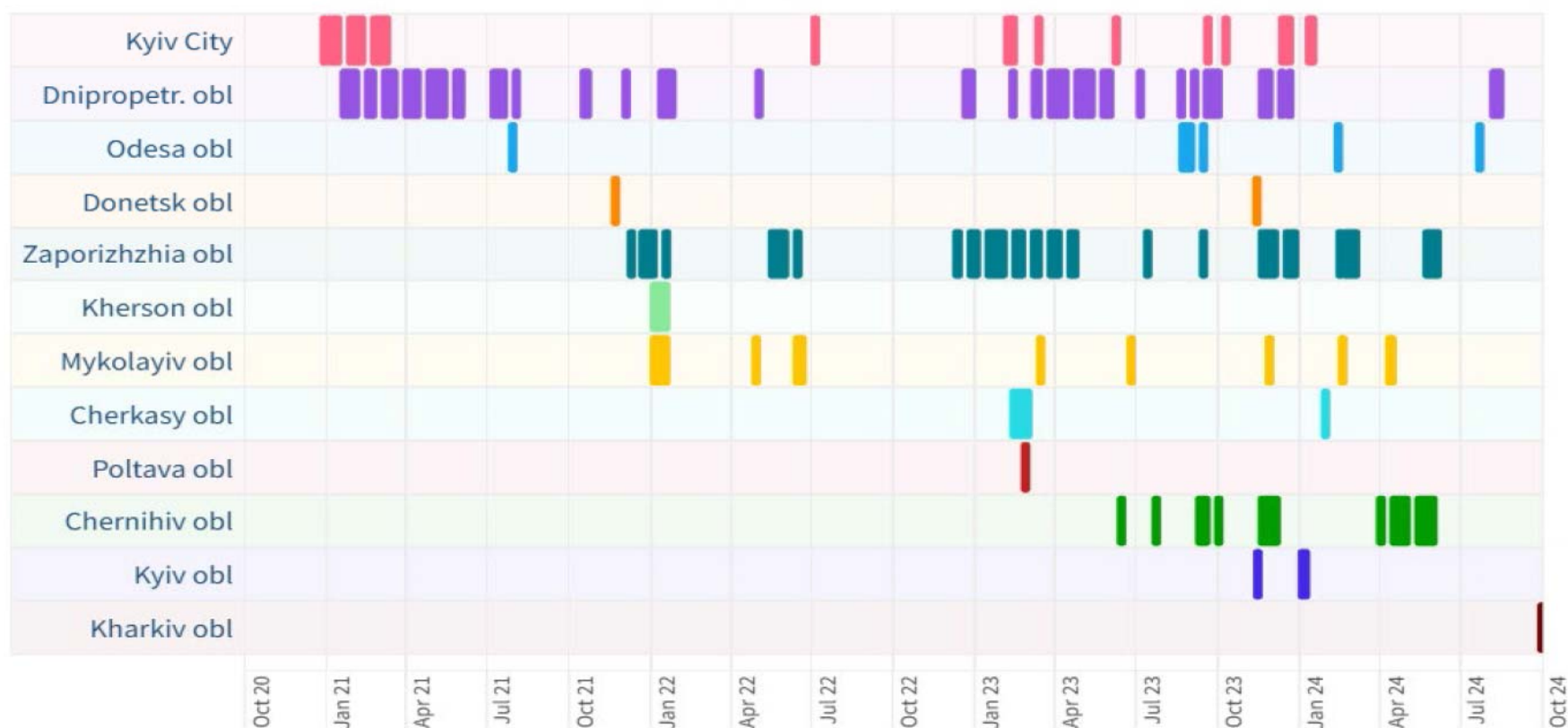


## Hotspots' geographical locations

Throughout the entire period of surveillance for recent infections, the highest number of "hotspots," specifically locations of active HIV transmission, was recorded in Zaporizhzhia and Dnipropetrovsk regions. In 2024, there was an increase in the number of "hotspots" observed in Chernihiv region



**Local level Hotspots by regions, 2021-2024 FY**

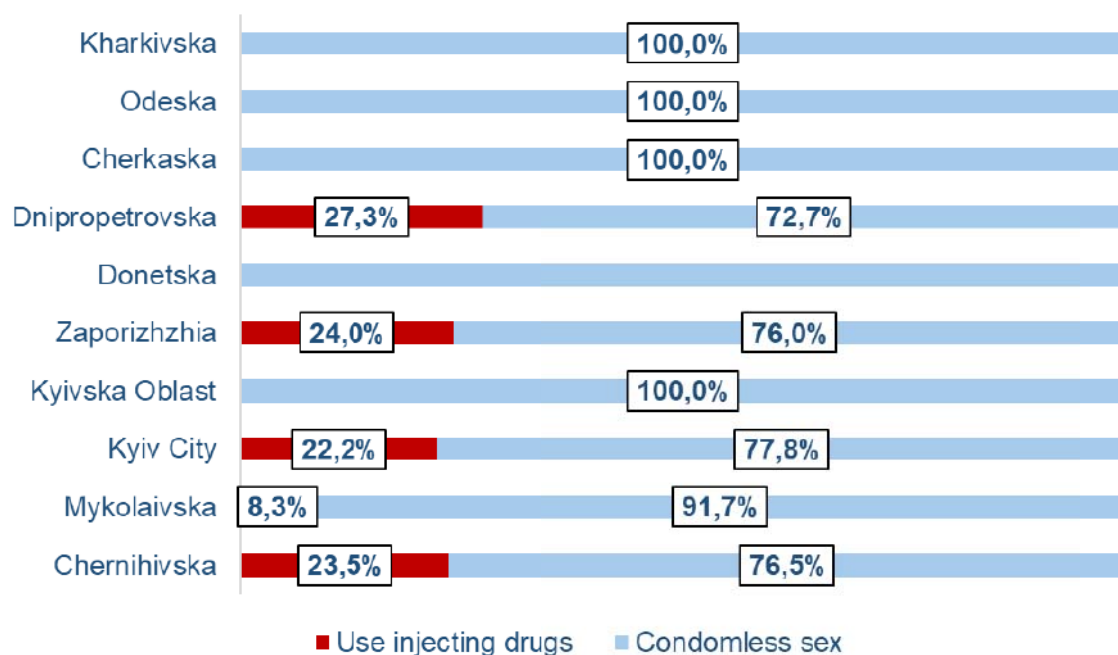


## HIV exposure risk factors at identified Hotspots

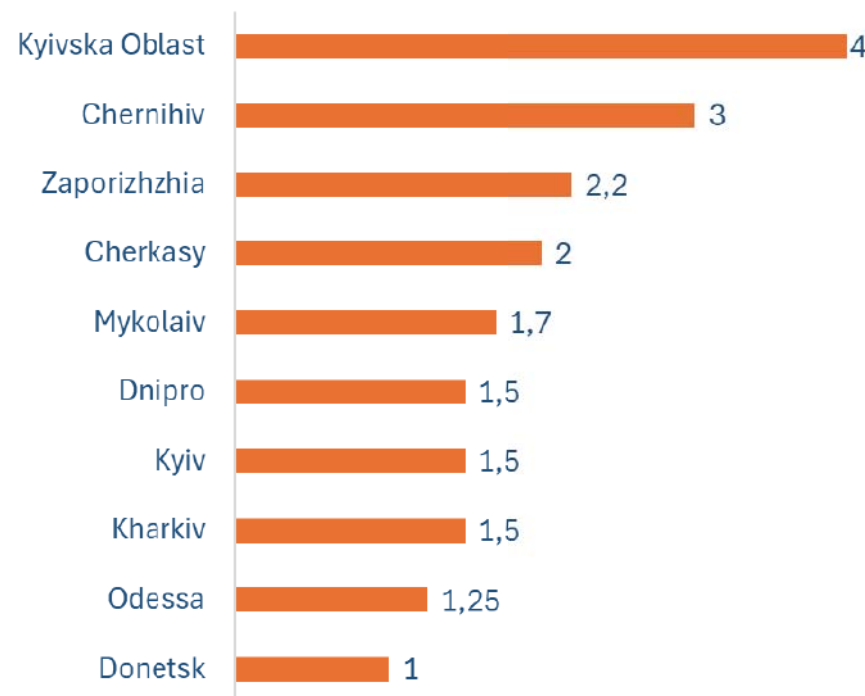
In 2024, condomless sexual contact is identified as the primary risk factor for HIV transmission in "hotspot" areas. In the regions of Zaporizhzhia, Kyiv, Cherkasy, and Chernihiv, each new case of HIV infection is associated with more than two distinct risk factors



RI at hotspots (locations) by risk factors, 2024 FY



Number of HIV infection risk factors per case of RI



\* Data on risk factors have been available since 2024. A single individual with a RHI may be associated with more than one risk factor for HIV transmission

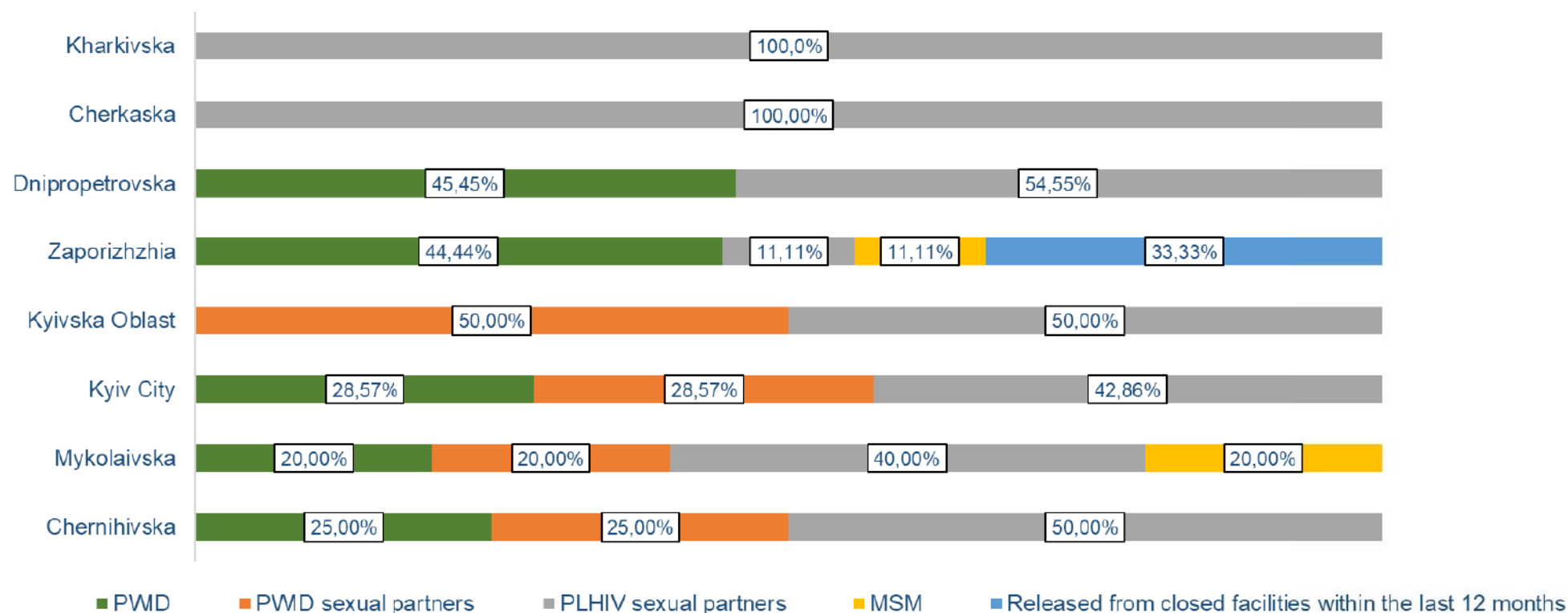
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## Key populations distribution of RHI in Hotspots

In 2024, within the structure of key populations in "hotspot" areas, the largest proportion of RHI is attributed to sexual partners of people living with HIV



RI by key populations in hotspots (locations)



## Key findings:

- ▶ Between 2021-2024 FY, over 12,000 individuals with newly diagnosed HIV were tested for RHI, and 2.8% [2,3% - 3,5%] of them were identified as having recent infections
- ▶ Elevated RHI rates observed:
  - In Zaporizhzhia [8% - 16%] and Mykolaiv [8% - 12%] Oblasts
  - Among young people age group 15-24 - female (12%) and male (8%)
  - In key populations, specifically MSM (5%) and PWID (3%)
  - In a group of PLHIV who were referred from NGOs, social networks (13%)
- ▶ The highest number of active (persistent) HIV transmission locations (hotspots) have been identified in Dnipropetrovsk, Zaporizhzhia, Chernihiv regions, and Kyiv city
- ▶ In "hotspot" locations, the predominant risk factor for HIV transmission is condomless sexual intercourse, with sexual partners of PLHIV constituting the primary key group at risk for HIV infection

## Recommendations:

- ▶ HIV prevention interventions (primarily PrEP, index testing, and TasP (treatment as prevention) should be targeted at the following groups:
  - Youth aged 18-24
  - Specific key populations - PLHIV sexual partners, MSM and PWID
  - People aged 30-44 who have risk sexual behavior and are not belong to key populations (considering the "profile" of RHI case)
- ▶ Evaluation, as well as further enhancement and development of prevention measures, should consider the unique characteristics of the 'hotspots' in each region



## Main events 2024 FY

- ▶ Training on the implementation of epidemiological surveillance for recent HIV infections, *May 14-15 and 16-17, 2024*



- ▶ Stakeholder meeting on HIV Case Base Surveillance (HIV CBS) and Recent HIV infection response *October 10 – 11, 2024*



- ▶ Launch of new designated sites for RHI Testing

Kharkiv



Lviv



Boyarka, Kyiv Oblast



Mykolaiv



Zinkiv, Poltava Oblast



Brovary, Kyiv Oblast



- ▶ Monitoring visits to 7 regions, Visited 23 designated RHI testing sites

Kryvyi Rih

Novomoskovsk

Voznesensk

Bila Tzerkva

Mykolaiv

Zaporizhzhia

Pryluky

Poltava

Kamianske

Fastiv

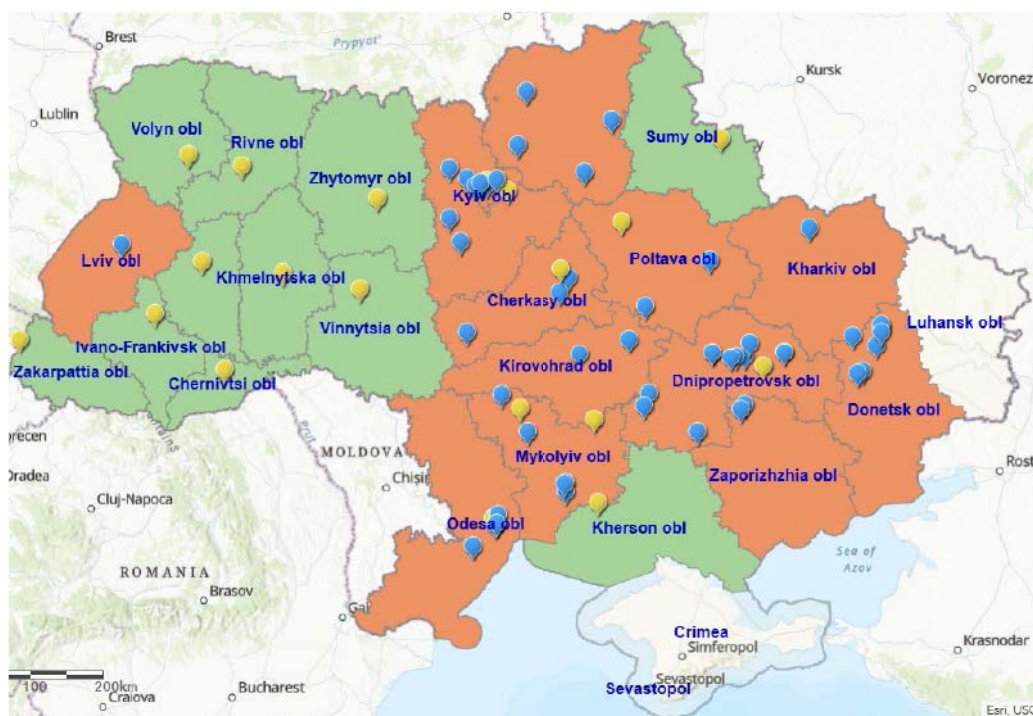
Dnipro

Kyiv

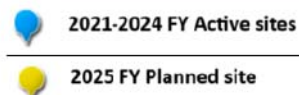
Chernihiv



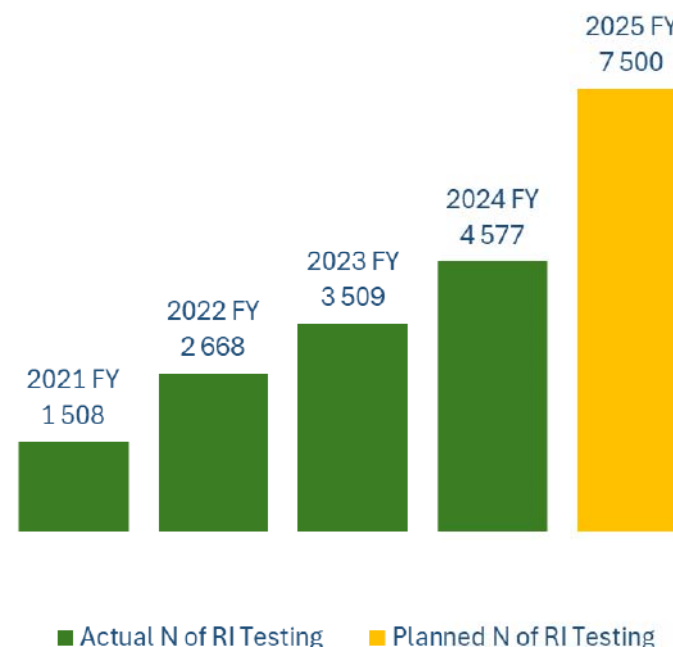
In 2025, it is planned to expand surveillance of Recent HIV infections to 25 regions of Ukraine, involving 22 new sites (a total of 75 sites)



Regions of RHI surveillance



7,500 RI Tests planned for 2025 FY



## Main recommendations:



### Prevention

- ▶ There is a need to enhance HIV prevention measures targeting youth aged 18-24, individuals aged 30-34 with risky sexual behavior who do not belong to key populations, and members of key communities, specifically MSM and PWID. Prevention measures in hotspots must be developed based on local specifics, with consideration given to the unique characteristics of "hot spots" in each region.

### "Hot Spots" analysis

- ▶ It is imperative to conduct regular surveillance in regions exhibiting elevated rates of recent HIV infection, specifically Kyiv City, Dnipropetrovsk, Zaporizhia, Mykolaiv, and Chernihiv Oblasts. Furthermore, targeted interventions should be developed and implemented to mitigate the ongoing transmission of infection among key populations, youth and general population with risk sexual behavior.

For more **detailed information** on recent HIV infection testing, please refer to this **interactive dashboard**:



If you have any **questions or suggestions** regarding the information in our upcoming digest, please leave your feedback and proposals here:



The surveillance of recent HIV infection is implemented at the initiative of the State Institution "Public Health Center of the Ministry of Health of Ukraine," with technical support from the Centers for Disease Control and Prevention (CDC) of the United States, as part of the President's Emergency Plan for AIDS Relief (PEPFAR), NU2GGH002375