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**PEPFAR**



# Digest

## IMPLEMENTATION OF THE MONITORING AND RESPONSE SYSTEM FOR RECENT HIV INFECTIONS IN UKRAINE

as of September 1, 2024

Edition 1



Dear readers,



We are pleased to present the inaugural edition of our digest, dedicated to the **analysis of surveillance data pertaining to recent HIV infections in Ukraine.**

This edition aims to elucidate **contemporary data, emerging trends, and key findings** that contribute to a deeper understanding of the current HIV landscape in the country. Furthermore, it seeks to evaluate the effectiveness of interventions implemented to mitigate the epidemic.

We anticipate that this digest will serve as a valuable resource for all stakeholders engaged in the HIV response in Ukraine, facilitating a more **informed and coordinated response to the epidemic.**

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



# Understanding Recent HIV Infection (RHI)



- 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



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

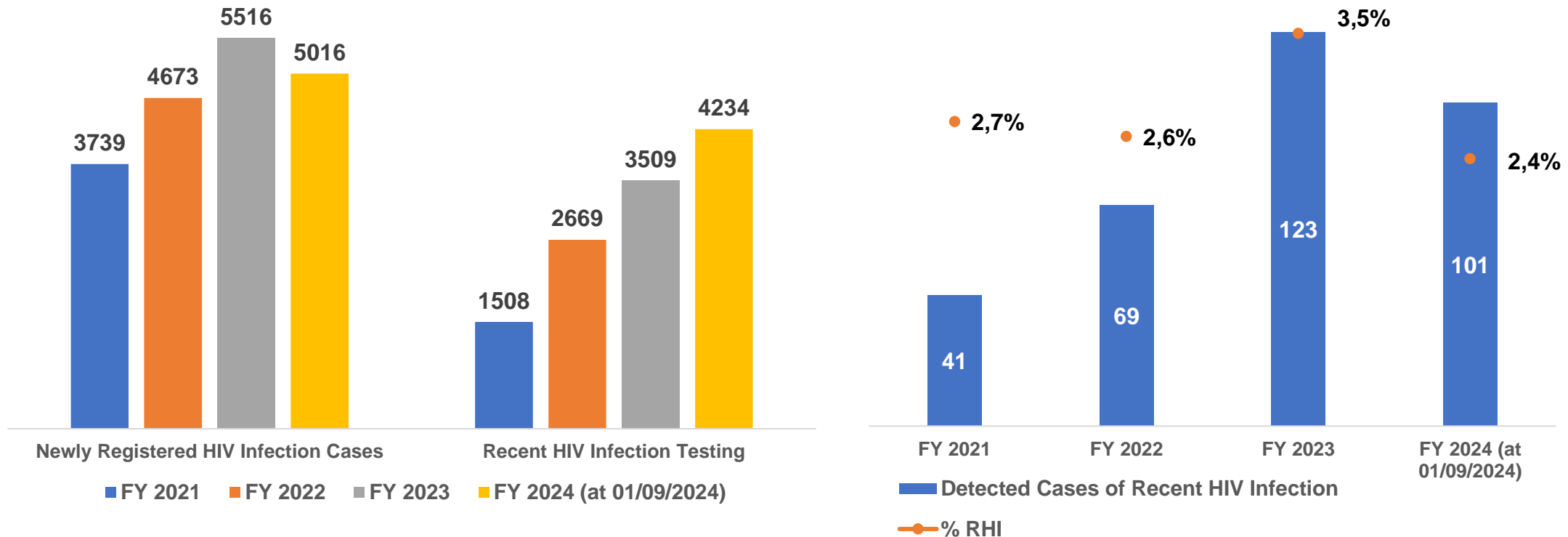
In 7 of these regions, the testing coverage for RHI exceeds 50% of the total newly diagnosed HIV cases.



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



Between 2021 and 2024, there has been a notable increase in the volumes of testing for recent HIV infections (RHI) and the number of detected cases. The proportion of RHI cases has consistently averaged around 3%.



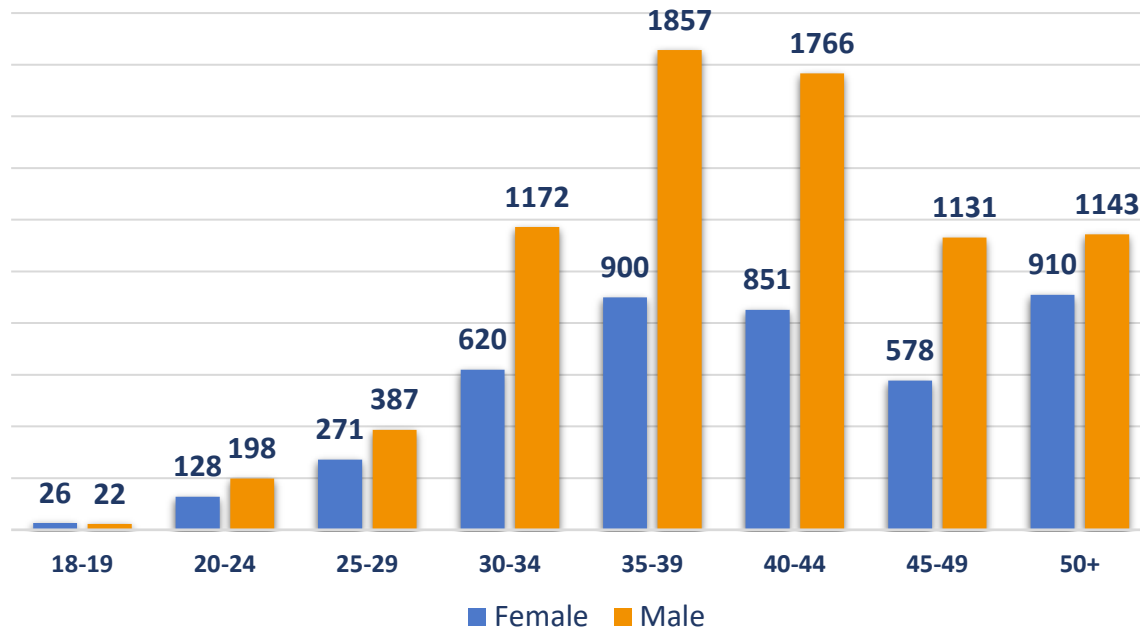
\*Fiscal Year (FY) in the PEPFAR Program : October 1 – September 30)

# Demographics of Recent HIV Infection Testing: Gender and Age Distribution

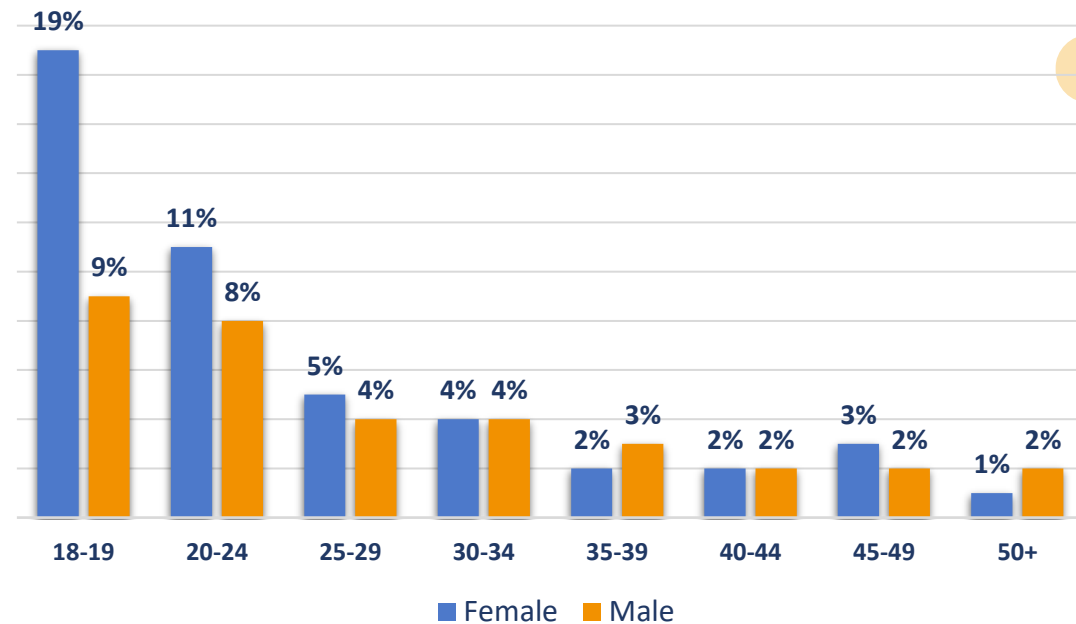


During the entirety of the surveillance period, the predominant demographic of individuals tested for recent HIV infection consisted of men aged 30 to 44 years. Conversely, the highest percentage of detected recent HIV infections was observed among individuals in the youth cohort, specifically those aged 18 to 24 years

Total Tested for Recent HIV Infection by Age and Gender



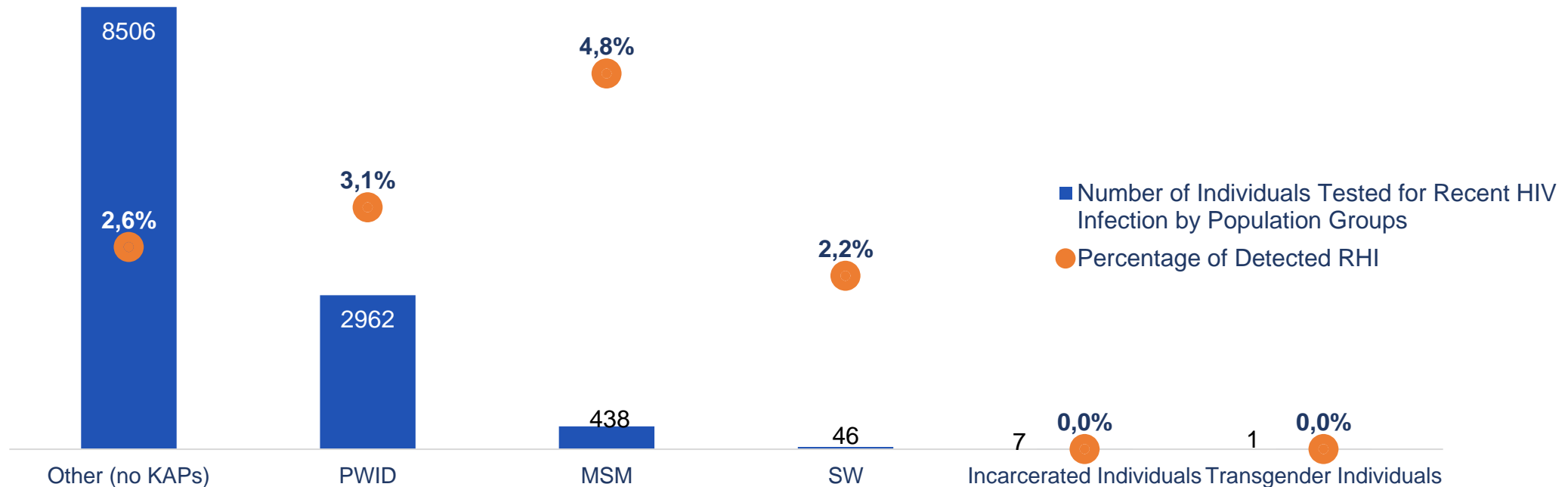
Proportion of Recent HIV Infection Among Tested Individuals by Age and Gender



# Demographics of Recent HIV Infection Testing: Population Groups



The vast majority of individuals tested for recent HIV infection do not belong to key populations that are at elevated risk for HIV transmission. Nevertheless, the proportion of recent HIV infections is significantly higher among MSM and PWID

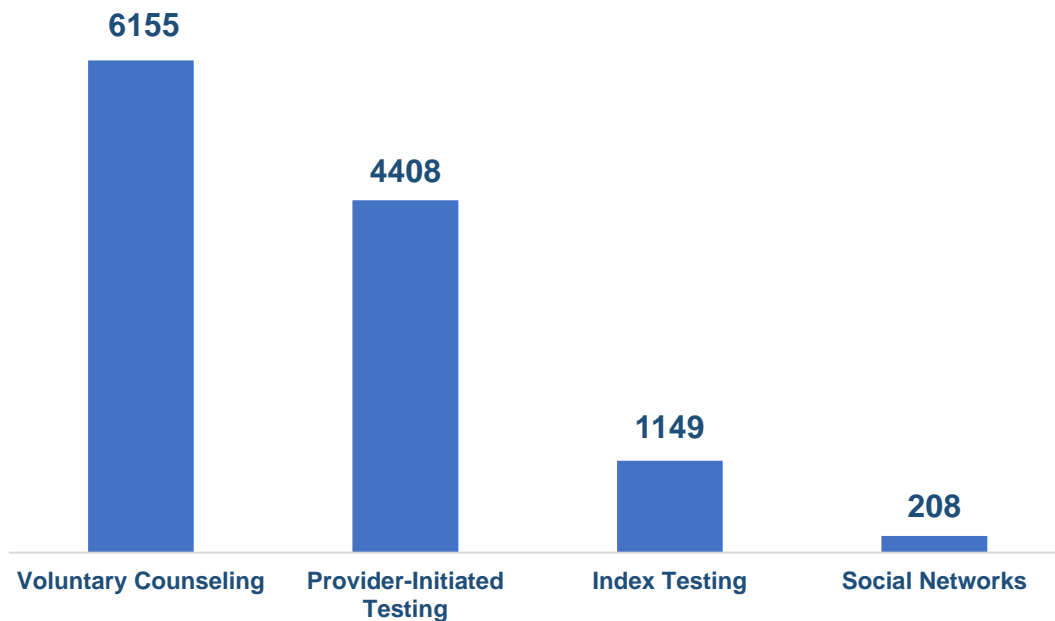


# Testing Modalities and Recent HIV Infection Detection Rates

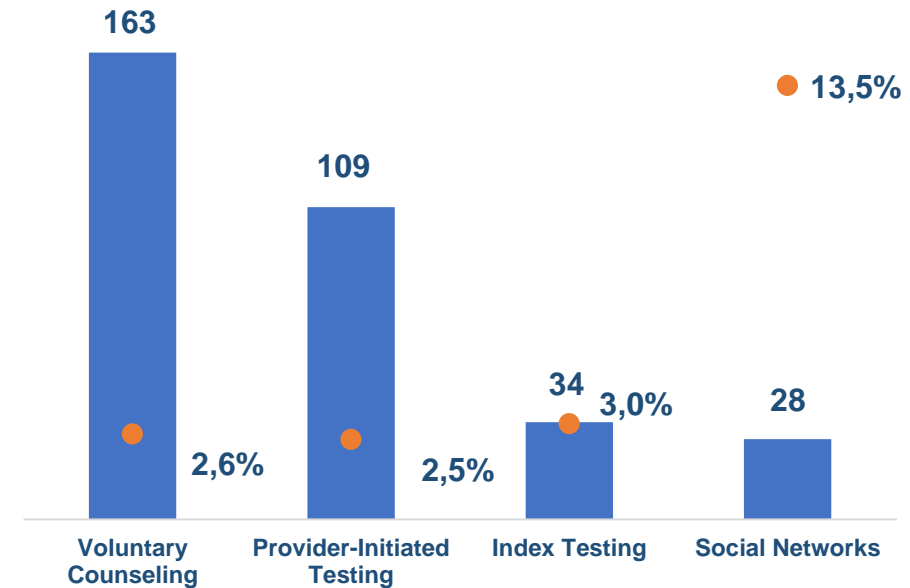


The majority of individuals tested for recent HIV infection were those who participated in voluntary testing or underwent testing at the initiative of healthcare professionals. In contrast, the highest prevalence of detected recent HIV infections was observed among individuals who were tested through social networks

### Recent HIV Infection Testing by Testing Modalities



### Testing Results for Recent HIV Infection by Testing Modalities



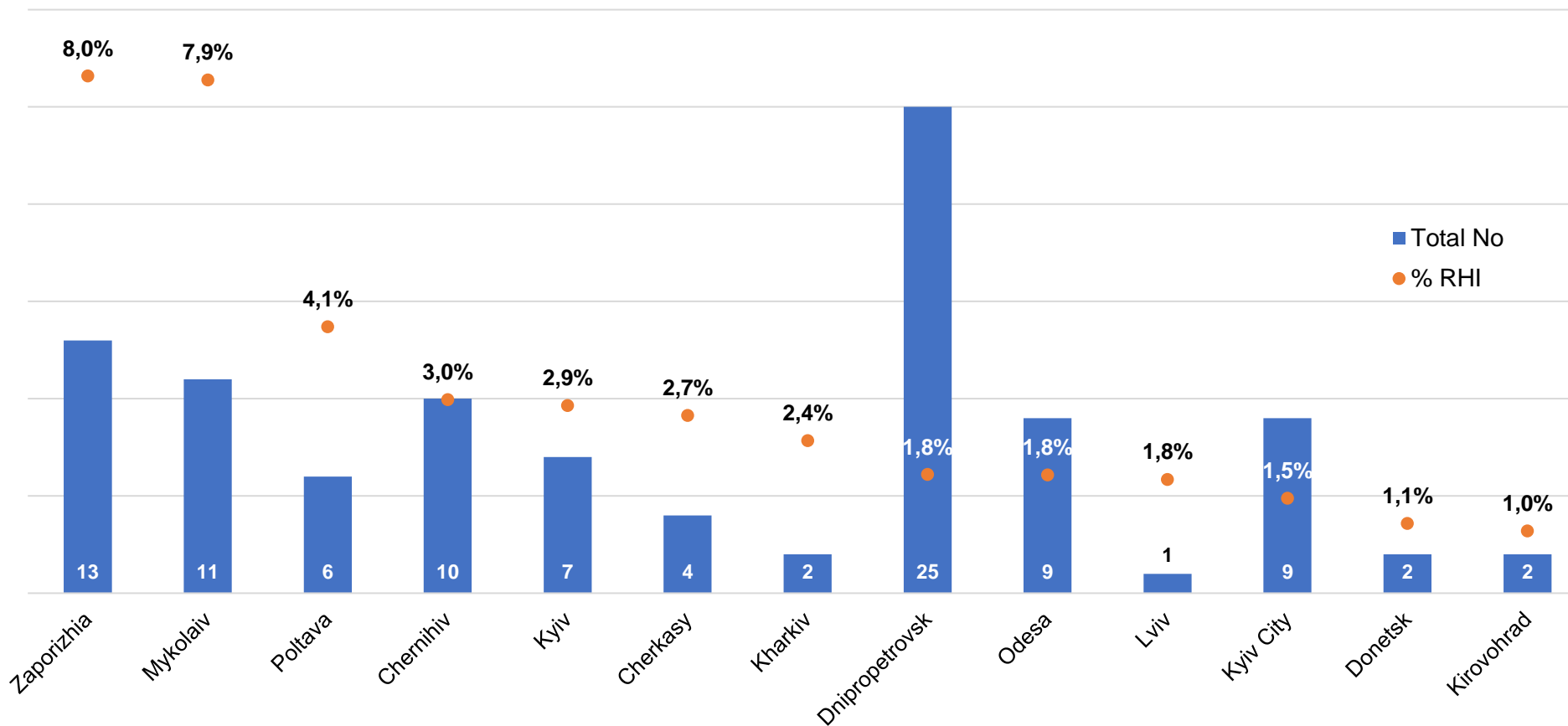


# Geographic Distribution of Recent HIV Infection Case



The highest percentage of recent HIV infection cases has been identified in the regions of Zaporizhia, Mykolaiv, Poltava, and Chernihiv

Testing Results for Recent HIV Infection by Region (FY: 2024)



# 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

Surveillance and monitoring efforts are grounded in data analysis and include the identification of "hot spots" 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.

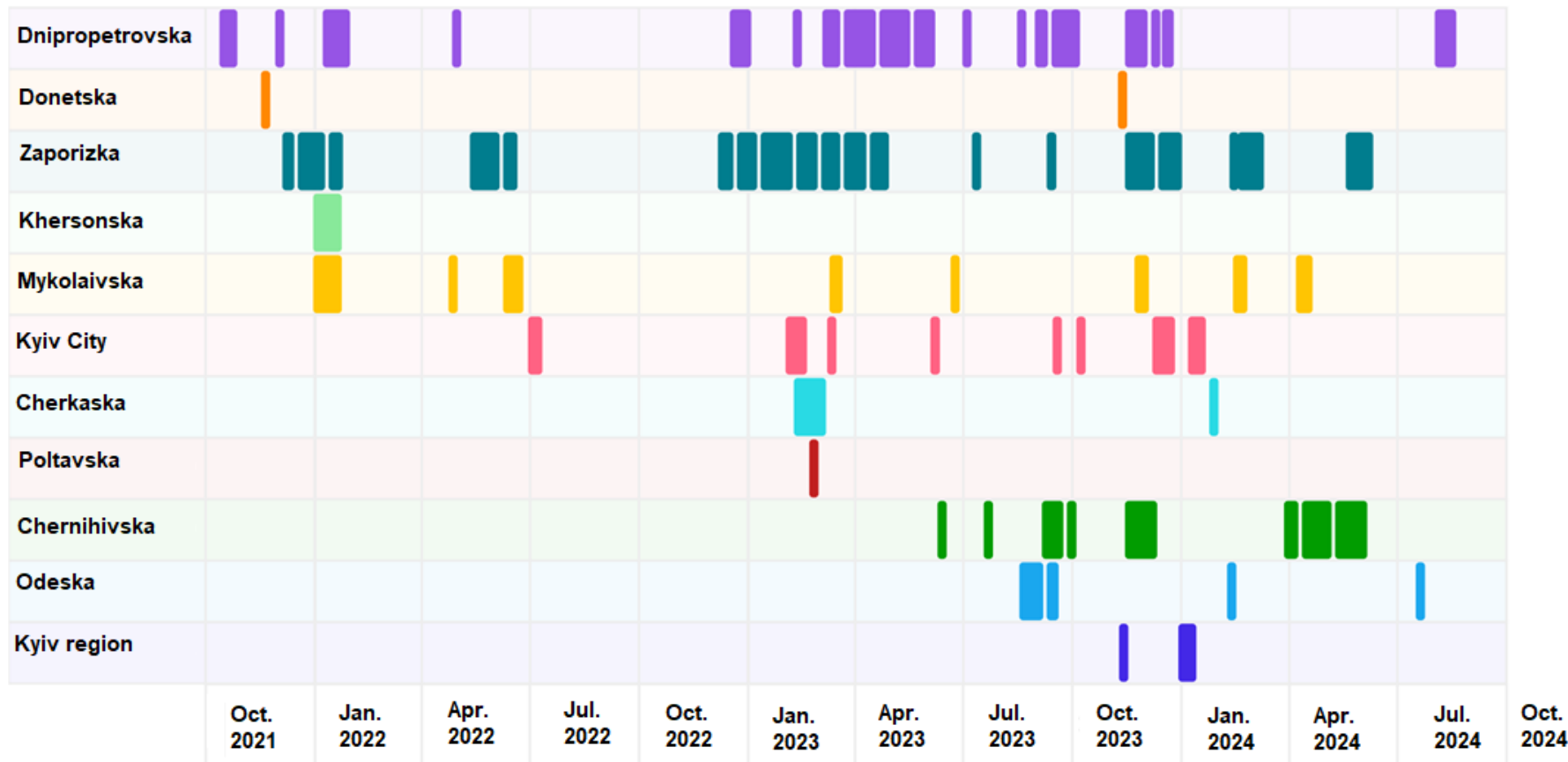


# Geographic Concentration of 'Hot Spots'

Throughout the entire surveillance period, the highest number of "hot spots" has been recorded in the Zaporizhia and Dnipropetrovsk regions



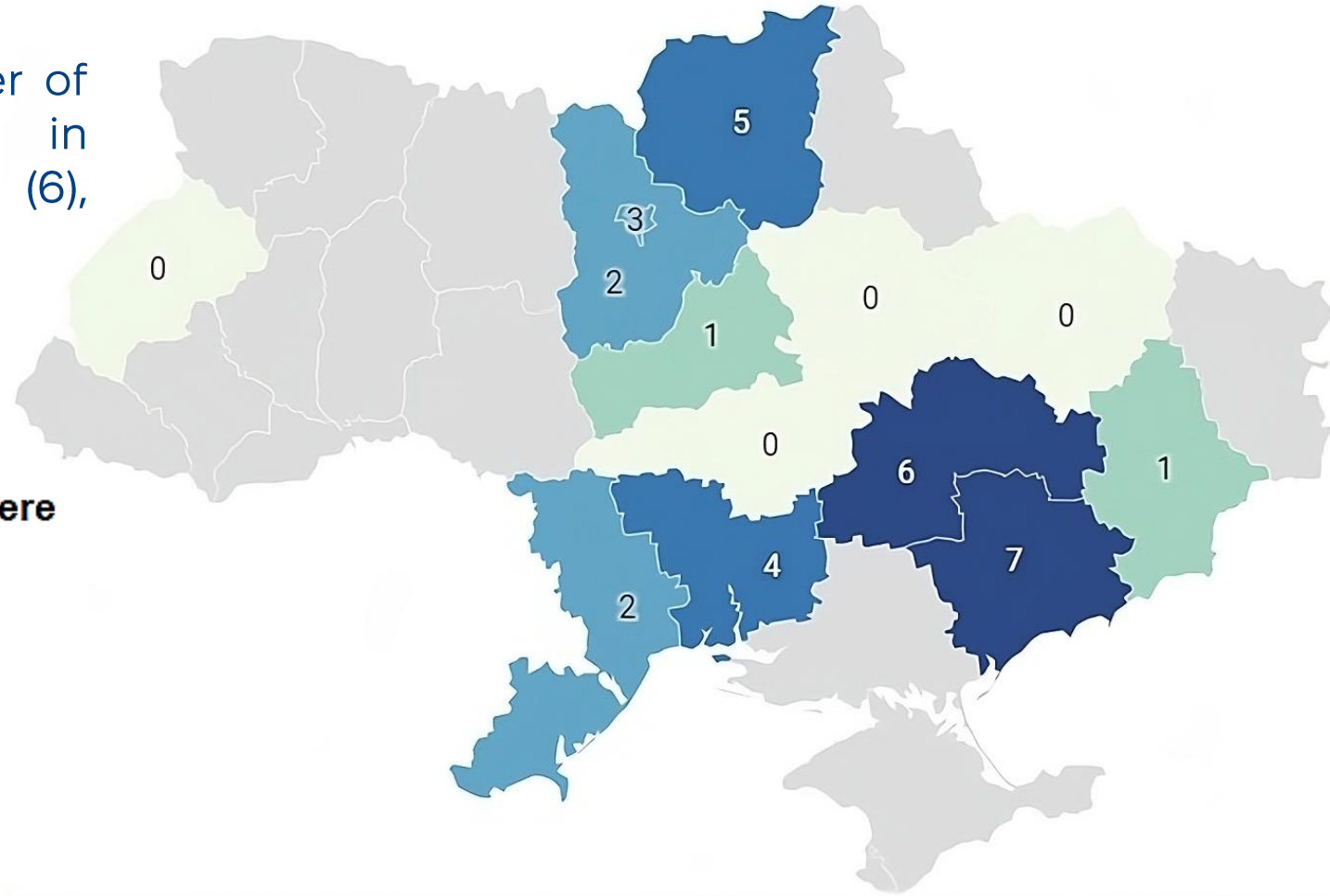
Local-level 'Hot Spots' aggregated by regions  
(FY: 2022 - FY: 2024)



# Distribution of 'Hot Spots' in FY 2024



In FY 2024, the highest number of "hot spots" were identified in Zaporizhia (7), Dnipropetrovsk (6), and Chernihiv (5) regions



**Number of 'Hot Spots' in regions where Testing for RHI was conducted (FY: 2024)**

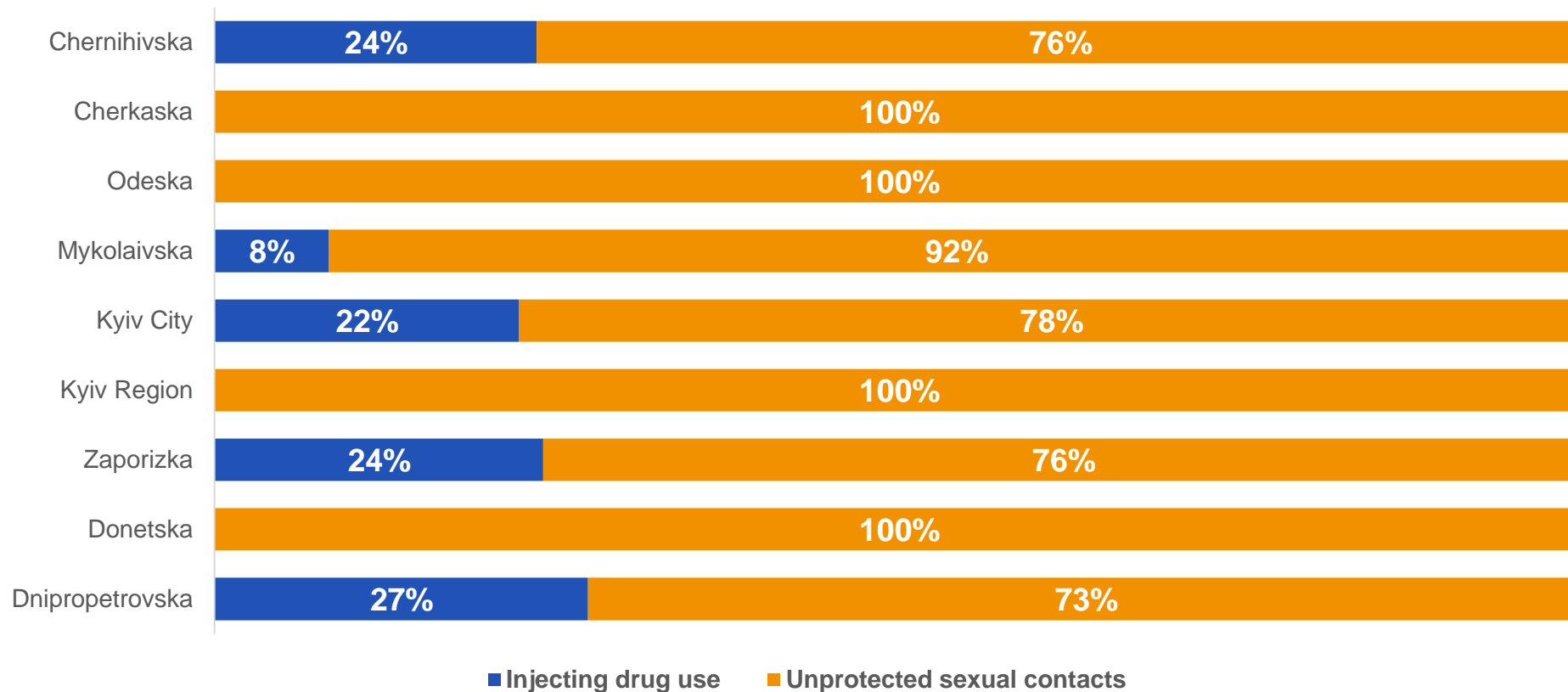
Legend:  $\geq 6$  (dark blue), 4-6 (medium blue), 2-4 (light blue), 1-2 (green), < 1 (light green)

# Risk Factors for Recent HIV Infection in regional 'Hot Spots'

In the distribution of risk factors for recent HIV infection across regional "hot spots," the dominant factor is the risk associated with unprotected sexual contacts



Distribution of risk factors for RHI across regional "hot spots"

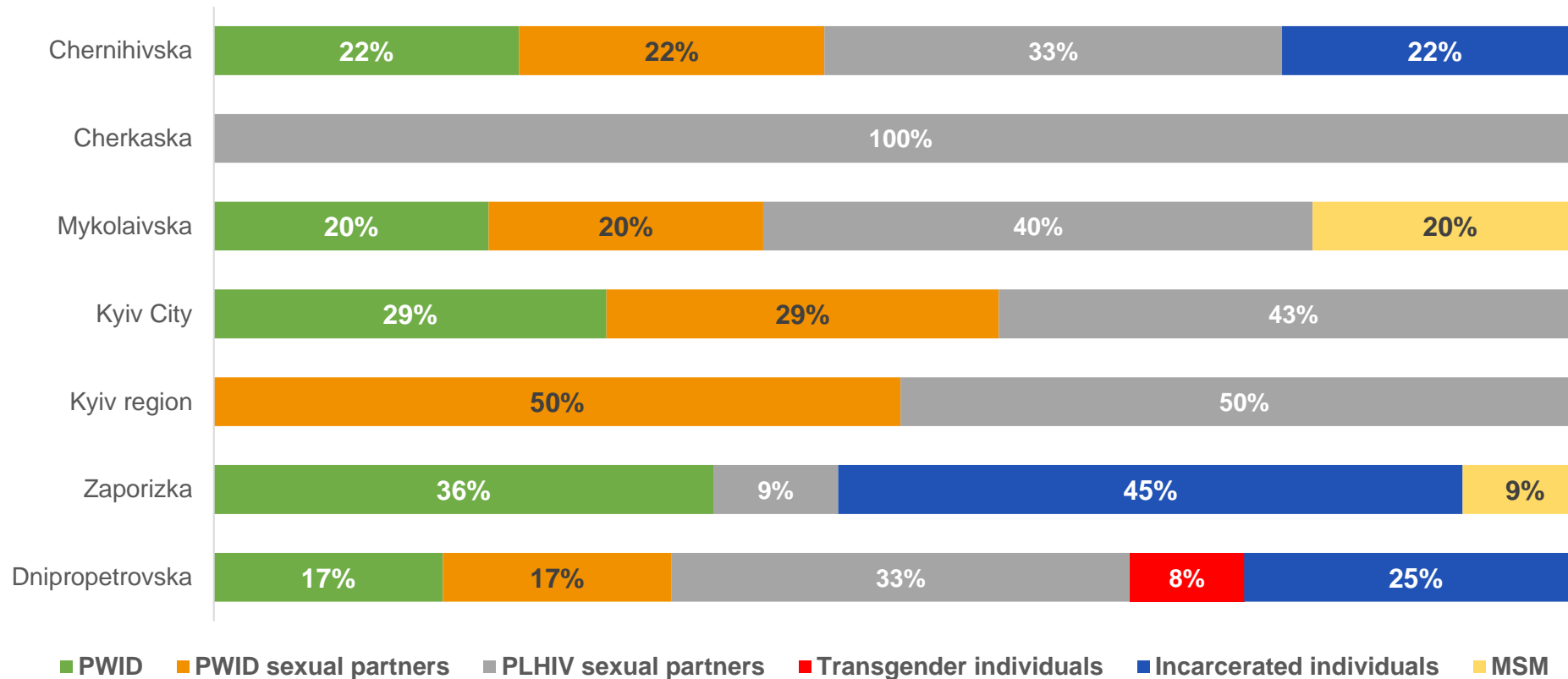


# Key population distribution of Recent HIV Infections in 'Hot Spots'

The distribution of key populations with recent HIV infections across "hot spots" varies by region; however, in most regions, sexual partners of people living with HIV (PLHIV) predominate



Distribution of key populations with RHI across "hot spots"



# Main recommendations:



## Prevention

- ▶ There is a need to enhance HIV prevention measures targeting youth aged 18-24 years and members of key communities, specifically MSM and PWID

## "Hot Spots" analysis

- ▶ It is imperative to conduct regular surveillance in regions exhibiting elevated rates of recent HIV infection, specifically Zaporizhia, Mykolaiv, and Chernihiv. Furthermore, targeted interventions should be developed and implemented to mitigate the ongoing transmission of infection among key populations, with consideration given to the unique characteristics of "hot spots" in each region

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