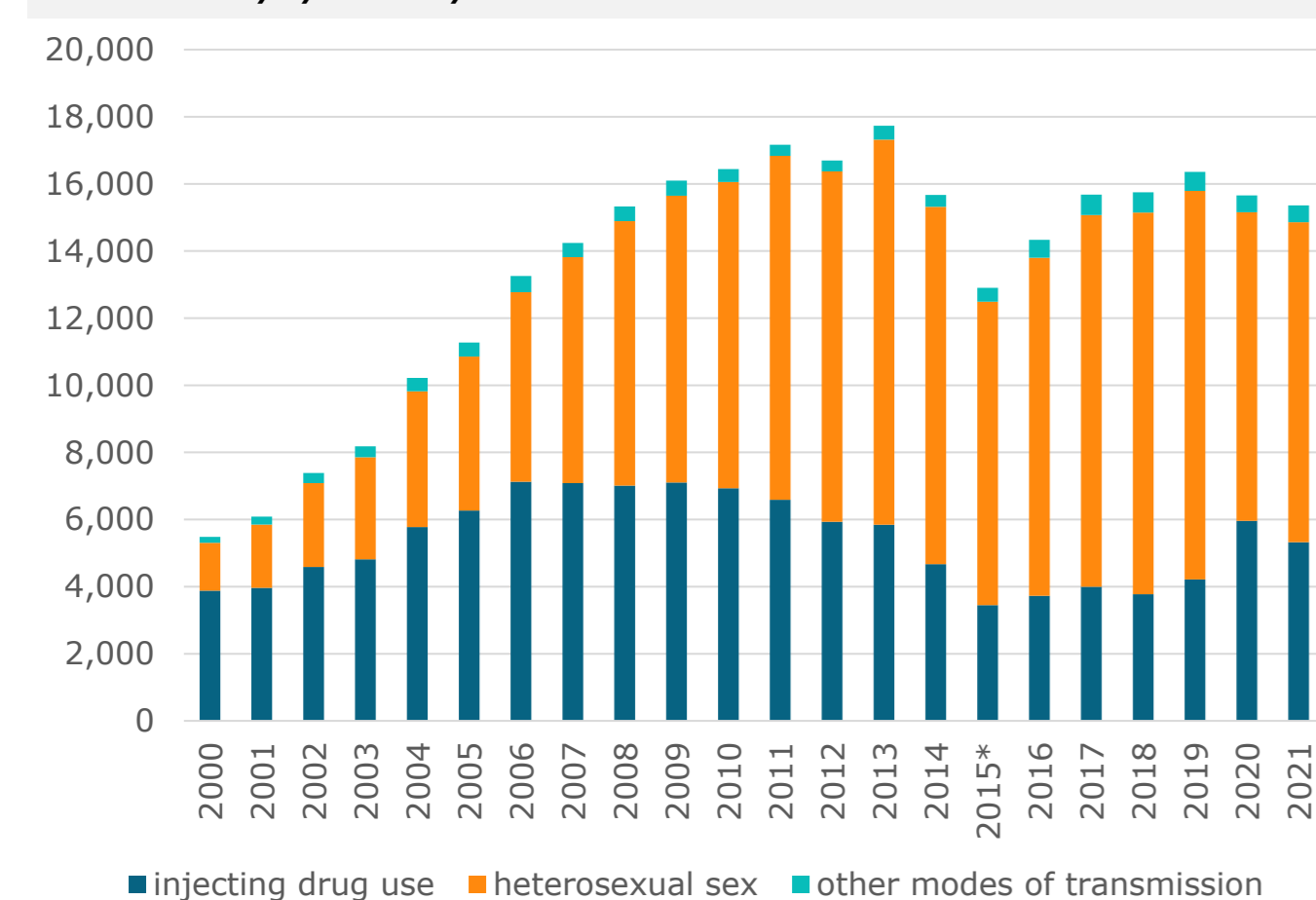


Introduction

Eastern Europe and Central Asia (EECA) is one of the few regions globally where the HIV epidemic continues to grow. UNAIDS estimates that between 2010 and 2020, the number of new adult HIV infections decreased globally by 23%, whereas in EECA, there was a 72% increase, the highest rate among all regions. Ukraine is one of the countries most affected by HIV in Europe, with an adult prevalence of 1.0%. It has experienced multiple crises since it emerged from the Soviet Union in 1991 including two revolutions, the 2014 Crimean annexation, and the ongoing war which has severe implications for the capacity and effectiveness of the public health system.

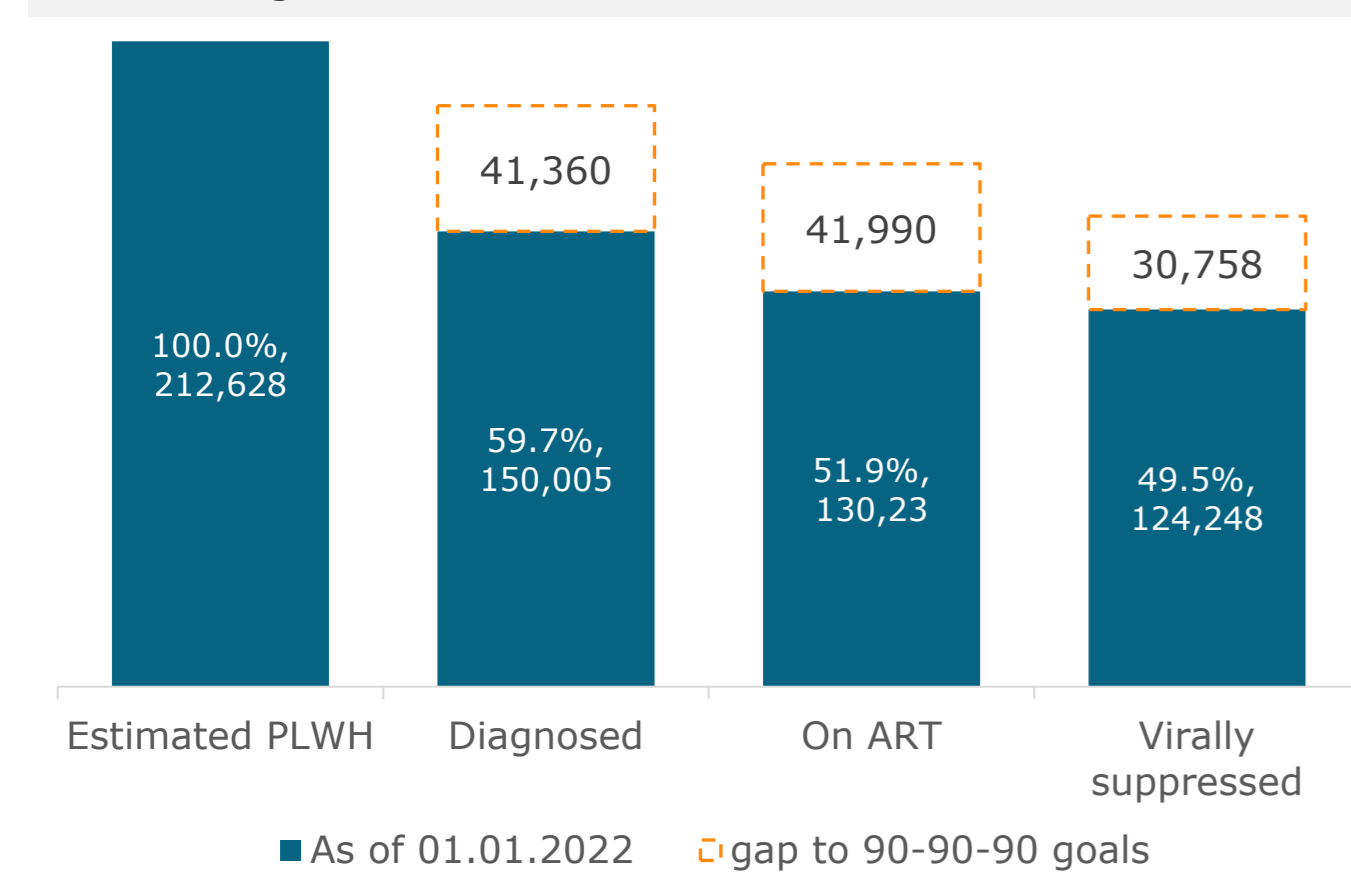
The epidemic was initially driven by transmission among people who inject drugs (PWID). The number of new HIV cases registered in health facilities decreased from the peak 21,177 in 2011, to 15,658 in 2020. The proportion of cases reported to have acquired HIV through heterosexual intercourse has steadily increased, reaching 71% in 2016 and remained stable until 2020 when it decreased to 59% due to resurgence of injecting drug use-related cases (Figure 1).

Figure 1. Number of officially registered HIV cases in Ukraine by year by attributed mode of transmission.



There has been a significant progress in HIV diagnosis and treatment area, however the national HIV care cascade reveals large gaps between the number of people diagnosed with HIV, the number in active care, on ART, and virally suppressed (Figure 2).

Figure 2. National HIV care cascade in Ukraine 01/2022, gov.-controlled areas.



Methods

A cross-sectional survey was conducted in 6 regions of Ukraine in 2021, with half of participants recruited using simple random sampling among OAT patients and another half using respondent driven sampling among out-of-treatment people who injected opioids (PWIO). PWIO seeds were selected from clients of harm reduction programs.

The sample size was proportional to the total number of OAT patients in each city. The survey questionnaire administered anonymously, and included questions on HIV and OAT treatment history, adherence, barriers to care, and mental health.

Additionally, data from clinical charts was extracted for the OAT group.

HIV care cascade outcomes were compared using univariable logistic regression.

Funding

The Global Fund to Fight AIDS Tuberculosis and Malaria grant "Gain momentum in reducing TB/HIV burden in Ukraine"
Principal Recipient: State Institution "Public Health Center of the Ministry of Health of Ukraine"

Results

Figure 3. Gender.

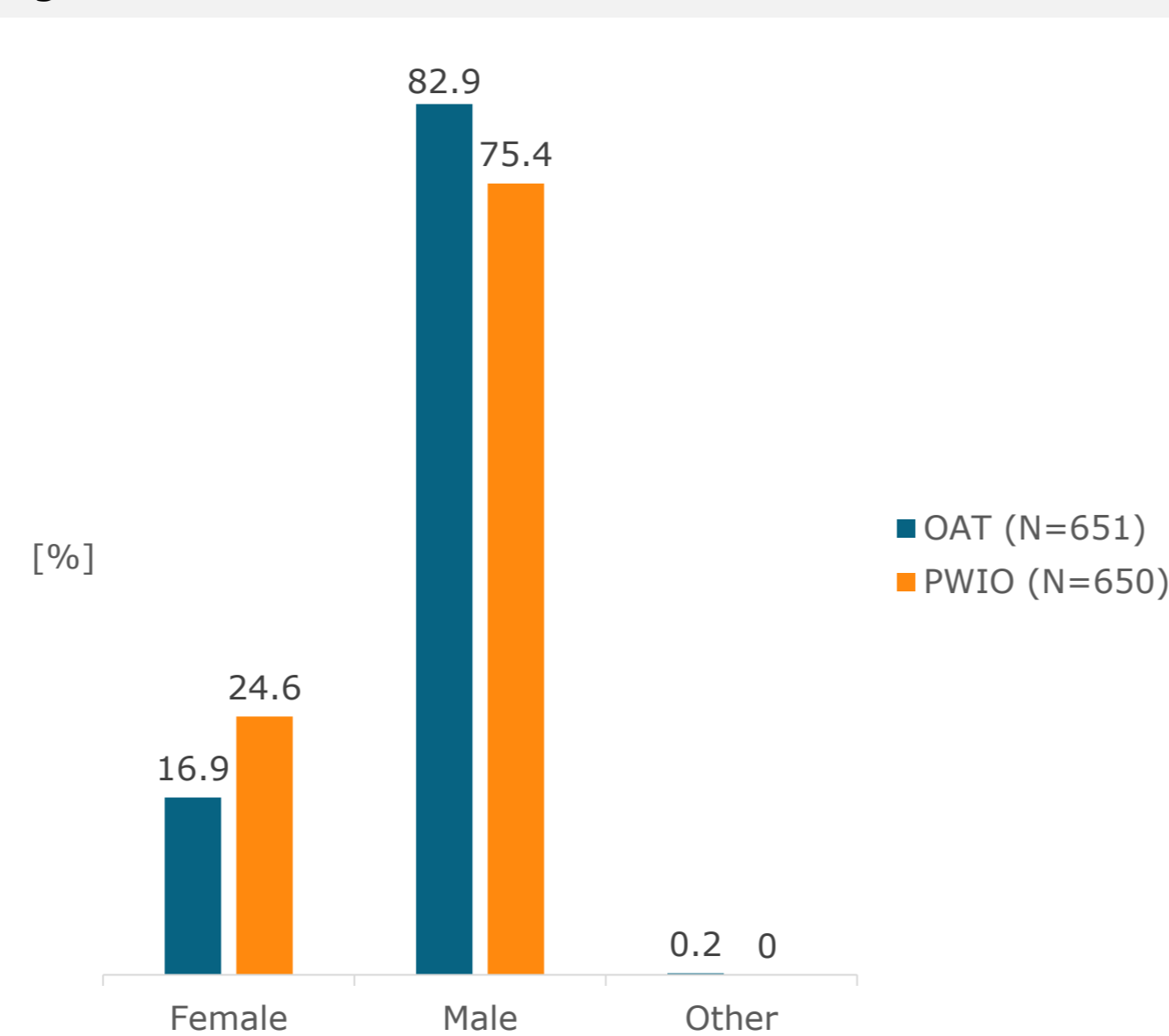


Figure 4. Age structure.

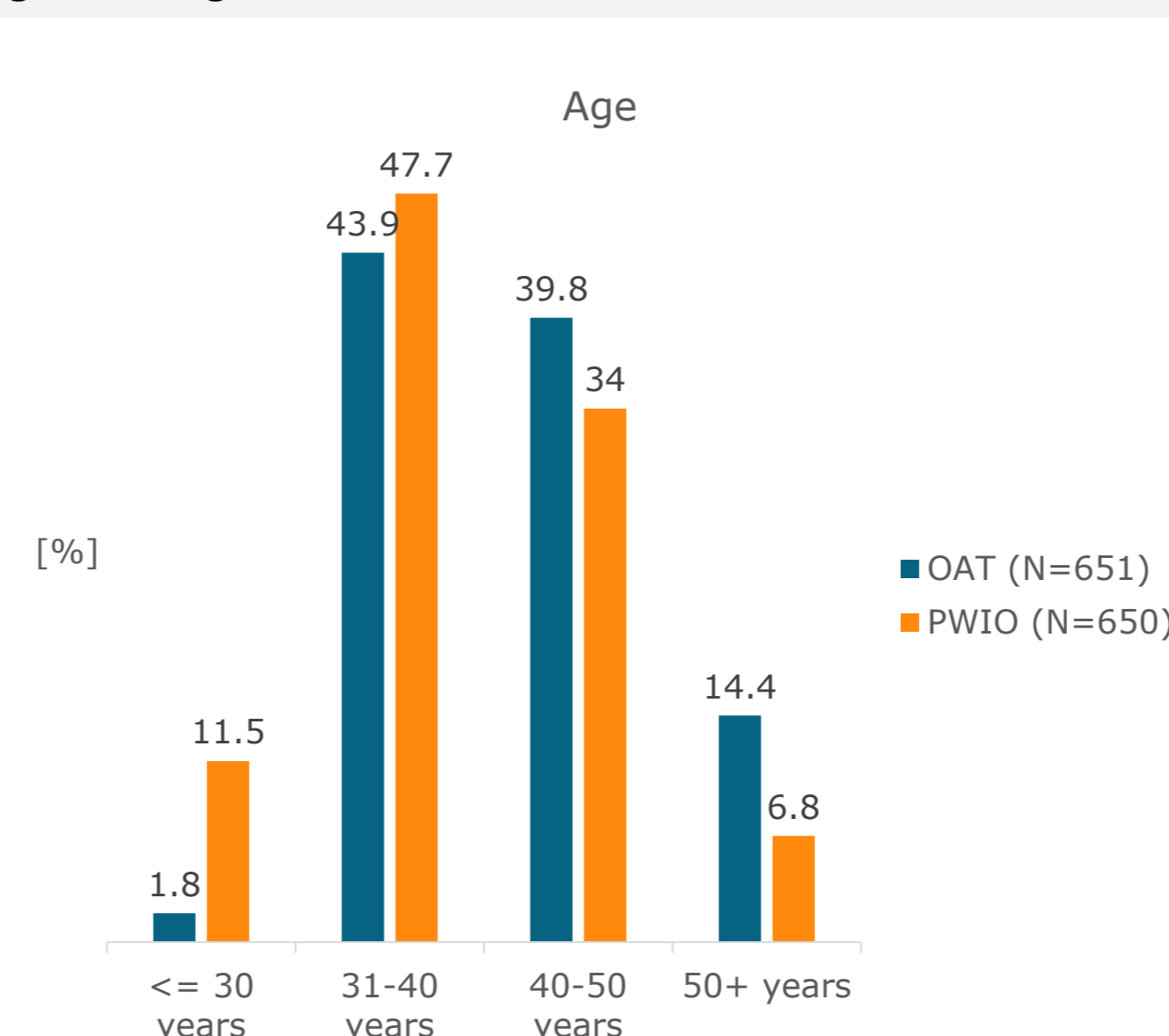


Table 1. Survey sample size.

City	OAT patients, N	PWIO, N
Dnipro	174	174
Zaporizhia	76	76
Kyiv	236	234
Lutsk	36	36
Rivne	46	46
Kharkiv	83	84
Total	651	650

Figure 5. Education.

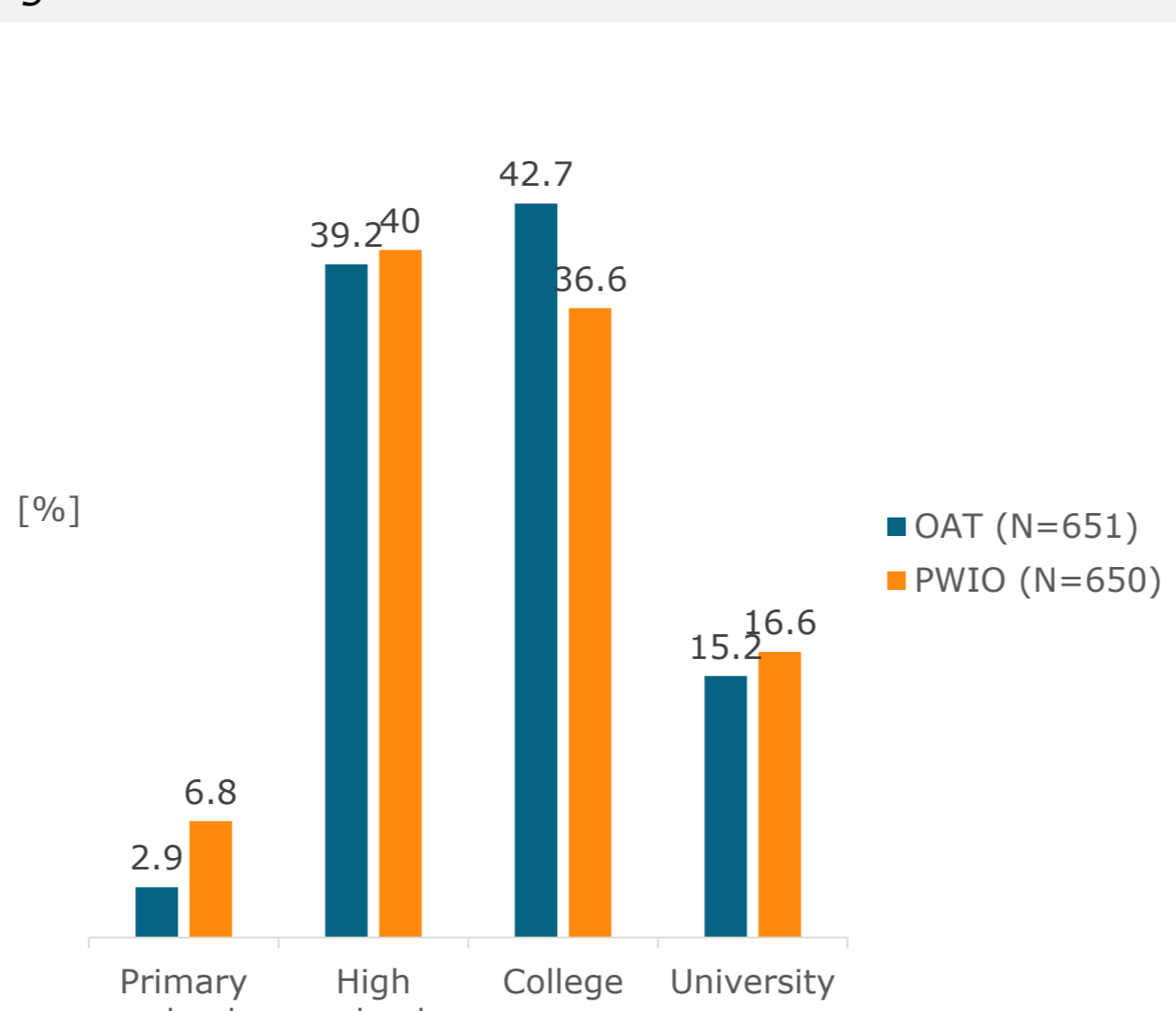


Figure 6. Occupation.

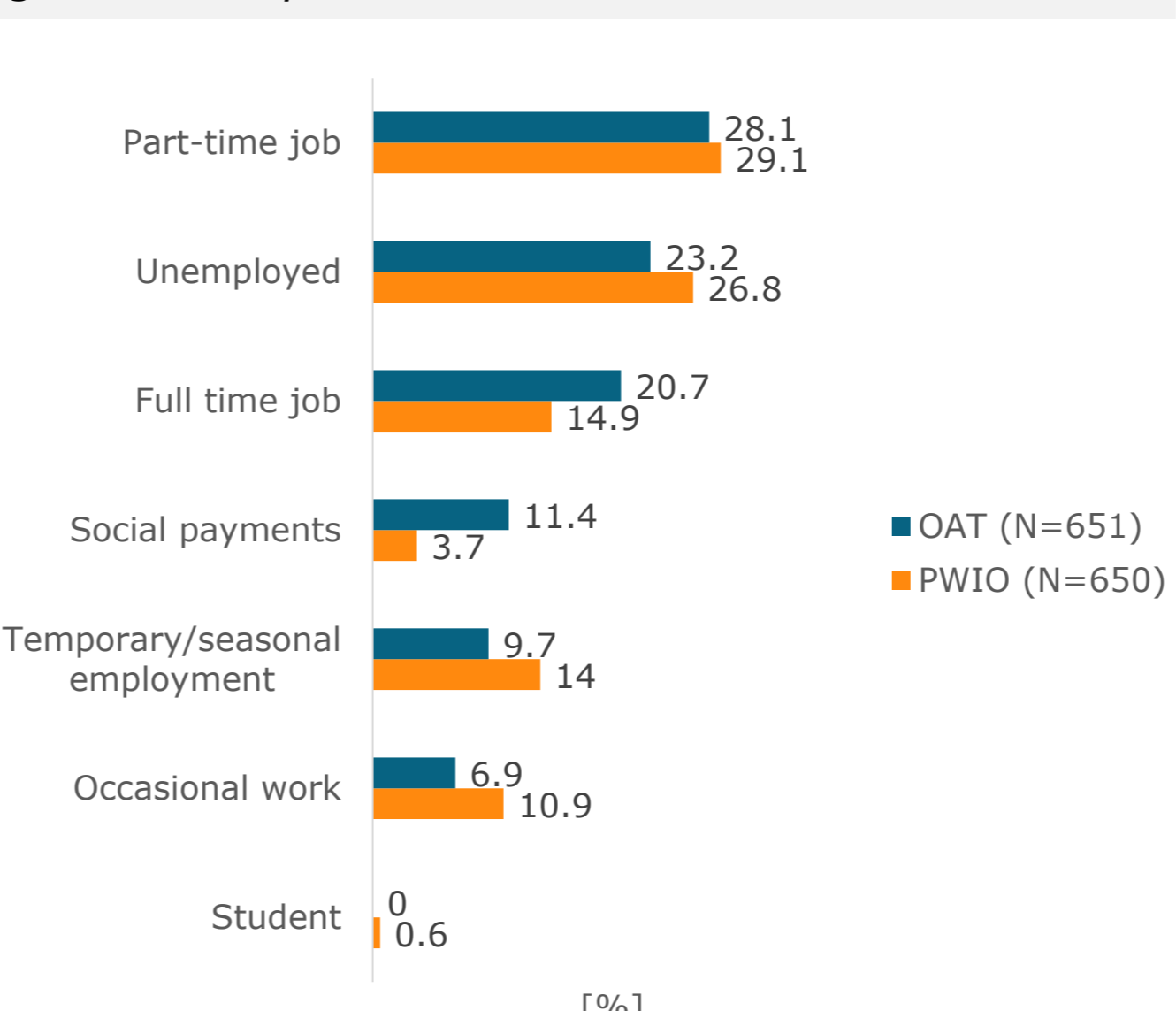


Figure 7. Living conditions.

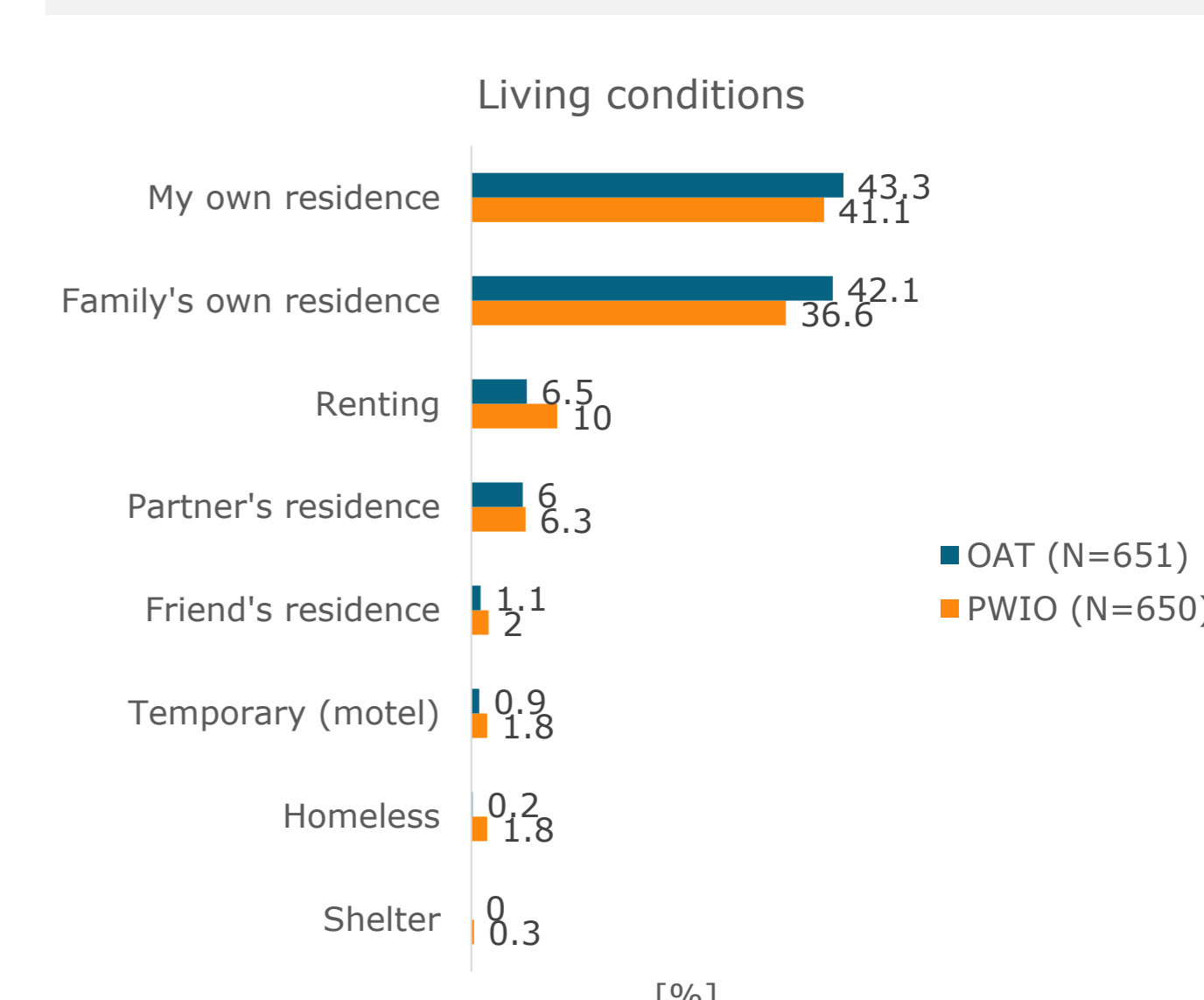


Table 2. HIV cascade indicators.

	OST patients				PWIO				p-value	OR	OR 95% LL	OR 95% UL
	N	%	95% LL	95% UL	N	%	95% LL	95% UL				
Tested for HIV ever	651	100.0%			650	100.0%						
HIV positive and aware of status	632	96.9%	95.6%	98.3%	516	79.4%	76.3%	82.5%	0.002	1.04	1.01	1.07
Registered in care	217	34.4%	30.7%	38.1%	84	16.3%	13.1%	19.5%	0.290	1.01	0.99	1.03
ART prescribed ever	213	98.2%	96.4%	99.9%	76	90.5%	84.2%	96.8%	0.014	1.08	1.02	1.15
ART taking currently	209	96.3%	93.8%	98.8%	74	88.1%	81.2%	95.0%	0.022	1.09	1.01	1.17
ART adherence >95%	204	94.0%	90.9%	97.2%	65	77.4%	68.4%	86.3%	0.001	1.19	1.08	1.31
	122	56.2%	49.6%	62.8%	26	31.0%	21.1%	40.8%	0.000	1.27	1.12	1.43

Figure 8. HIV testing status.

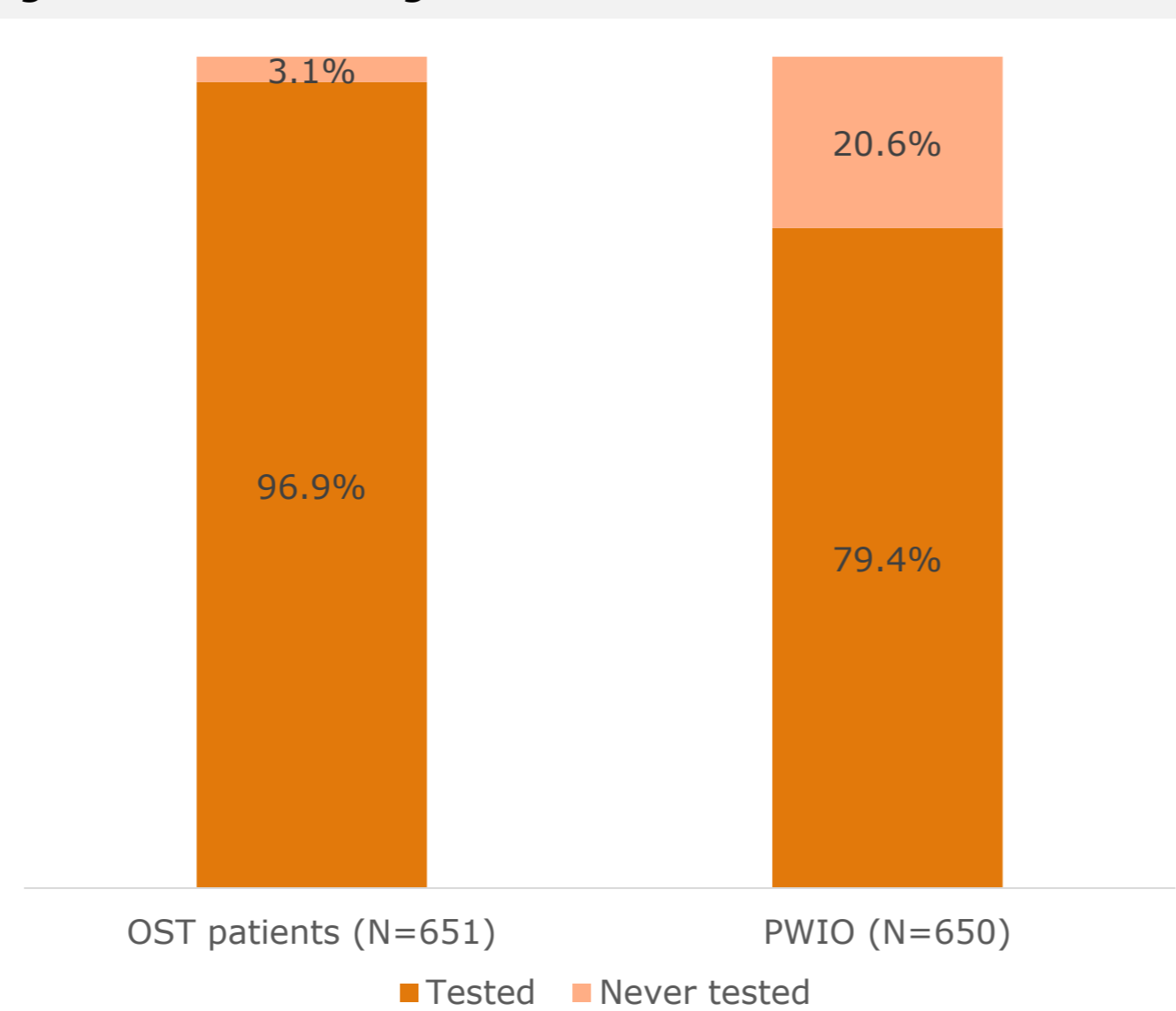


Figure 9. HIV testing results.

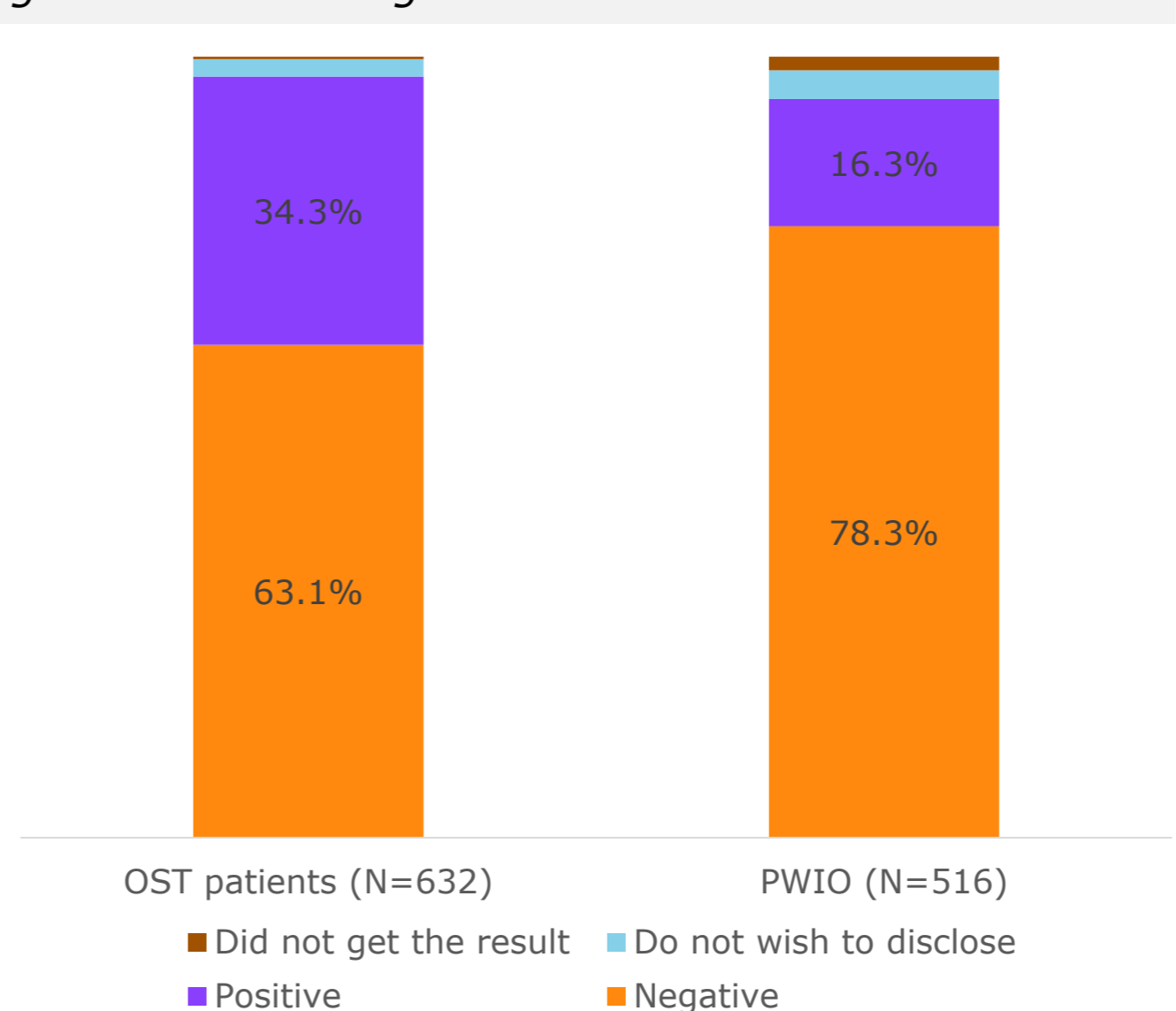


Figure 10. CD4 testing status.

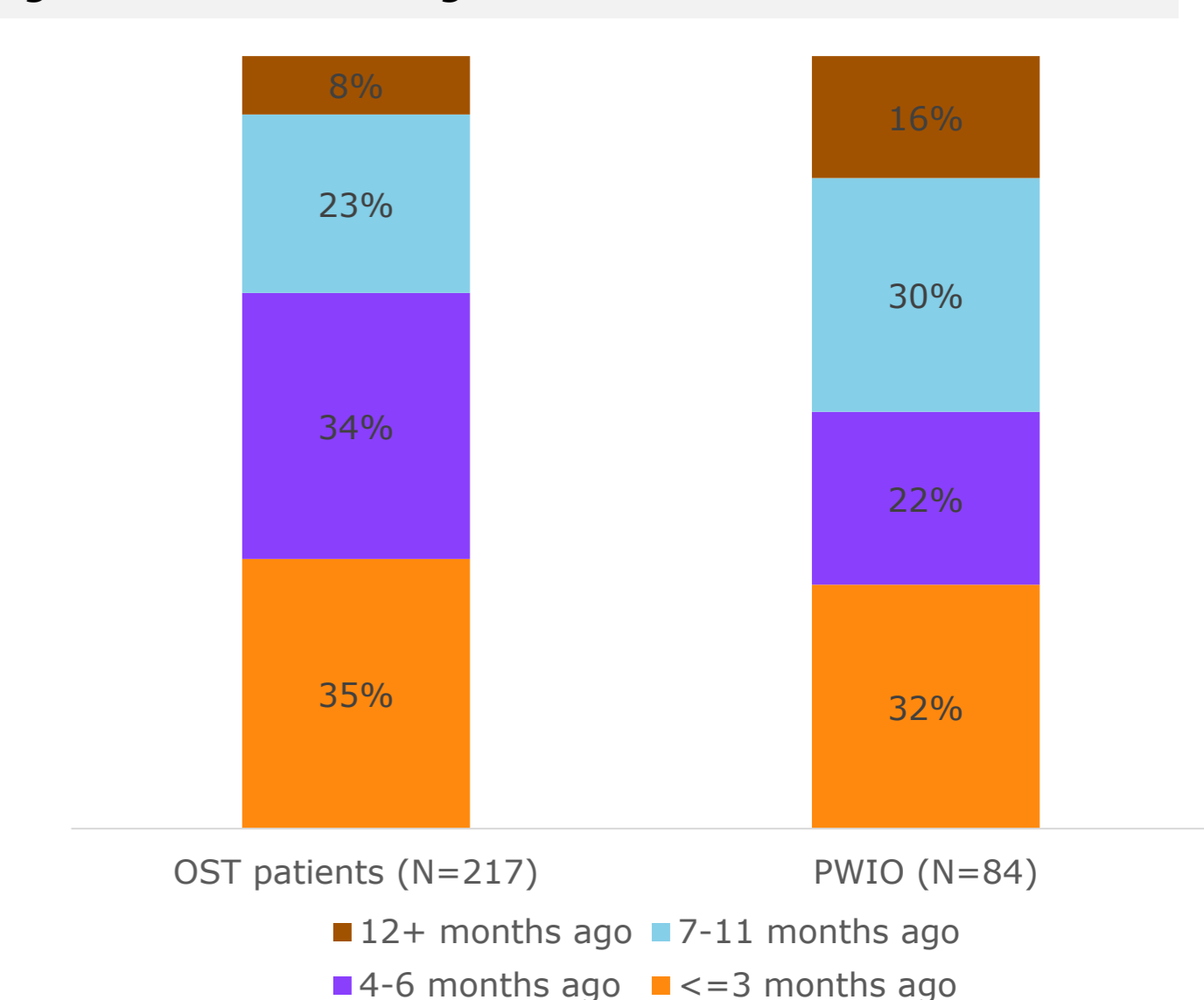


Figure 11. HIV care cascade among OAT patients and PWID in Ukraine (based on survey self-report data).

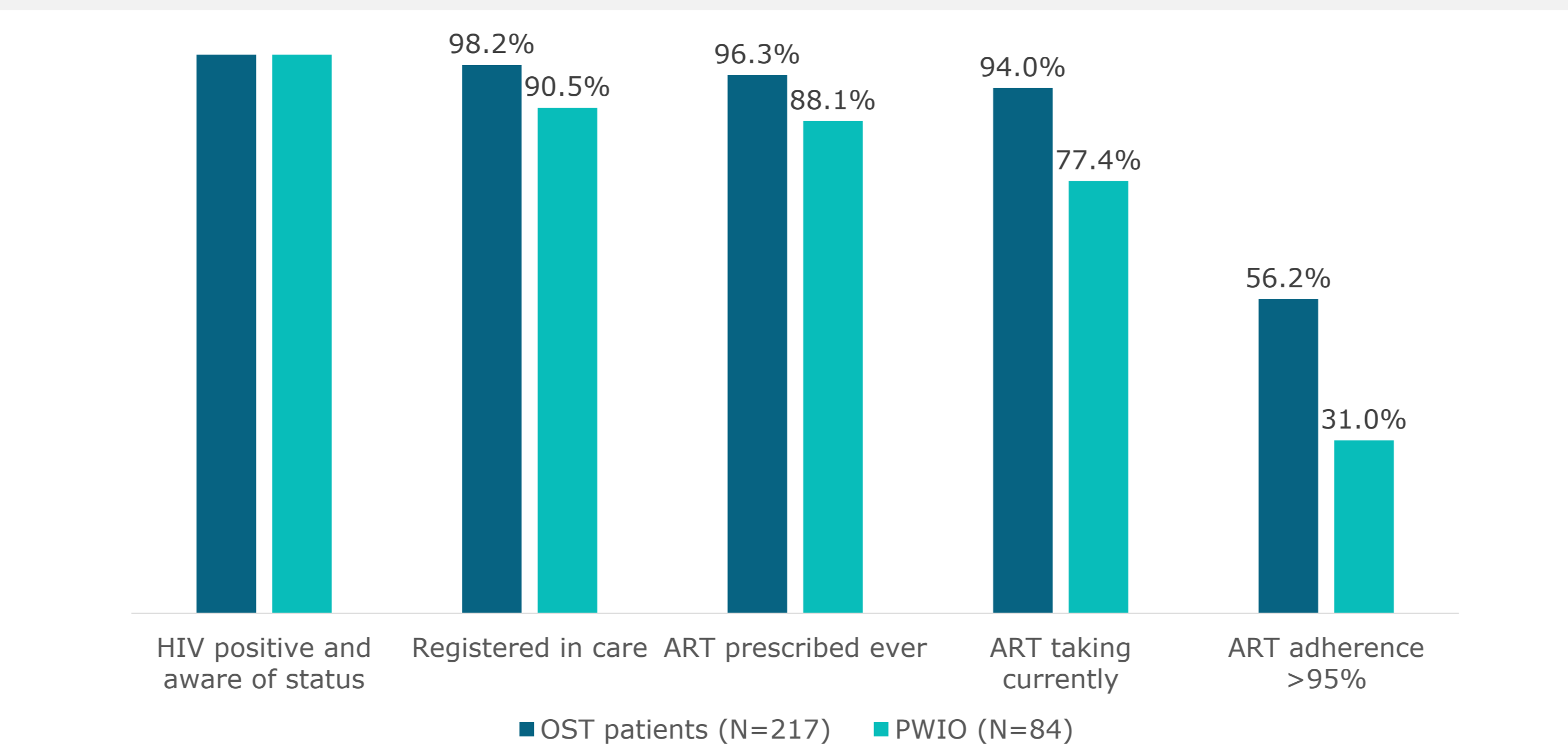
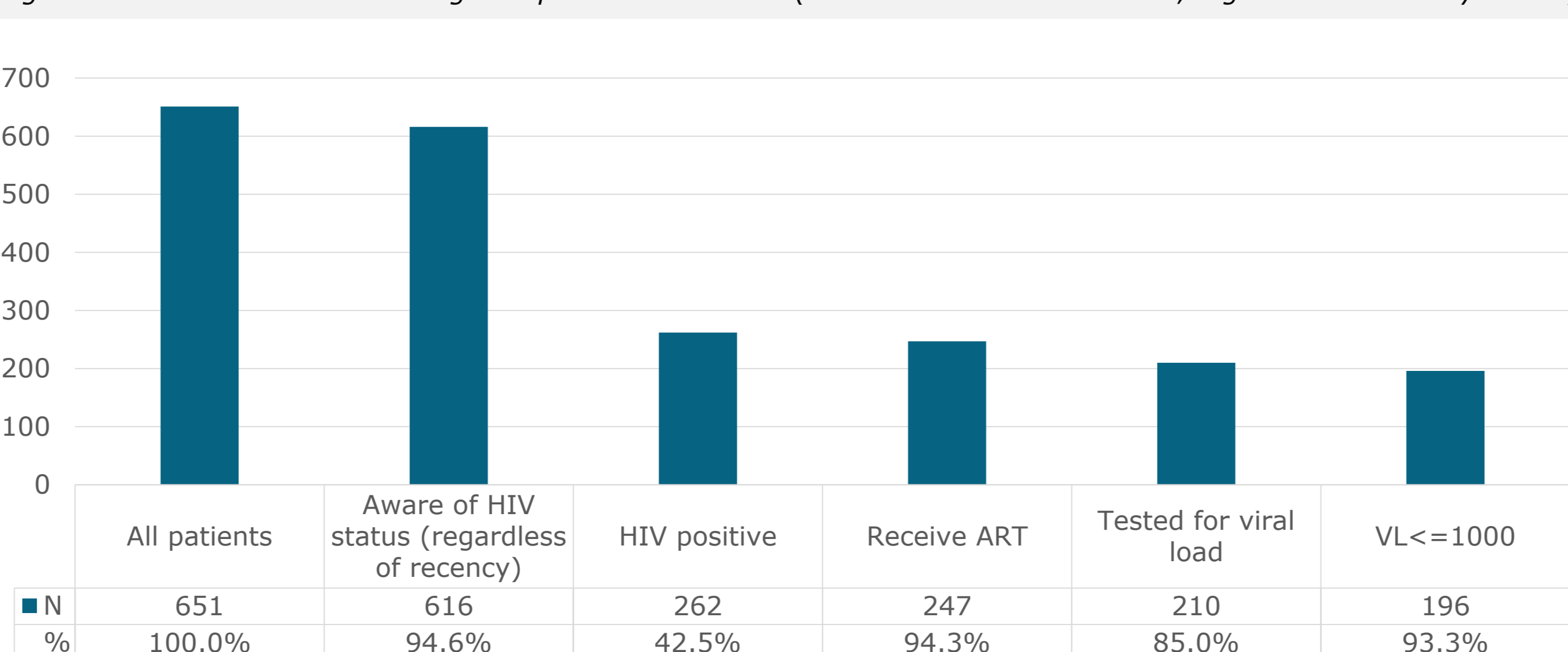


Figure 12. HIV care cascade among OAT patients in Ukraine (based on clinical charts data, regardless of recency of test).



Conclusions

- ART uptake was relatively high in OAT patients and out-of-treatment PWID in Ukraine.
- Despite the limitations of cross-sectional design, the study confirmed the significant positive effect of OAT on HIV treatment engagement and adherence.
- ART adherence remains suboptimal in both groups.
- Viral load testing among OAT patients is suboptimal if recency is taken into account, emphasizing the need for integrated care approaches
- Viral suppression level is adequate
- Further analysis will identify factors associated with OAT engagement and adherence to ART to inform strategies to reach 95-95-95 goals in this population.