

## **Predictors of retention in HIV care in Ukraine**

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**Background** After it was shown that HIV-infected individuals on antiretroviral therapy (ART) might have fully suppressed viral load and this makes them almost uninfected, the idea to use treatment as prevention has gained much attention. In this study, we aimed to explore the HIV treatment cascade existing in routine HIV care in Ukraine and potential barriers to implementation of test-and-treat strategies.

### **Methods**

We analyze data from a retrospective cohort of 1582 patients who were observed in HIV outpatient clinic in Poltava region of Ukraine in 2003-2016. Only data from routine medical documentation is analyzed. Three outcome measures related to involvement and retention in care were considered – (1) duration of contact with the HIV-care institution after the initial registration, (2) time of the first CD4 count analysis, (3) start of ART.

### **Results**

Among 1582 study participants, 212 were registered in care in 2005 or earlier, 418 in 2006-2008 and 958 in 2009 or later. Proportion of patients who were registered in care and not seen by health workers in subsequent years was 21.4% overall and lower (14.2%) in earlier years as patients registered earlier already had more time to come back. Staying in care was best predicted by having any of the clinical complications including oropharyngeal candidiasis (AOR=0.4, 95%CI 0.3-0.5), leukoplakia (AOR=0.6, 95%CI 0.4-0.9), any unknown opportunistic infection (AOR=0.5, 95%CI 0.3-0.9), herpes simplex (AOR=0.4, 95%CI 0.1-0.8), herpes zoster (AOR=0.5, 95%CI 0.3-0.9). Likewise, patients with diagnosed HIV-infection stage 4 at admission were less likely to drop out (AOR=0.5, 95%CI 0.3-0.8). Among those who stayed in contact with health facility, 905 (72.7%) had their CD4 test within same or next year after registration, 317 (25.5%) did so later on, and only 22 (1.8%) never got their CD4 counts. Younger patients (27 years or less) had greater risk to never get CD4 counts and to postpone getting the test. Analysis of start ART showed that If any of the above listed symptoms and syndromes were present, odds of getting ART were greater: AOR=2.2, 95%CI 1.4-3.4.

**Conclusions.** The main predictors of retention in HIV care were revealed appearance of severe opportunistic infections, low level of CD4 counts and older age.