

# The continuum of care among very immunosuppressed (less than 100 CD4+ cells) patients in an outpatient clinic in Mexico City: Gaps in diagnosis, linkage and retention in care



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## Background

Late diagnosis and late presentation are still prevalent in Latin America region. These diagnosis scenarios have negative impact both in the individual level as well as from the public health perspective.

## Materials and methods

We included all the patients who were seen for the first time in our clinic with CD4+ cell counts under 100 cells/mm<sup>3</sup>; and those who were either recently diagnosed, naïve to antiretroviral therapy (ART) or without ART for at least three months. Patients were classified as “late testers” (LT) when their first HIV positive test was less than 6 months away from the first medical visit; “late presenters” (LP) as those who had an HIV positive test 6 months or longer before the first medical visit, and “chronic intermittent users” (CIU) as those who were previously linked to HIV care and on ART at least one month. We then built an HIV cascade to identify the profile of patients in each scenario and compared characteristics among groups. Clinical outcomes such as virologic suppression, virologic failure, loss to follow up (LFTU) and death are also reported.

## Results

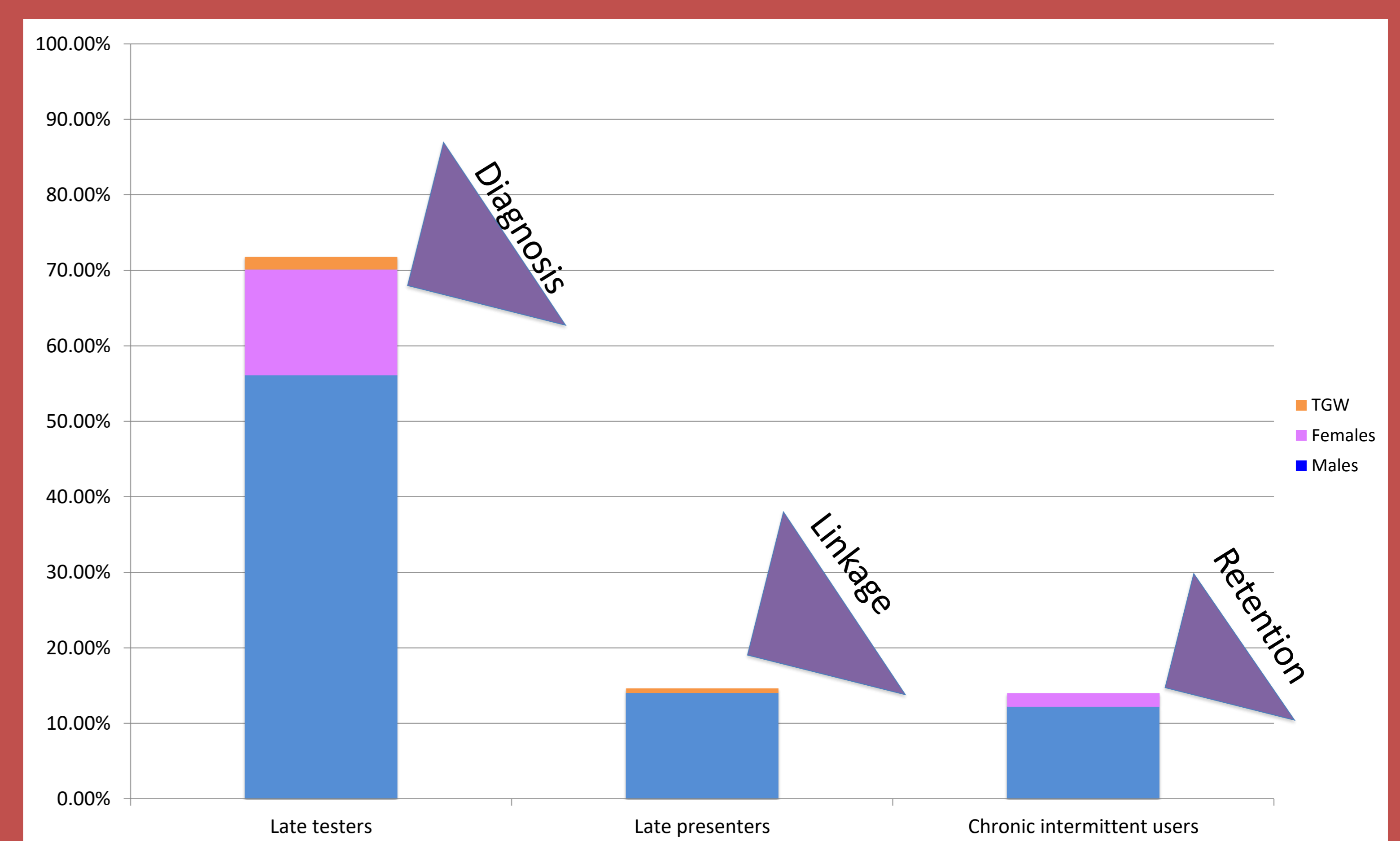
In the last two years, out of the 2,000 patients currently on care at our clinic, 164 (8.2%) patients had complete data and met the inclusion criteria. Of those, 117 (71.3%) were classified as LT, 24 (14.6%) as LP and 23 (14.8%) as CIU. Mean age of participants was 36.6 yrs. Although women represent only 14.6% (24/164) of the sample, the majority of them were classified as late testers (87.5%). There was no association between sexual preference, educational level and drug use with the different outcomes. Previous access to social security was strongly associated to chronic intermittent users (p 0.0017). By now, 7.9% of the patients are LFTU, and 3.6% died. Deaths were due to AIDS defining conditions in all cases.

**Table 1. Distribution and general characteristics of study participants, according to their presentation group**

N (%)	LT* (n=117)	LP** (n=24)	CIU*** (n=23)	p
Age, mean	36.5	36.5	36.6	0.9
<b>Gender</b>				0.32
Male	94 (78.6)	23 (95.8)	20 (86.9)	
Women	21 (19.6)	0	3 (13)	
TGW	2 (1.7)	1 (4.1)	0	
<b>Sexual preference</b>				0.17
MSM	58 (49.6)	18 (75)	10 (43.4)	
Bisexual	16 (13.6)	2 (8.3)	2 (8.6)	
Heterosexual	41 (35)	4 (16.6)	10 (43.4)	
Heterosexual female	21	0	3	
Heterosexual males	20	4	7	
No info	2 (1.7)	-	1 (4.3)	
<b>Educational level</b>				0.30
Elementary school or less	21 (17.9)	3 (12.5)	3 (13)	
Middle school/High school	62 (70.9)	12 (50)	17 (73.9)	
College/higher	33 (28.2)	9 (37.5)	3 (13)	
Missing	1 (1.7)	-	0	
<b>History of imprisonment</b>	1 (0.8)	1 (4.1)	0	0.71
<b>Previous access to social security</b>	11 (9.4)	4 (16.6)	10 (43.4)	.00017
<b>Drug use</b>	26 (22.2)	6 (25)	5 (21.7)	0.95
IV drug use	0	0	0	
<b>Mean CD4+ at first visit</b>	49	48	41	0.65
<b>ARV therapy started</b>				
TDF+FTC+EFV	90 (76.9)	21 (87.5)	8 (34.7)	
KXA+EFV	2 (1.7)	0	1 (4.3)	
TDF+FTC+RAL	7 (5.9)	1 (4.1)	0	
TDF+FTC+DTG	6 (5.1)	0	1 (4.3)	
ABD+3TC+DTG	2 (1.7)	0	0	
PI based regimens	10 (8.5)	2 (8.3)	13 (56.5)	
<b>Current status</b>				
Alive, in care, virologically suppressed	79 (67.5)	18 (75)	13 (56.5)	
Alive, in care, virological failure	2 (1.7)	1 (4.1)	3 (13)	
Alive, in care, low level viremia	10 (8.5)	1 (4.1)	3 (13)	
Alive, in care for < 6 months	8 (6.8)	2 (8.3)	0	
In care at other facility	4 (3.4)	0	1 (4.3)	
LFTU	10 (8.5)	1 (4.1)	2 (8.6)	
Deaths	4 (3.4)	1 (4.1)	1 (4.3)	

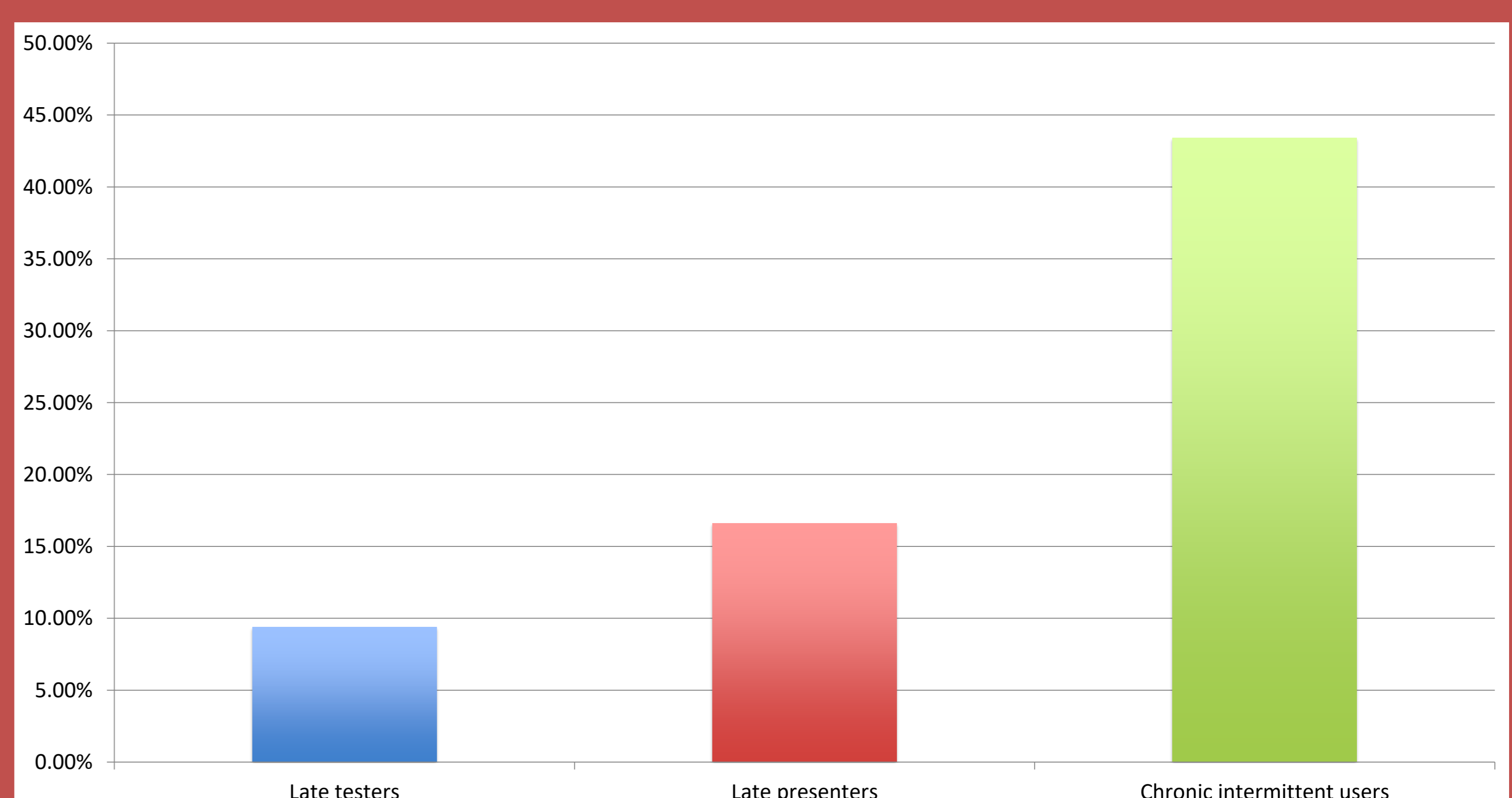
\*LT: Late testers, \*\*LP: late presenters, \*\*\*CIU: Chronic intermittent users.  
TGW: transgender women  
LFTU: Loss to follow up

**Figure 1. Distribution of study participants according to the continuum of care, by gender**



TGW: transgender women. Purple arrows show the gaps in the continuum of care that each group of patients represent

**Figure 2. History of social security among the different study groups**



## Conclusions

In our sample, late testing represents 70% of all patients with less than 100 CD4+ cell count at first medical visit. However, 1/3 of our sample is comprised of patients with previous diagnosis, who were either never linked to care or not retained. Women and heterosexual males in our sample were mainly late diagnosis; however, once diagnosed they seem to be linked and retained in care. Lack of continuity or fragmentation in care between different healthcare systems seems to be an important factor for ARV/ HIV care discontinuation. Although not statistically significant, outcomes appear to be worse for chronic intermittent users when compared to the other groups. Larger samples may allow to better describe this observation. Increasing diagnosis strategies might be the first step to improve this continuum; however more studies to better understand the reasons that explain these different scenarios are needed.