

Managing HIV infection in the COVID-19 era. The cascade of care as tool to evaluate the effectiveness of city-wide programs against HIV/AIDS

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Methods

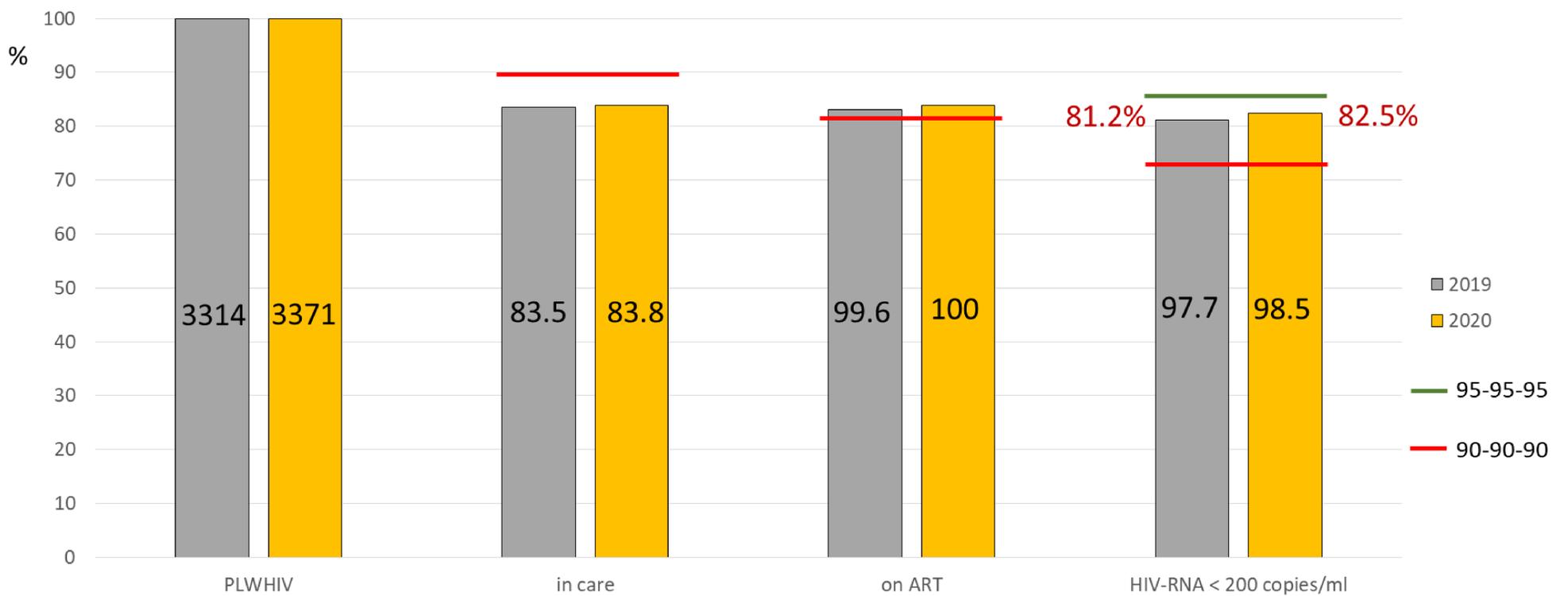
We calculated the number of PLWHIV using the eCDC HIV modeling tool (version 1.3.0) that simultaneously estimates the annual number of newly acquired HIV infections and the size of the undiagnosed population.

Inputted data covered the period from 1984 to 2020. Data (year of diagnosis, AIDS diagnosis, CD4 at diagnosis, death, HIV-RNA blood level) on the diagnosed and treated populations were derived from the clinical database of the only Provincial Center authorized to treat HIV infection and cross-checked with the Regional administrative data-base.

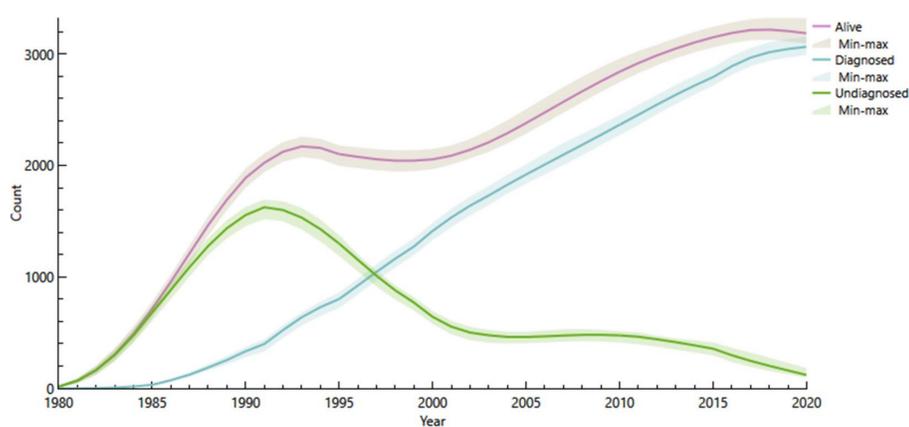
Virological response to cART was defined according to the last available HIV-RNA measure. Data from 2019 were compared to those of 2020 to identify possible negative effects of COVID-19 pandemic on the management of chronic HIV infection.

Cascade of care

According to our calculation the total estimated number of PLWHIV was 3314 in 2019 and 3371 in 2020. Taking into account subjects undiagnosed and lost to follow up 83.5% of subjects were actively followed in 2019 and 83.8 in 2020; 99.6% in 2019 and 100% in 2020 of them were actively taking cART. Finally 97.7% (2019) and 98.5% (2020) of patients taking cART had their last viral load < 200 copies/ml. we use the < 200 copies/ml cut-off as it defines non-infectivity according to the U=U definition.

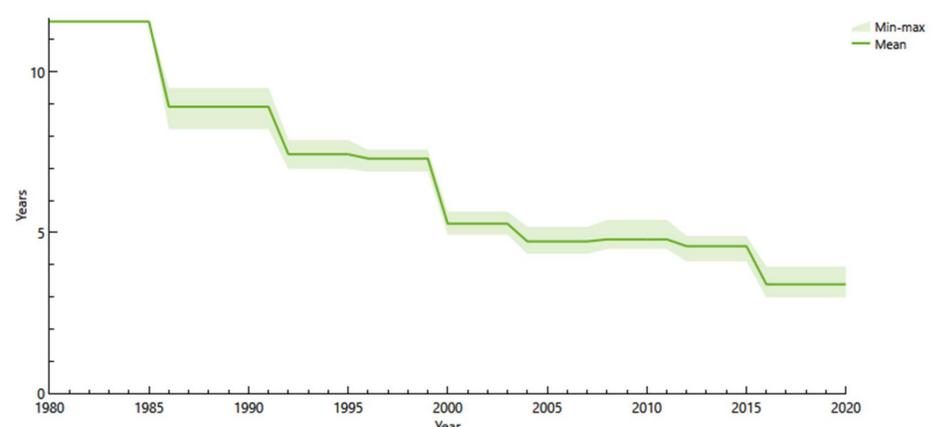


Total, diagnosed and undiagnosed PLWHIV



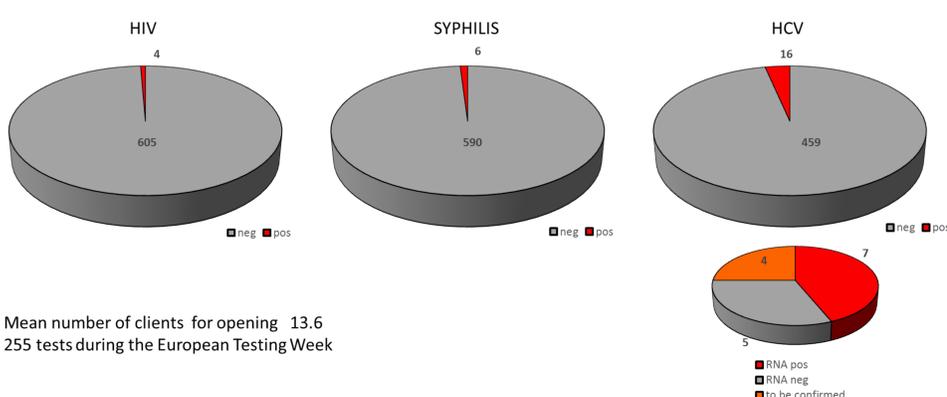
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Time to diagnosis



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Testing activity in 2020 at the town check-point



Conclusions

The Achille's heel of our cascade of care is still the proportion of PLWHIV who are unaware of their status mostly because they do not perceive they are at risk and do not seek for the test.

However

The use of an independent check-point referring to a city-wide program named "friendly test" to favor voluntarily testing,

The switch to alternative methods of clinical management (tele-medicine),

The implementation of a home-delivery system of ARV drugs,

Allowed us to limit the detrimental effects of COVID-19 and lock-down.

The causes of the reduction in new diagnosis observed in 2020 have still to be clarified