

# Impact of the COVID-19 pandemic situation on HIV care in Liège, Belgium



Majdouline El Moussaoui<sup>1</sup>, Nicolas Lambert<sup>2</sup>, Nathalie Maes<sup>3</sup>, Karine Fombellida<sup>1</sup>, Dolores Vaira<sup>4</sup>, Michel Moutschen<sup>1,4</sup>, Gilles Darcis<sup>1</sup>

1: Department of Infectious Diseases and General Internal Medicine, Liège University Hospital, Belgium, 2: Department of Neurology, Liège University Hospital, Belgium, 3: Department of Biostatistics and Medico-Economic Information, Liège University Hospital, Belgium, 4: AIDS Reference Laboratory, Liège University, Belgium

## Introduction

The COVID-19 pandemic and containment measures dramatically affected the different health care systems around the world including the screening and the medical management of people living with HIV (PLWH). We aimed to study the impact of this pandemic on the holistic care of PLWH in Liège (Belgium), a city considered as the epicenter of the second wave in Europe.

## Methods

We performed a retrospective cohort study of HIV-infected patients attending at Liège University Hospital (Belgium) during 2019 and 2020. The observation period for each year extended from January to December. The COVID-19 pandemic was divided into 3 times spans: from March to May (corresponding to the first wave of pandemic), from June to September (corresponding to the period between the waves) and from October to December (corresponding to the second wave). Variables studied included the number of new HIV diagnoses, the number of out-patient follow-up visits to a specialist in infectious diseases performed through in-person assessment or via telemedicine, the number of psychology or sexology consultations, the number of patients who underwent screening for comorbidities (including dyslipidemia and rectoscopy/colonoscopy appointments) and coinfections (chlamydia infections and gonorrhoea, syphilis, hepatitis B and C), the number of blood CD4+ T-cells absolute count analyses and HIV plasma viral load (VL) assays performed, the HIV plasma VL value as well as the delay between the diagnosis and the management.

## Results

We observed a significant decrease in the number of new HIV diagnoses in 2020 compared to 2019 (26 in 2020 versus 48 in 2019 new HIV diagnoses,  $p < 0.01$ ). This decrease was consistent during the whole duration of the pandemic in 2020, from March to December. Nevertheless, we did not observe any additional delay between the diagnosis and the medical care initiation in 2020 when compared to 2019.

When focusing on PLWH followed in our institution during both years 2019 and 2020, we observed a significant decrease in terms of consultations undertaken by sexual health services, psychologists and specialists in infectious diseases at our HIV clinic in 2020 when compared to 2019, mainly during the first wave of the pandemic (Table 1). Thanks to the telemedicine program initiated at our hospital at the beginning of the COVID-19 pandemic, a total of 163 consultations were performed through this new useful tool between April and December 2020 (Figure 1, Table 1). Along with this decrease of visits, we also found a significantly reduced number of routine VL assays and blood CD4+T-cells count analyses performed during 2020 compared to 2019. There were significantly less patients in 2020 compared to 2019 with HIV plasma VL above 400 copies/mL (54 versus 97 patients,  $p < 0.001$ ).

Finally, we found that significantly less patients benefited from screening for hepatitis C ( $p < 0.01$ ), syphilis ( $p < 0.001$ ), colorectal and anal cancers ( $p < 0.001$ ) and hypercholesterolemia ( $p < 0.0001$ ) in 2020.

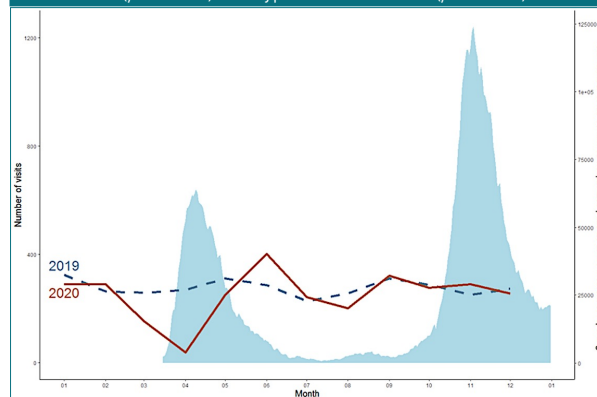


Figure 1. Number of hospitalized Covid-19 infected patients in 2020 in the Province of Liège (blue waves; source: Sciensano COVID-19-Bulletin épidémiologique du 01/01/2021) and the total number of out-patient follow-up visits to a specialist in infectious diseases (including telemedicine) per month in 2019 (blue line) and 2020 (red line).

Medical visits per year (N = 1162 HIV patients followed in 2019 and in 2020)			
Year	Total number of medical visits	Number of medical visits / patient	Total number of medical visits / month
2019	3068	3 (2; 3)	250 (239; 261)
2020	2548	2 (2; 3)	210 (186; 272)
Comparison, p-value <sup>(a)</sup>		<0.0001	0.088
Medical visits per wave (N = 1162 HIV patients followed in 2019 and in 2020)			
	Total number of medical visits/ number of months	% telemedicine	Total number of medical visits/ month
2020, first Wave : Mar-May	347/9 months	47 (13%)	131 (25; 191)
2020, between Waves: Jun-Sept	1026/4 months	34 (3%)	253 (199; 314)
2020, second Wave : Oct-Dec	631/3 months	82 (13%)	203 (193; 235)
Comparison, p-value <sup>(b)</sup>			
First vs (between and second) Between vs second			0.030 0.48

Results are expressed as median (IQR) and <sup>(a)</sup> p-value signed rank test for repeated measures or <sup>(b)</sup> Kruskal-Wallis test. Significant p-value < 0.05.

Table 1. Evolution of the total number of outpatient follow-up visits to a specialist in infectious diseases.

## Conclusion

Our report exhibits the deleterious impact of the COVID-19 pandemic on the screening, follow-up and medical care of PLWH in our institution. Although extension of our observations to other regions of the world need to be supported by other studies, these highlight the imperious need to implement new strategies in order to guarantee the continuum of HIV care whatever the circumstances. These strategies might include the establishment of an effective telehealth system as well as an automatized follow-up system for coinfections and comorbidities screening. In order to be fully effective, these measures should be part of a large-scale standardized strategy for the medical care of PLWH.

## References

[1] Sciensano. COVID-19. Bulletin épidémiologique du 1/01/2021 (internet). Available from [https://covid19.sciensano.be/sites/default/files/COVID19\\_Daily%20report\\_20210101%20%20FR.pdf?fbclid=IwAR170dLrFnT\\_LFgTEWzGQOTeYJLWm9ab1Dw3tL-6MAx10sw\\_R2LA](https://covid19.sciensano.be/sites/default/files/COVID19_Daily%20report_20210101%20%20FR.pdf?fbclid=IwAR170dLrFnT_LFgTEWzGQOTeYJLWm9ab1Dw3tL-6MAx10sw_R2LA). Accessed February 26, 2022

## Acknowledgments

Infectious diseases department – CHU de Liège  
Anne-Sophie Sauvage<sup>1</sup>, Frédéric Frippiat<sup>1</sup>, Christelle Meuris<sup>1</sup>, Françoise Uurlings<sup>1</sup>, Marianne Lecomte<sup>1</sup>, Philippe Léonard<sup>1</sup>

melmoussaoui@chuliege.be

