

Factors associated to new HIV-1 Infections in HIV-Pre-Exposure Prophylaxis (PrEP) Users after COVID-19-associated Programmatic Interruptions in the Dominican Republic

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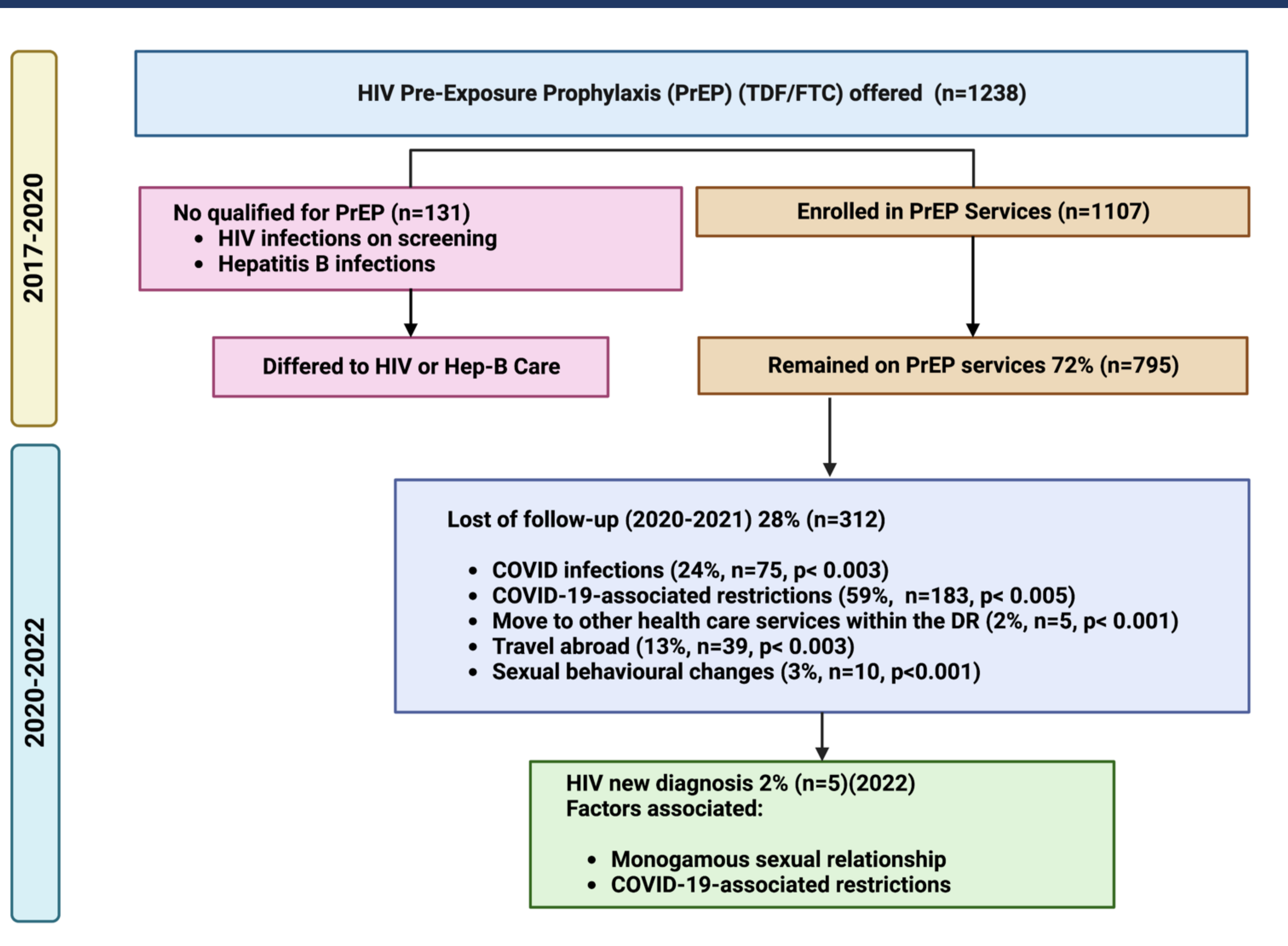


Figure 1. Descriptive analysis of HIV-1 infections among PrEP clients in the Dominican Republic after COVID-19.

Background

Pre-exposure prophylaxis (PrEP) has proven to be highly effective to prevent HIV infection. Seroconversions are exceptional when adherence to PrEP is adequate. However, COVID-19 has had an impact on HIV programmatic response. This study is aimed to analyze the new HIV infections in previous PrEP clients in the DR.

Methods

A mixed-methods study of PrEP clients enrolled from 2017-2022 was conducted in a HIV/STI clinic in Santo Domingo. Lost-of follow-up was assessed before and after the COVID-19 restrictive interventions were placed in March 2020. Demographic data was collected from records, and HIV infections were analyzed by genomic studies to evaluate primary HIV-1 resistance to ART.

Results

- A total of 1238 self-identified MSM/TG were offered PrEP, of these 89% (n=1107) starts on PrEP, and 72% (n=795) remained continuously adherent after two years until the first 2020 trimester, when 28% (n=312) clients were lost of follow-up.
- Qualitative assessment of these withdraws and new HIV diagnoses were associated to COVID-19-associated preventive programs interruptions (p< 0.005), behavioral changes, and travel abroad.
- A total of five cases (2%) were reported to be HIV (+) after PrEP cessation. Genomic analysis of these new infections revealed nonprimary resistance patterns.
- All HIV diagnosis occurred during 2022 (Figure 1).

Conclusions

- Our analysis reveals that COVID-19 pandemic had an impact on HIV PrEP access and utilization in the DR, fear of contracting COVID-19 may have led to decreased attendance at health clinics.
- The totally preventable HIV cases reported were not linked to primary resistance to PrEP medications suggesting that diagnoses occurred without pharmacological pressure.
- These findings suggest that we shall consider possible causes associated to cognitive distortions (empirical, heuristic, or fallacious processes, lack or scarce capacity to evaluate risk situations and failure in one of the key behavioral regulatory functions of the Prefrontal Cortex (PFC)) in association with HIV risk.
- We propose the need to redesign programmatic responses in LMIC into a more person-centered response.