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HIV Prevention and Treatment in the Context of the COVID-19 in the Bronx, New York: Implications for Practice and Research

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Abstract

New York City has been one of the major epicenters of the coronavirus disease (COVID-19) pandemic, experiencing among the highest case rates, hospitalizations, and deaths globally. The Bronx borough in New York City, which has been disproportionately impacted by HIV, has also experienced significant disparities in COVID-19. In this perspective, we discuss the disruptions faced by our community and primary-care based HIV programs at Montefiore Health System in the Bronx in the context of the COVID-19 pandemic. We discuss how the COVID-19 pandemic has impacted our HIV prevention and treatment programs, the resulting adaptations to clinical care, and the implications for practice and future research. **(AIDS Rev. 2020;22:143-147)**

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Key words

COVID-19. SARS-CoV-2. HIV. Primary health care.

Background

The global coronavirus disease (COVID-19) pandemic continues to disrupt life in unprecedented ways. In the United States, health-care delivery has been profoundly impacted, posing numerous challenges for HIV prevention and treatment. In this perspective, we discuss the ongoing disruptions facing our primary care- and community-based HIV programs in the context of the COVID-19 pandemic at Montefiore Health System in Bronx, New York City. Montefiore is a large integrated tertiary academic health center comprised four acute care hospitals, a large network of primary care community health centers, and is the largest care provider for people living with HIV in the Bronx. Below, we discuss the ongoing impact of the COVID-19 pandemic on our HIV prevention and treatment programs, the resulting adaptations to clinical care, and the implications for practice and research.

Montefiore services the Bronx, which has been disproportionately impacted by both HIV and COVID-19. As one of New York City's five boroughs, the Bronx ranks fourth in size with a population of 1.4 million individuals and most Bronx residents identify as persons

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of color (56% Hispanic or Latinx, 31% Black or African-American[1]). The overall HIV prevalence is high at 2.5%, which is higher than New York City (1.5%) and national (0.4%) prevalence[2]. Similar disparities exist in rates of comorbid illnesses such as asthma, diabetes, heart disease, and substance dependence, as well as social determinants of health such as poverty and household crowding. The Bronx also faces a disproportionate number of COVID-19 cases, hospitalizations, and deaths in New York City and has among the highest per-capita rates globally. Compared to other boroughs New York City, the Bronx has among the highest rates of COVID-19 cases (e.g., 3390 cases/100,000 people), hospitalizations (e.g., 865 per 100,000 people), and deaths (e.g., 270 per 100,000 people)[3].

Disruptions to community outreach programs

The Montefiore Prevention Program (MPP) is a community- and primary care-based HIV prevention program which conducts both in-person and virtual community outreach activities. MPP focuses on outreach to sexual minority men in the Bronx with a clinical focus on supporting HIV pre-exposure prophylaxis (PrEP) implementation in primary care settings. Since late March 2020, MPP has faced substantial disruption to much of its work during the COVID-19 crisis due to social distancing measures. For example, face-to-face interactions were essential to community engagement and outreach, provision of HIV testing, and patient navigation for engagement in primary care services including PrEP, sexually transmitted infection (STI) testing, and treatment. All of these activities essentially came to a halt. Likely similar to service programs around the world, we have had to cancel many of our long-planned community-based events, and HIV testing and linkage of new patients to primary care services have ground to a halt.

While the impact of the pandemic on in-person HIV related services has been severe, MPP's have been able to adapt its virtual outreach activities to be relevant to COVID-19. MPP maintains a social media presence on general social networking platforms (e.g., Instagram and Facebook) and mobile dating and hook-up apps. We leveraged MPP's presence on these platforms to disseminate COVID-19 related health messages (e.g., promoting and normalizing mask wearing), linkages to vital services (e.g., food banks and unemployment assistance), and also adapted in-person activities to online platforms (e.g., support groups held through Google Hangouts). Although there is a growing body of virtual interventions for HIV prevention[4], these have usually been done in the context of research trials. As outreach programs across the U.S. and globally rapidly shift to virtual venues, there is an unique opportunity to conduct implementation science research to understand how diverse online engagement strategies may impact sexual health and related care behaviors, especially in the context of a pandemic.

HIV prevention and sexual health care disruptions

Another area related to HIV prevention that has posed challenges for us is the provision of optimal clinical care for patients on PrEP. In late March 2020, almost all in-person ambulatory visits were halted (Fig. 1). Our outpatient primary care health centers went from seeing over 2000 patients a day for face-to-face visits to under a 100 through May 2020. During this period, telemedicine quickly became the norm for primary care visits and continues to be the primary mode of access today for the majority of patients seeking primary care services, including for PrEP and HIV. However, as telemedicine is rapidly scaled-up, there is limited evidence to guide practice. Research is needed on a variety of topics to inform effective strategies for conducting virtual care, effective communication practices for counseling patients through telephone or video (especially with no or restricted ability to observe body language and expressions), and strategies for overcoming barriers to successful telehealth visits (e.g., barriers related to digital literacy and privacy concerns).

Similar to care visits with providers, outpatient lab testing has also been severely restricted and thus routine HIV and STI testing has also been hampered, and we have been only able to refer individuals in need of urgent labs. Within this context, there is much gray area concerning the meaning of "urgent" labs for PrEP care. For example, while patients newly initiated on PrEP should ideally receive a follow-up fourth-generation serum HIV test within a month, at-home HIV self-testing test may suffice for now. For people who have been on PrEP longer and have had multiple negative HIV tests previously, it is not clear whether the benefit of obtaining HIV testing outweighs the risk of exposure to COVID-19. Similarly, for STI testing, if an individual was sexually active before shelter-in-place orders and now is not having sex with others and is asymptomatic, how urgent is routine STI testing? We are finding

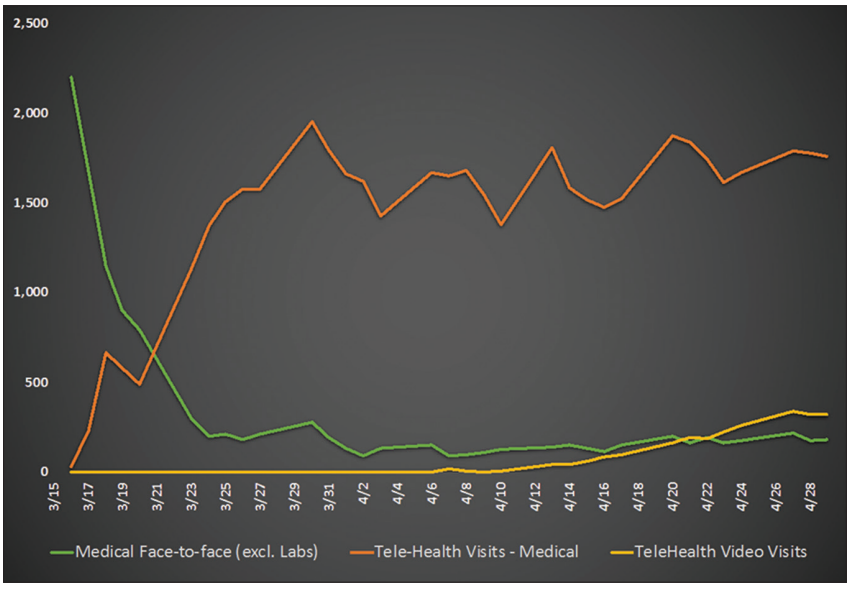

Figure 1. *Changes to total number of daily ambulatory medical visits from March 15, 2020 to April 29, 2020, Montefiore Medical Group, Bronx, New York, USA.*

that many individuals who interrupted their PrEP during the initial phase of shelter-in-place are now in need of instruction for safely restarting either continuous or event-based PrEP. To address this need, MPP is preparing messages to disseminate about home-based PrEP restarts and the option of switching to event-based PrEP for sexual minority men.

Given the major disruptions in care delivery, research is needed to understand how such disruptions impact behavior change, and HIV and STI transmission. For example, to minimize use of laboratory infrastructure, COVID-19 exposure, and use of PPE, providers must decide how frequently to obtain labs. Because this approach is highly variable and could introduce implicit or explicit biases in who gets repeat testing and frequent follow-up, we are in the process of developing institutional protocols to guide these parameters; however, few empiric data are available for guidance. One approach being adopted to address STI concerns is a syndromic approach for STI treatment (i.e., treating presumptively for STIs based on symptoms) – one that many countries with limited resources have been using for years. Another adaptation has been how we counsel patients on safer sex in the context of COVID-19, without necessarily stigmatizing sex in and of itself. To this end, the New York City Department of Health and Mental Hygiene released sex-positive and affirming recommendations for safer sex during the COVID-19 crisis[5] in anticipation of the possible impact on HIV and STIs, and we are communicating these to patients. Evaluating the impact of such recommendations on sexual behaviors as well as on STI and HIV transmission will be important to inform ongoing efforts to promote sexual health.

HIV treatment disruptions

The HIV treatment program operated within our network of community-based primary care health centers is experiencing a number of similar challenges over the past three months (Table 1). As was the case for PrEP, we have adapted to telemedicine visits and reduced access to lab monitoring. These changes impact patient engagement, leading to concerns that we are missing treatment interruptions. To help mitigate such interruptions, our patient navigators are using telephone or video-based platforms to maintain regular patient contact on scheduled intervals. For patients at highest risk of adverse outcomes, navigators are reaching out every two weeks and for those who are the lowest risk (stable with no comorbidities), every two months. Navigators follow a script to introduce them-

Table 1. Changes to HIV outreach, treatment, and preventive care during COVID-19

Care domain	Pre-COVID-19/Usual care	Factors disrupted	COVID-19-era solutions
Community Outreach and Engagement	– In-person counseling and community based HIV testing – Social and educational outreach events – Linkage to in-person care services – Social media outreach	All in-person activities	– Increased social media, email, telephone outreach – Provision of HIV self-test kits by mail – Linkage to telehealth clinical services – Increased screening and referrals to address social determinants of health (e.g., food bank, and housing)
HIV Diagnosis	– Risk Assessment and screening at visits – Testing at primary care visits	Limited primary care provider visits	– Social media outreach – Mail HIV self-test kits to patients
PrEP Care	– In-person visits every 3 months	Ability to have any in-person care	– Home-based PrEP restarts – Event-based PrEP – Tele-visits with providers with lab monitoring as essential
STI Testing and Treatment	– In-person visits – Onsite lab monitoring – Onsite treatment	Routine testing and treatment	– Re-evaluation of needs for lab frequency based on COVID-era changes in sexual behaviors – Syndromic approach for STI treatment
Engagement in HIV Treatment	– In-person visit, meeting whole team – Multi-faceted in person care with some telephonic services – In-person predominant	Ability to have any in-person care	– Tele-visits with providers with lab monitoring – Patient navigators using telephone or video-based platforms to maintain regular patient contact on scheduled intervals. – Reduced frequency of HIV viral load monitoring for undetectable patients

selves and their capacity to arrange telemedicine and urgent lab visits, conduct quantitative adherence estimates, and offer to streamline communication through direct email messaging in the electronic health record. The navigators also screen for medical concerns including mental health and challenges related to social determinants of health in the context of COVID-19 (e.g., food insecurity and housing instability). Linkage to available resources is provided as needed. In the first two months of the NYC COVID-19 outbreak, 75% of our patients with HIV have communicated with a staff member by phone and 24% have had telemedicine visits. While telemedicine has been helpful, it will be important for programs such as ours to ensure that reliance on such technology does not exacerbate disparities due to issues such as digital access or digital literacy[6].

Due to the challenges associated with obtaining labs, our ability to assess for viral suppression is currently diminished. At a programmatic level, the COVID-19 crisis has led us to question relaying on viral load suppression as the main measure of program success (i.e., in a setting of decreased testing ability, is there another metric besides viral load to gauge program performance?). It is also important to understand if more treatment interruptions have occurred due to the substantial emotional, psychological, and logistical toll of the COVID-19 pandemic, and factors that may mitigate such interruptions to inform interventions. For example, for patients on Medicaid or certain other drug assistance programs, we have now been able to prescribe antiretroviral therapy for 90 days at a time, in whom previously had to pick-up prescription refills on a monthly basis. The hope is that this policy change will help improve access to ongoing therapy, reduce pharmacy visits, and support adherence. However, the impact of this change on viral suppression is currently unknown.

Conclusion

As the directors and care providers of HIV prevention and treatment programs, we continue to adapt the way we conduct outreach and deliver care, and are prepar-

ing to be in a state of change for the coming year and possibly beyond. As we witness the extraordinary stress on our fragmented health system, particularly for safety-net institutions, there is an urgent need to accelerate redesign and implementation of care systems that are flexible and truly patient centered. The interventions that make the most sense now may not meet our needs next month or in a year. There is a need for rigorous data-driven assessments of how well these intervention adaptations have worked, and to use that data to inform and modify interventions to meet changing circumstances as the COVID-19 pandemic continues to evolve. HIV has long been one of the most dynamic disciplines in medicines and we are confident that this energy and flexibility will benefit our programs and our patients as we weather this terrible storm.

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