



“COVID-19 resulted in IMMEDIATE and SUSTAINED decreases in HIV preexposure prophylaxis.”

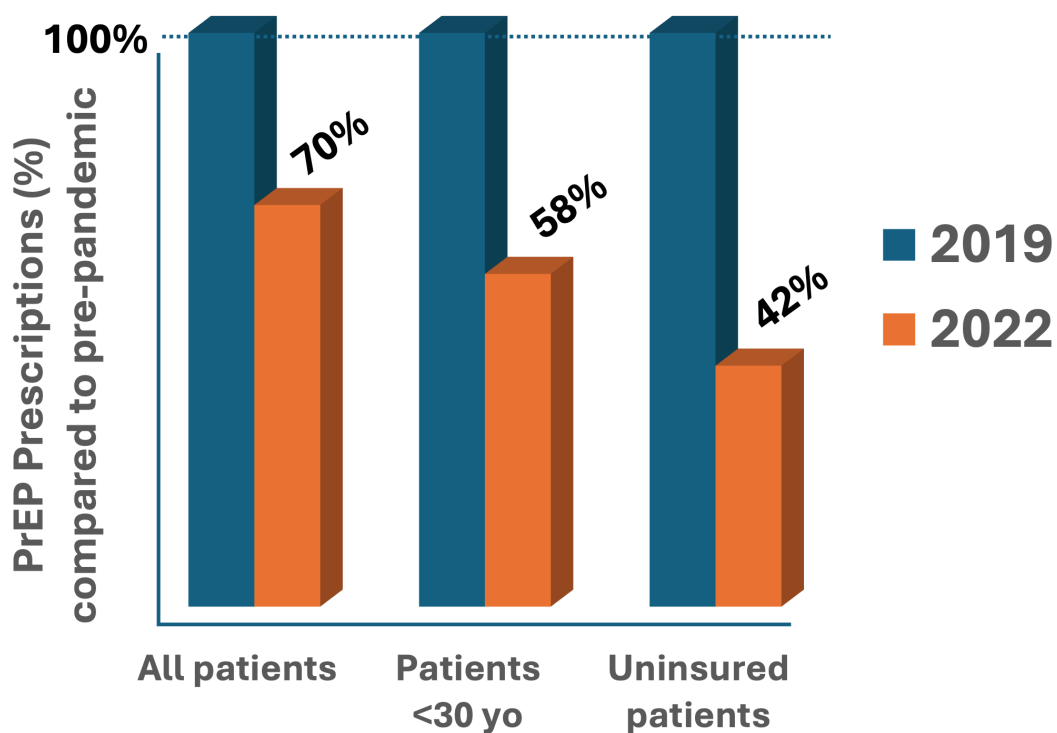


EHR Data

Total PrEP Rx

New PrEP Rx

STI tests




Sustained Decreases of HIV Preexposure Prophylaxis Prescriptions for LGBTQ Populations in the Third Year of the COVID-19 Pandemic at a Boston Community Health Center

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Introduction: The coronavirus disease 2019 (COVID-19) pandemic resulted in acute decreases in human immunodeficiency virus (HIV) preexposure prophylaxis (PrEP) prescribing and access to sexual health care in the US, but less is known about sustained changes as the COVID-19 pandemic continued. We explored patterns of PrEP prescribing and STI testing for lesbian, gay, bi, transgender, and queer (LGBTQ) populations from 2019–2022 at Fenway Health—one of the largest prescribers of PrEP (N=5,832) in the Northeastern US.


Methods: After the Fenway Institute was granted institutional review board (IRB) approval in 2022, quarterly numbers of (1) total PrEP prescriptions, (2) new PrEP prescriptions, and (3) patients undergoing bacterial sexually transmitted infection (STI) screening were procured from January 1, 2019, to June 30, 2022, as well as the average number of days between prescriptions per quarter. We calculated incidence rate ratios (IRRs) which compared average quarterly numbers of prescriptions from 2020–2022 to 2019 (baseline), overall and disaggregated by race, age, and insurance status. Rates of new PrEP prescriptions and STI screening were used to contextualize the observed decline in number of PrEP prescriptions.

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Results: By the second quarter of 2022 (Q2 2022), PrEP prescriptions remain lower than before the COVID-19 pandemic for the study population (IRR 0.70, 95% CI 0.67–0.73, $p < .001$). Individuals under 30 years had a larger relative decline compared to their baseline (IRR 0.58, 95% CI 0.53–0.63, $p < .001$) than did older patients. Uninsured individuals had larger relative declines (IRR 0.42, 95% CI 0.30–0.58, $p < .001$) than those enrolled in coverage. Between 2019 and Q1-2020 the monthly average number of individuals testing for at least one bacterial STI decreased by 64%; however, by Q4-2021 rates had rebounded.

Discussion: Being younger than 30 years or being uninsured was more associated with decreasing rates of PrEP prescriptions than was race. Rates of new PrEP prescriptions and testing for bacterial STIs decreased immediately after the onset of the pandemic and did not recover to pre-pandemic levels, though STI testing rates rebounded to a greater extent than new or total PrEP prescriptions.

Conclusions: PrEP prescriptions remain lower than pre-pandemic levels. Decreasing numbers of prescriptions may be linked to on demand PrEP use, abstinence, disengagement from care, or receipt of PrEP elsewhere. Interviews with patients are needed to optimize PrEP engagement.

Keywords

HIV prevention • Linkage to care • PrEP • STIs

Introduction

After the first reported case of COVID-19 in the US in January 2020, access to health care was disrupted for millions of Americans. Existing disparities were amplified, and new barriers such as the reliance on telemedicine were erected, profoundly transforming the American healthcare system and the treatment of chronic and non-emergent conditions.^{1,2}

Lack of a unified federal policy left the management of the pandemic largely in the hands of state governments, with different regions implementing lockdowns of varying severity and constructing safety nets of varying strength. A state of emergency was declared in Massachusetts on March 10th, 2020, that included significant restrictions on social interactions (i.e. lockdowns) and access to preventive health care. This was followed by months of adjusting restrictions before ending the state of emergency on June 15, 2021.⁴

Throughout the pandemic, overburdened systems made it increasingly difficult for individuals to access preventive care including sexual health services. For example, one study presented data from a cross sectional survey of gay and bisexual men (GBM) in the US and found that two thirds of those who completed the online survey experienced barriers accessing HIV or STI testing and 9% had disruptions in access to PrEP prescriptions.³ To directly study the effect the COVID-19 pandemic had on access to PrEP and STI testing during the early pandemic and over longer time periods for LGBTQ populations, we studied trends in PrEP and STI testing at Fenway Health. This community health center is the largest HIV primary care practice in Massachusetts, has diagnosed more bacterial STIs in GBM than any other clinic in New England, and has the region's largest PrEP program.⁵ In 2022, the clinic served 30,000 patients, half of which identified as LGBT, 2,200 of which were living with HIV, and more than 5,000 of whom have received a PrEP prescription.⁶ Because of its central role in PrEP and sexual health services for New England, Fenway is an important facility for investigating how COVID-19 impacted trends in PrEP prescribing and the utilization of sexual health services.

Methods

This retrospective study was conducted by analyzing de-identified health records to ensure the confidentiality and privacy of the patients. No direct contact or intervention with patients was involved, and the data used had all personal identifiers removed to protect patient privacy and confidentiality. The data team at Fenway Health queried their records to provide de-identified electronic health records (EHR) data ranging from January 2012–June 2022 for all patients who did not self-identify as cisgender heterosexual men and women. In efforts to keep pre-pandemic and post-pandemic periods comparable, only data from 2019–2022 was analyzed. Data were considered by quarter, with Q1 representing January–March, Q2 representing April–June, Q3 representing July–September, and Q4 representing October–December. Data from 2019 through the end of Q1-2020 represented pre-pandemic data, while Q2-2020 marked the start of the post-pandemic period given the date of the first regional lockdown in response to the COVID-19 pandemic in Boston. Data collection ended with Q2-2022, when a Monkeypox outbreak affected STI testing and care in Boston. This timing ensured changes in sexual health care associated with COVID-19 could be more specifically examined.⁷ To capture the populations that account for the vast majority of PrEP prescriptions at Fenway, data collection was limited to individuals self-identifying as GBM, transgender women, and gender nonbinary persons who were assigned male at birth, as self-identifying cisgender heterosexual persons accessing STI services at Fenway do not commonly use PrEP. All procedures were carried out in compliance with the ethical standards of the IRB, Fenway Institute (1340 Boylston St, Boston, MA 02215), and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards (IRB2022-26: Approved on 8/15/2022).

Outcomes

Quarterly numbers of (1) total PrEP prescriptions, (2) new PrEP prescriptions, (3) patients undergoing bacterial STI screening, from January 1, 2019, to June 30, 2022, and (4) the average number of days between prescriptions per quarter were calculated.

Poisson regression was used to calculate IRRs to compare average quarterly numbers of prescriptions during the years 2020–2022 to 2019 (i.e., pre-pandemic), overall and disaggregated by race, age group, and insurance status.

Results

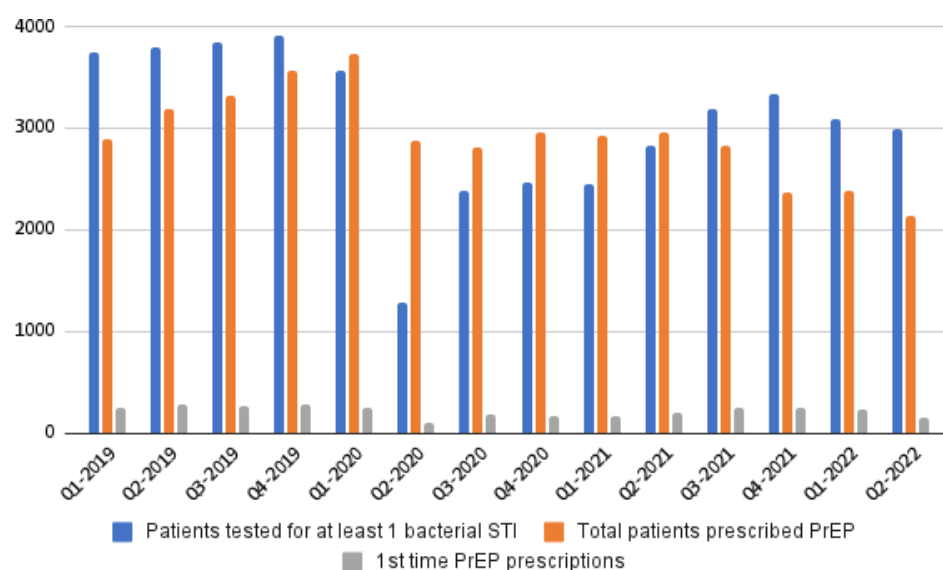
During the study period a total of 5,832 people were prescribed PrEP at least once. The total number of PrEP prescriptions recorded at the clinic were 40,941 with a mean of 115.6 days between prescription refills.

Of those prescribed PrEP, 94% were cis-gender GBM, the mean age was 35 years (SD= 11), and 70% identified as White, 7% as Asian, and 6% as Black; 15% identified as Hispanic and 80% had private insurance (Table 1).

Since the first PrEP prescription at Fenway Health in 2012, numbers of prescriptions had been increasing in a generally monotonic fashion until Q1-2020, which represented an all-time maximum in the average monthly number of prescriptions for the health center (mean=1,241 monthly prescriptions) (Figure 1). From Q1-2020 to Q2-2020, which included the onset of COVID-19 infections and restrictions on health care access in Massachusetts, the average monthly number of prescriptions decreased by 23% from 1,241 to 958. The average monthly number of prescriptions

Table 1. Demographics of People Prescribed Preexposure Prophylaxis (PrEP) at Least Once (n=5,832)

		N	%
Population	Cisgender men	5,497	94.3
	Transgender men	39	0.7
	Transgender women	125	2.1
	Non-binary assigned male at birth	171	2.9
Age, years	<30	2,194	37.6
	30–34	1,284	21.4
	35–44	1,259	21.6
	45+	1,131	19.4
Race	American Indian or Alaska Native	32	0.6
	Asian	395	6.9
	Black or African American	345	5.9
	Multiracial	373	6.4
	Native Hawaiian or Other Pacific Isla..	19	0.3
	Other	88	1.5
	White	4,096	70.2
	Missing	484	8.3
Ethnicity	Hispanic	895	15.4
	Not Hispanic	4,456	76.4
	Missing	481	8.3
Insurance	Private/Dual	4,688	80.4
	Medicaid or Medicare	943	16.2
	None/Uninsured	201	3.5

**Figure 1.** Average Quarterly Patients Prescribed Preexposure Prophylaxis (PrEP) vs. Average Quarterly Patients Tested for Bacterial Sexually Transmitted Infections (STIs) from Q1-2019–Q2-2022

remained relatively stable until Q4-2021 when they decreased further to 788 average monthly prescriptions, which represented a 45% decrease as compared to the health center's peak number in Q1-2020. Subsequently, the monthly average number of PrEP prescriptions declined again to the lowest monthly average for the entire period of 2019 to 2022, with 714 monthly average prescriptions in Q2-2022, representing a 42% decline from the peak in Q1-2020. First time PrEP prescriptions remained low throughout the study but were relatively consistent.

Declines in the average monthly number of prescriptions when comparing the entire year of 2020 to the year 2019 were of small magnitude and only evident in patients who were <30 years of age (IRR 0.89, 95% CI 0.82-0.97, $p=.018$) or who identified as White (IRR 0.94, 95% CI 0.89-0.99, $p=.022$) (Table 2). However, when comparing 2021 to 2019, rates of

Table 2. Rate Ratios of the Average Monthly Number of Preexposure Prophylaxis (PrEP) Prescriptions for the Years 2020-2022 as Compared to 2019 (Pre-Pandemic)

		RR for 2020 compared to 2019 (95% CI)	P-value	RR for 2021 compared to 2019 (95% CI)	P-value	RR for 2022 compared to 2019 (95% CI)	P-value
All		0.96 (0.92–1.00)	.059	0.86 (0.82–0.90)	<.001	0.70 (0.67–0.73)	<.001
Age group	<30	0.89 (0.82–0.97)	.018	0.79 (0.72–0.86)	<.001	0.58 (0.53–0.63)	<.001
	30–35	1.01 (0.92–1.11)	.908	0.96 (0.87–1.05)	.425	0.81 (0.74–0.90)	<.001
	35–45	1.00 (0.92–1.09)	.960	0.87 (0.80–0.95)	.007	0.80 (0.73–0.87)	<.001
	45+	0.94 (0.87–1.03)	.181	0.84 (0.77–0.91)	<.001	0.65 (0.59–0.72)	<.001
Race	White	0.94 (0.89–0.99)	.022	0.84 (0.80–0.88)	<.001	0.68 (0.64–0.72)	<.001
	Black	0.99 (0.83–1.19)	.861	0.78 (0.64–0.95)	.025	0.64 (0.52–0.79)	<.001
	Asian	1.06 (0.89–1.27)	.398	0.96 (0.80–1.15)	.924	0.87 (0.72–1.05)	.310
	Multiracial/ other	0.95 (0.82–1.09)	.427	0.86 (0.74–1.00)	.064	0.69 (0.59–0.81)	<.001
	Not reported	1.04 (0.89–1.21)	.611	1.02 (0.87–1.19)	.750	0.82 (0.07–0.97)	.055
Insurance	Private	0.96 (0.92–1.01)	.128	0.86 (0.82–0.91)	<.001	0.72 (0.68–0.75)	<.001
	Medicaid/ Medicare	0.98 (0.88–1.09)	.608	0.86 (0.77–0.96)	.014	0.67 (0.59–0.75)	<.001
	Uninsured	0.73 (0.53–1.00)	.050	0.65 (0.49–0.87)	.010	0.42 (0.30–0.58)	<.001

prescriptions declined to a larger degree (IRR 0.86, 95% CI 0.82-0.90, $p < .001$) and were evident in most subgroups by age, race, ethnicity, and insurance status. When comparing 2022 to 2019, rates of prescriptions were even lower overall (IRR 0.70, 95% CI 0.67-0.73, $p < .001$) and declined significantly in all subgroups except for Asian patients, with the greatest decreases being among patients <30 y of age (IRR 0.58, 95% CI 0.53-0.63, $p < .001$), Black patients (IRR 0.64, 95% CI 0.52-0.79, $p < .001$) and those without health insurance (IRR 0.42, 95% CI 0.30-0.58, $p < .001$).

In terms of new PrEP prescriptions, the total number of people initiating PrEP for the first time at Fenway Health in the study period 2019–2022 was 2,976. The number of first-time PrEP users peaked in Q4-2019 at 276 prescriptions before dropping 11% the following quarter. A major decrease in new PrEP starts was observed between Q1-2020 and Q2-2020, as the number of individuals initiating PrEP dropped from 247 prescriptions to 96 prescriptions. The number of PrEP initiators increased in Q3-2020 and remained relatively stable until a 16% increase between Q1-2021 (168) and Q2-2021 (198). Numbers of new PrEP initiators decreased over the next three quarters and fell to 144 new starts in Q2-2022, their lowest levels since the onset of the pandemic (Q2-2020) (Appendix Table 1).

The total number of people tested for at least one bacterial STI each quarter during the study period was 42,857 (Figure 2). Rates of testing for at least one bacterial STI had a greater recovery towards pre-pandemic levels towards the later years in the study period than did rates of total PrEP prescriptions. Between 2019 and Q1-2020 the monthly average number of individuals testing for at least one bacterial STI decreased by 64% from 1,188 patients to 430 patients; however, between Q2-2020 and Q3-2020, there was a sharp increase of 85% to 794 patients. Increases in STI testing rates generally continued through the next several quarters until a peak in Q4-2021 after which they appeared to plateau, edging closer towards but not meeting pre-pandemic levels (Figure 2).

Quarterly Patient STI Testing 2019-2022

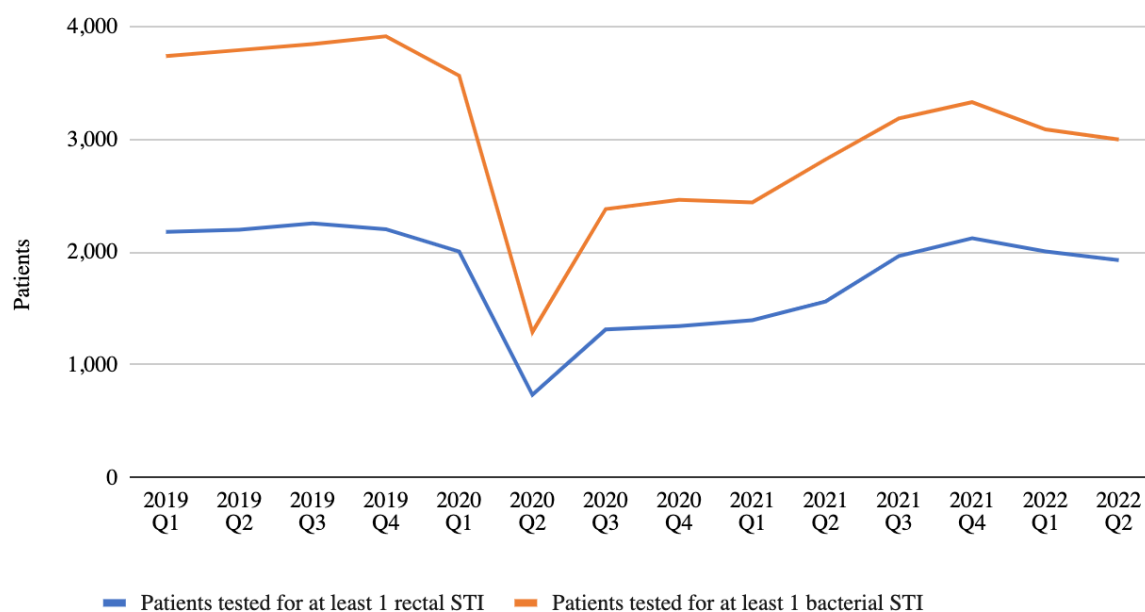


Figure 2. Quarterly Patient Sexually Transmitted Infection (STI) Testing 2019–2022

Discussion

The major findings of this study are that the COVID-19 pandemic was associated with both immediate and sustained decreases in total numbers of PrEP prescriptions at a health center in the Northeastern US with large numbers of patients using PrEP. By Q2-2022, quarterly rates of total PrEP prescriptions remained 54% lower than their high in Q1-2020, with decreases observed across nearly all demographic groups, and with no indication of further recovery based on the trajectory in PrEP prescriptions at the end of the study period in 2022. We found that rates of new PrEP prescriptions and testing for bacterial STIs also decreased immediately after the onset of the COVID-19 pandemic and did not recover to pre-pandemic levels, though rates of STI testing rebounded to a greater extent than new or total PrEP prescriptions. Our findings indicate that PrEP prescription patterns have evolved over time in important ways at this specialized community health center.

To contextualize the impact of the COVID-19 pandemic on PrEP prescriptions at our health center, it is useful to consider rates in STI testing. Compared to the 23% drop in quarterly PrEP prescriptions at the start of Massachusetts COVID-19 restrictions in Q2-2020, the drop in the quarterly number of people tested for a bacterial STI was much greater at 64%. The greater decrease in STI testing is likely a result of intensive restrictions on in-person care soon after the onset of the pandemic, which limited access to STI testing, and a pivot to virtual care for PrEP prescriptions, which could be maintained without in-person health care. It is also likely that during the early days of the pandemic, individuals decreased their sexual activity with new partners to decrease exposure to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). However, testing for bacterial STIs began recovering in Q3-2020 (2,382), coinciding with more access to in-person care, and continued to increase through Q4-2021 and into 2022, with a greater force compared to PrEP. The rebound in STI testing suggests that many patients were resuming sexual contacts over time. While the relatively less robust recovery of PrEP prescriptions could represent discontinuation of PrEP despite resumption of sexual contacts for some patients, which would be a concerning finding in terms of HIV prevention efforts, it is also possible that many patients were maintaining protection against HIV by using their pills in an event-driven manner, filling their PrEP prescriptions at other clinics, and/or using online pharmacies.

In 2020, the only groups with statistically significant decreases in PrEP prescriptions as compared to 2019 at this community health center were individuals who were White, who were under 30 years of age, or who were uninsured. This finding was generally in line with national data from the Centers for Disease Control and Prevention (CDC), which suggested across the board declines in PrEP prescriptions at the onset of the COVID-19 pandemic, with the largest relative decline in prescriptions coming from the youngest age groups studied.⁸ At this community clinic, the number of prescriptions continued to fall in the subsequent year. The groups with the largest relative decrease in PrEP prescriptions were again those who were less than 30 years of age and those who were uninsured.

All demographic groups analyzed reported a statistically significant decrease in PrEP prescriptions in 2022 relative to pre-pandemic apart from individuals who were Asian ($p=.310$) and those who did not report their racial identity ($p=.055$). There are mixed findings in the existing literature about disparities, as some studies have suggested that the COVID-19 pandemic exacerbated disparities in accessing sexual health care for communities of color when compared to White individuals, while studies in other settings have not found differences among racial groups.^{9,10} Importantly, these prior studies did not analyze data into 2022, so our study represents one of the first examinations of longer-term disparities in PrEP prescriptions after the

pandemic. While long-standing inequities exist in access to PrEP in the US, with underuse among Black and Latinx populations, our findings suggest that decreases in PrEP prescriptions as of 2 years after the onset of the pandemic appear to have affected most racial and ethnic groups in a similar manner with the caveat of non-statistically significant decreases for patients identifying as Asian.⁸

In each year of the study period, those who were under 30 years of age and those who were uninsured had the greatest declines in PrEP prescriptions relative to their comparator demographic groups. Unlike the trends among racial groups, the differences in rates of PrEP prescriptions to patients of varying ages and insurance statuses did not narrow over time during the study period.

Research conducted in the Netherlands prior to the COVID-19 pandemic indicated that key reasons for stopping PrEP was lack of insurance coverage along with periods of low perceived risk for acquiring HIV.¹¹ These seem to correspond with findings from this study, given that those without insurance may have experienced the steepest decline in PrEP prescriptions. Another possible explanation for this observed decline in PrEP usage is that individuals may be opting for intermittent or event-driven PrEP usage.¹² Such usage patterns have been observed in other studies and are likely relevant in this context as well.¹³

Rates of STI testing fell to their lowest levels both at the clinic and nationally in April 2020.¹⁴ Decreasing rates may be attributed to increased barriers to access as clinics transitioned to virtual care as well as to a general decrease in the number of new sexual partners reported by GBM at the onset of the COVID-19 pandemic both in the US and abroad.^{15,16,17} Our findings confirm that rates for STI testing increased following Q2-2020 and have remained largely resilient since.^{14,8} While the number of patients undergoing testing for at least 1 bacterial STI is still not at pre-pandemic levels, it is closer to these levels than the number of patients being prescribed PrEP. Testing positivity at this clinic was out of the scope for this paper, but existing research suggests an increase in positive STI tests may be expected.¹⁴ Asymptomatic individuals may have been more likely to forgo STI testing during the pandemic which could lead to many individuals failing to receive necessary care, increasing STI rates for years to come.^{14,18} This paper extends knowledge beyond the existing literature as few studies have analyzed trends in PrEP prescribing at community health centers years following the onset of the COVID-19 pandemic. The finding that the recovery in PrEP uptake and persistence is lagging behind rates of STI screening is concerning, if this means that individuals were engaging in condomless sex without protection against HIV. Further studies to evaluate individual patterns of behavior and reasons for PrEP discontinuation in the setting of sexual risk are warranted.

The longevity of COVID-19's impact on PrEP prescription patterns presented in this paper diverges from findings published by the CDC. The CDC, using data from IQVIA Real World Data—Longitudinal Prescription Database (IQVIA), showed a similar decrease in PrEP prescriptions amongst the young and the uninsured in Q2-2020, but by Q3 their data showed a rebounding pattern.⁸ This discordance could be attributed to several factors that stem from regional differences in New England compared to the rest of the US as well as changing preferences in how individuals obtain PrEP. Massachusetts had expanded PrEP use extensively prior to the pandemic, so there were possibly fewer individuals who might benefit from PrEP who had not used it when the epidemic hit, and more PrEP users who could have been affected by the pandemic than in other states. The 38% decrease in PrEP prescriptions in Massachusetts following the pandemic compared to states like Pennsylvania and Delaware, which may have experienced some growth in PrEP prescriptions, underscores that local factors may have played a role in explaining these findings.¹⁹ These regional nuances were buried in national trends, and this paper aimed to elucidate regional differences that were not evident on a national level.

Limitations

There were several limitations of this study. This study used EHR data from a single specialized community health center in Boston, so our findings may not be generalizable to other health centers or geographic locations. There was no review of medical chart notes in this analysis, which limits our ability to determine the reasons why PrEP prescriptions were discontinued. It is certainly possible that patients have begun procuring PrEP through other health centers especially due to shifts towards telemedicine; however, telemedicine did remain an option for patients at Fenway Health throughout the pandemic, which may partially mitigate this limitation. The population of PrEP consumers at our health center is predominantly White, cisgender men with private insurance, and this lack of diversity may have limited our ability to detect more significant changes in PrEP prescribing for certain demographic groups, such as Asian populations. Finally, there was not an exploration of HIV incidence that may be associated with changing trends in PrEP prescriptions; this is critical to consider as it demonstrates the impact of changing PrEP trends and would be a meaningful extension of this investigation.

Conclusions

Diverging from national trends reported by the CDC, rates of PrEP prescriptions at this community health center specializing in sexual health care in the Northeastern US remain lower than pre-pandemic levels and show no sign of further recovery, suggesting a distinct evolution in patterns of PrEP use.⁸ Decreasing numbers of prescriptions could be a result of increased use of event-driven PrEP, which could be consistent with greater intervals of time between PrEP prescriptions without attenuated STI testing as observed in our study; fewer sexual contacts and HIV exposures and thus less need for PrEP; disengagement from PrEP care despite ongoing HIV exposures; or receipt of PrEP prescriptions elsewhere. Direct assessments with patients to understand patterns of sexual behaviors and PrEP use are needed to understand the reasons for the changes in PrEP prescriptions we observed, which could inform strategies to optimize PrEP engagement and effectiveness.

Author Contribution

JM and DK first conceived this project. MT joined shortly after project conception and served as the lead data analyst. MT is credited with creating all graphs and figures for this paper. Research questions were further specified by JM, DK, and MT as they worked to understand the impact of COVID-19 on this community health center in Boston, MA. SG is credited with extracting all electronic health records from the Fenway Institute that were used to complete this project.

MT, DK, and KM oversaw the work of JM in drafting this paper, and each offered feedback and advice on how this project may be taken to publication.

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Appendix

Appendix Table 1. Quarterly Numbers of Total and New Preexposure Prophylaxis (PrEP) Prescriptions 2019–2022

Data from 2019 to 2022 - PrEP		
Quarter	Total PrEP Prescriptions (n)	New PrEP prescriptions (n)
Q1-2019	2,896	244
Q2-2019	3,184	275
Q3-2019	3,324	259
Q4-2019	3,565	276
Q1-2020	3,725	247
Q2-2020	2,873	96
Q3-2020	2,818	182
Q4-2020	2,951	172
Q1-2021	2,930	168
Q2-2021	2,954	198
Q3-2021	2,832	246
Q4-2021	2,363	243
Q1-2022	2,389	226
Q2-2022	2,141	144

Appendix Table 2. Quarterly Rates of Testing for Human Immunodeficiency Virus (HIV) and Bacterial Sexually Transmitted Infections (STIs) during 2019–2022

Data from 2019 to 2022 - Tests						
Quarter	Chlamydia tests (n)	Gonorrhea tests (n)	Syphilis tests (n)	HIV tests (n)	All bacterial STI tests (n)	Patients tested for at least 1 bacterial STI (n)
	Total	Total	Total	Total	Total	Total
Q1-2019	3,856	3,976	3,485	3,530	11,317	3,739
Q2-2019	4,005	4,137	3,539	3,505	11,681	3,792
Q3-2019	4,099	4,243	3,593	3,602	11,935	3,846
Q4-2019	4,042	4,163	3,589	3,574	11,794	3,914
Q1-2020	3,664	3,757	3,277	3,286	10,698	3,565
Q2-2020	1,254	1,265	1,228	1,070	3,747	1,290
Q3-2020	2,388	2,441	2,210	2,163	7,039	2,382
Q4-2020	2,453	2,556	2,255	2,202	7,264	2,464
Q1-2021	2,457	2,504	2,276	2,190	7,237	2,441
Q2-2021	2,891	2,968	2,570	2,601	8,429	2,822
Q3-2021	3,305	3,399	2,871	2,947	9,575	3,186
Q4-2021	3,438	3,533	2,971	3,029	9,942	3,330
Q1-2022	3,206	3,318	2,857	2,839	9,381	3,088
Q2-2022	3,052	3,141	2,749	2,726	8,942	2,998

Appendix Table 3. Fenway Health Sexually Transmitted Infection (STI) Testing During 2019–2022

Data from 2019 to 2022 - Tests		
Quarter	Patients tested for at least 1 rectal STI	Patients tested for at least 1 bacterial STI
	Total	Total
Q1-2019	2,179	3,739
Q2-2019	2,199	3,792
Q3-2019	2,254	3,846
Q4-2019	2,203	3,914
Q1-2020	2,005	3,565
Q2-2020	734	1,290
Q3-2020	1,314	2,382
Q4-2020	1,343	2,464
Q1-2021	1,395	2,441
Q2-2021	1,562	2,822
Q3-2021	1,966	3,186
Q4-2021	2,123	3,330
Q1-2022	2,006	3,088
Q2-2022	1,928	2,998

Appendix Table 4. Number of Days Between Preexposure Prophylaxis (PrEP) Prescriptions During 2019–2022

Year	Mean number of days between PrEP prescriptions	Median number of days between PrEP prescriptions
2019	107.7	90
2020	106.3	88
2021	121.7	89
2022	126.7	91