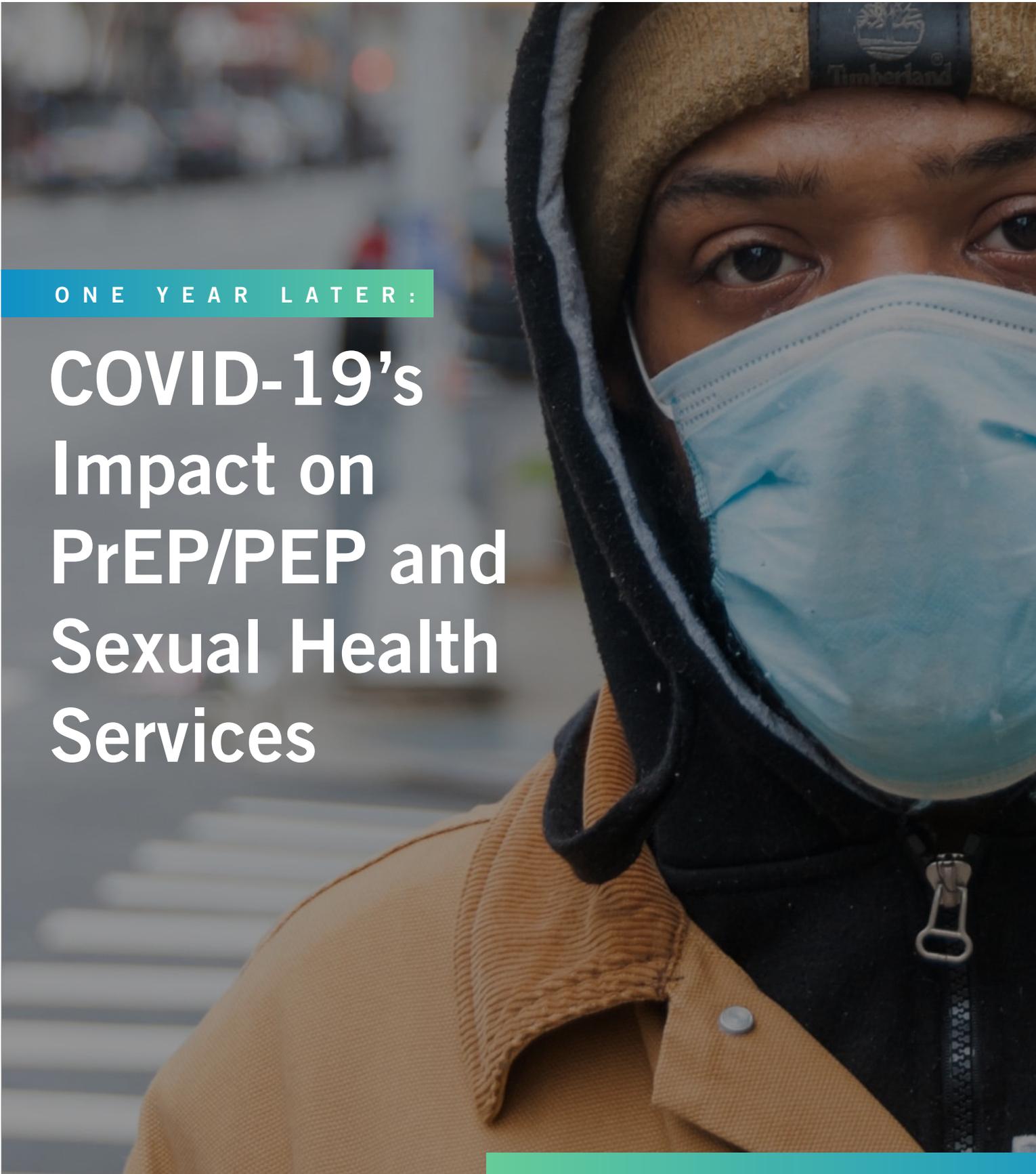




ONE YEAR LATER:

COVID-19's Impact on PrEP/PEP and Sexual Health Services



EXECUTIVE SUMMARY

The United States has been in a state of emergency concerning the COVID-19 global pandemic since March 2020. With the country responding to the pandemic for over a year, the National Coalition of STD Directors (NCSDD), in collaboration with NASTAD, examines the impact COVID-19 has had on PrEP/PEP and sexual health services, particularly in the South.

Throughout the nation's response to the pandemic, sexual health programs were uniquely impacted.

- Much of the sexual health workforce was pulled into COVID-19 detail, causing significant service disruptions.
- Sexual health programs implemented harm reduction practices to mitigate COVID-19 risks when serving clients.
- PrEP and PEP programs were impacted across the care continuum, from awareness to adherence. Jurisdictions are tasked with ending an epidemic during a pandemic. Ending the HIV Epidemic: A Plan for America (EHE) goals may be affected due to the challenges COVID-19 has had on the health care system.

As jurisdictions continue addressing both the HIV epidemic and the COVID-19 pandemic, the following recommendations can improve PrEP/ PEP access during this time.

- TelePrEP programs can significantly increase PrEP access during COVID-19 and beyond. Many jurisdictions are working to implement telePrEP programs to assist with client's PrEP maintenance, and initiation to PrEP.
- HIV/ STD self-testing programs can help individuals complete their routine PrEP screenings, reducing barriers for clients.

INTRODUCTION

COVID-19 cases have totaled more than 26 million with over half a million deaths occurring in the United States¹. While the entire country has been impacted by COVID-19, the southern United States has significantly, making up about a third of new cases in January 2021. With a significant number of new cases being reported in the South, its healthcare systems experienced considerable strain. Structurally, the South leads in having the nation's lowest physician per patient rate. For instance, Mississippi has a 191.3 active physicians per 100,000 population, as opposed to Massachusetts's 449.5 active physicians per 100,000 population.² Dually, southern hospital systems in states such as Georgia reported that their hospitals were at maximum capacity for COVID-19 patients. Many southern states experienced daily case counts surpassing the previous average daily counts from summer 2020.³ In further consideration, the South is also known to have populations with higher morbidities from chronic disease than other Americans not living in the South, such as diabetes, cancer, and hypertension which are risk factors of COVID-19.⁴ These higher incidences of morbidity also extend to HIV and other STDs. The South, before COVID-19, had the [highest HIV diagnosis and death rates](#) as well as ranking in the top five highest number of STDs cases such as primary and secondary syphilis, congenital syphilis, chlamydia, and gonorrhea.⁵ Furthermore, the rate of pre-exposure prophylaxis (PrEP) usage in the South is lower than any other region in the country, with a [PrEP to Need ratio \(PnR\) of 3.0](#).⁶ This score indicates fewer PrEP users in the South relative to the need for PrEP in this region.

There are many contributing factors for these health outcomes. The South has the highest poverty rate in the nation and leads in the number of Americans without health insurance. For instance, eight of the 16 southern states have not expanded Medicaid, creating barriers to accessing health care even greater.⁷ The history of racism and poverty in the South stems from chattel slavery to Jim Crow. It has led to some of the reasons why southerners disproportionately experience worse health outcomes.



38%
of the United States' population lives in the South



51%
of new HIV cases each year occur in the South

Along with having higher disease rates, the South incarcerates more of its population than elsewhere in the United States.⁸ Incarceration has been identified as a risk factor for COVID-19 and having COVID-19 related complications. Those who are incarcerated do not typically have access to adequate hygiene and protective measures against COVID-19 such as masks, social distancing, and frequent hand washing. As southern prisons, such as those in Louisiana, experience spikes in COVID-19 cases weekly⁹, there are no policies in place to better protect those imprisoned through measures such as decarceration. According to UNAIDS, reducing overcrowding in prisons can help to prevent the spread of COVID-19. This can help to reduce the amount of people at risk for becoming infected with COVID-19 and require the provision of continuing HIV care for patients that are still incarcerated and those that are released during the COVID-19 pandemic. This continuation of HIV care recommended by UNAIDS, also encourages “close collaboration with public health authorities, to allow people to continue their treatments without interruption at all stages of detention and upon release. They also recommend for jurisdictions to take a health systems approach, where prisons are not separated from the continuity-of-care HIV pathway but integrated with community health services.”¹⁰



Since the beginning of the pandemic, COVID-19 has greatly impacted the delivery of sexual health services throughout the United States. The intersection of COVID-19 and the impact on sexual health includes: Interruptions of STD/HIV services, sexual health clinic closures/patient visit frequency, PrEP/PEP implementation and retention, as well as the ability for public health jurisdictions to plan and achieve their Ending the HIV Epidemic goals.

To further explore the impact COVID-19 has had on the provision of sexual health and HIV prevention services, the National Coalition of STD Directors (NCSD), in collaboration with NASTAD, developed this paper to detail the many challenges, and opportunities, COVID-19 has brought to the HIV/STD prevention field, particularly in the southern United States.

COVID-19'S IMPACT ON SEXUAL HEALTH

COVID-19 has greatly impacted the sexual health workforce and caused significant service disruptions.

When COVID-19 was declared a national emergency in March 2020, sexual health clinics' doors were closed off from the public to comply with the nationwide shutdowns. NCSD sought to collect data from STD programs, sexual health clinics, and Disease Intervention Specialists (DIS) to assess the impact of COVID-19 response on the STD field through three “COVID-19 & The State of STD Field” surveys.

NCSD used these surveys and targeted weekly calls to identify challenges experienced by our membership secondary to COVID-19. Information sharing calls for the Clinic and DIS communities occurred from March to August 2020.

In the spring of 2020,



of STD programs were deferring STD services or field visits



of STD programs could not maintain their HIV and syphilis caseloads



of clinics reported a decrease in sexual health screening and testing



of clinics experienced reduced capacity to treat STDs



clinics reported that their capacity was reduced by more than half



90% of jurisdictions report staff being detailed to COVID-19

Similarly, NASTAD conducted a request for information (RFI) with its' members to assess the impact COVID-19 was having on HIV and hepatitis programs, one in [May 2020](#) and a second in [August 2020](#). Of the 49 respondents from May's RFI, 13 were from the South. Findings from NASTAD's August RFI show that 90% of jurisdictions report staff being detailed to COVID-19, a significant increase from May's RFI results. Additionally, respondents shared that due to social distancing and local restrictions, HIV prevention programs had a "decreased ability to continue outreach and engagement activities" and are working on innovative ways to continue outreach for prevention activities. Because of service disruptions related to COVID-19, surveillance data still does not and likely will not match actual STD rates. As of January 2021, [CDC estimates that 1 in 5 individuals in the US has a sexually transmitted infection](#).¹¹ Summer is a popular time for testing outreach events at pride festivals and community-based outreach which were largely cancelled due to COVID-19.

The public health emergency response to COVID-19 caused mass scale disruptions to the sexual health field including screening, diagnoses, and treatment. While STD clinic staff were eager to lend their expertise to the COVID-19 response, the work's enormous scope and taxing nature made it challenging for sexual health clinics to sustain their response without additional resources. With STDs at an all-time high, redeployment due to COVID-19 threatened an already over-burdened and under-resourced STD prevention network. A southern state whose STD staff has been mostly redeployed to COVID-19 emergency response shared:

"STD and DIS staff are working 7 days a week and are doing their very best to help save lives like they always have. But this effort is not sustainable; staff are burned out, tired, overwhelmed and scared."¹²

[NCSD's January 2021 survey report](#) found that the proportion of STD clinic staff redeployed on COVID-19 response decreased from 78% in March 2020 to 37% in January 2021. Moreover, 90% of respondents report their jurisdiction is conducting COVID-19 contact tracing and 87% of these programs are leading, staffing, assisting or supporting their jurisdiction's COVID-19 contact tracing efforts. However, COVID-19 redeployments are continuing to interfere with STD programs' ability to provide DIS services including a 28% decrease in chlamydia services, 23% decrease in syphilis services and an 18% decrease in gonorrhea services as of January 2021. Of the 39 respondents from that survey, there was representation from six jurisdictions in the South. Additionally, 29% of jurisdictions are utilizing DIS in COVID-19 vaccine distribution including Tennessee and Fulton County, Georgia. Another 8.7% are not currently utilizing DIS in vaccine distribution response but plan to soon, which further detracts from their ability to provide sexual health contact tracing services.¹³

SEXUAL HEALTH CLINICS

Sexual health clinics quickly pivoted to provide services, yet many challenges persisted.

66% of sexual health clinics reported decreased sexual health screening and testing, and added restrictions on patients' eligibility for appointments, such as: Patients must be symptomatic, need treatment, or be a current PrEP patient. Clinics were performing telehealth appointments only and limiting the number of patients to maintain social distancing. STD treatment capacity was also impacted, with 22% of clinics reporting that their clinical capacity to provide STD treatment reduced by half. Challenges to treatment included: Limited pharmacy capacity and drug availability, identifying alternative oral regimens for

chlamydia and gonorrhea, to reduce in-person visits, and identifying ways to treat syphilis cases, usually requiring injectable treatment. In April of 2020, CDC issued updated treatment guidance in response to COVID-19 clinic closures outlining therapeutic options for symptomatic patients and their partners when in-person clinical evaluation is not feasible.¹⁴ In December 2020, CDC released updated treatment recommendations for gonococcal infection.¹⁵

Many clinics closed at the start of the pandemic. Those that remained open struggled with acquiring personal protective equipment (PPE), modifying clinic flows and layouts, and limiting the number of patients to ensure appropriate social distancing.

To mitigate COVID-19 risks, many sexual health clinics implemented preventive measures, including: Taking a patient's temperature, referring symptomatic patients to a local testing site, performing pre-appointment phone interviews to screen for household COVID-19 symptoms, offering services by appointment only, and eliminating walk-in hours and availability of sexual health services in their community.

As mentioned, in addition to affecting screenings, treatment was impacted as well. Beginning in the spring 2020, the availability of various medications used to treat STDs was unpredictable. These medication shortages were not due to inadequate production by manufacturers but rather fragilities within the supply chain and problems with logistics and distribution.



When COVID-19 hit the US in early March 2020, STD test manufacturing companies quickly shifted production to multi-test swabs. In addition to STD testing, they were the primary collection device for COVID-19 assays. This decreased production capacity for unisex and urine collection tubes was not a challenge initially as sexual health clinics decreased testing capacity. However, this contributed to test kit shortages across the country as STD testing picked up. These companies have resumed urine/unisex kits production, with new production lines coming online over the next several months, but shortages persist across the country. Sexual health clinics also faced a surplus of expiring test kits in the Summer of 2020 as sexual health services began to resume across the country. A bulk

of their test kits were left unused due to service interruptions caused by COVID-19. Virtual elimination of asymptomatic, routine screening can have devastating consequences, reducing routine HIV screening of individuals seeking STD testing/ treatment, potentially leading to increased HIV rates.¹⁶ Some jurisdictions have received reports of a severe form of gonorrhea, called disseminated gonococcal infection, which is an uncommon but significant complication of untreated gonorrhea.

COVID-19'S IMPACT ON PREP/PEP IMPLEMENTATION

COVID-19 has greatly impacted PrEP and PEP services across the [care continuum](#)¹⁷, from awareness to adherence.

As sexual health clinics reported clinic closures, reduced clinic hours and services, STD testing kit shortages, and diminished laboratory capacity, the initiation and retention of PrEP patients as well as access to PEP was disrupted throughout this past year. In May 2020, [the CDC released a "Dear](#)

[Colleague” letter](#) to provide guidance on PrEP provision during clinic disruptions. Their guidance included the recommendation of home specimen collection kits for HIV and STDs, or an at-home HIV self-test.¹⁸

It was also recommended to extend 30-day prescriptions of PrEP to 90-days, to ensure patients had access to their medication. As of this writing, NCSH has reported an increase in seroconversions, during the intermittent COVID-19 lockdowns, of patients on PrEP before the COVID-19 pandemic. To address the barrier COVID-19 has on delivering in-clinic PrEP services, some clinics have employed telehealth visits for PrEP.

Another challenge impacting PrEP/PEP uptake and provision is COVID-19's impact on unemployment, triggering a loss in health insurance and an added barrier for paying for PrEP/PEP services and prescriptions. In April 2020, [the unemployment rate reached its highest point](#) (14.8%) at an unprecedented level, not seen since data collection started in 1948, before declining to a still-elevated level in December (6.7%).¹⁹

To address this unemployment disparity, sexual health clinics have continued to encourage and assist PrEP patients to apply for PrEP Assistance programs that are not employer-based, such as [Ready, Set, PrEP](#) and other medication assistance programs.

As mentioned above, sexual health services have been greatly impacted, resulting in decreased testing for HIV and STDs. As PrEP is recommended for individuals who have been diagnosed with an STD within the past six months, decreases in screenings not only reduces the number of people aware of their status but also reduces those that have been identified as eligible for PrEP.²⁰ While this is an example of challenges to PrEP initiation, PrEP has been impacted across the continuum, from awareness to adherence.



→ Research presented during the 2020 International AIDS Conference (IAC) in July showed a [one third decrease in PrEP usage during the COVID-19 shut down](#).²¹ Many of the study participants reside in the Northeast and the West coast regions, however, southern states were represented in this study. Of the 394 survey respondents, approximately 89% stopped PrEP as they felt they would “no longer engage in risky behaviors”, eight percent shared they could no longer access the medication due to either losing their insurance, couldn't receive a prescription or refill, or couldn't complete the necessary labs. While a majority of the PrEP users surveyed stopped voluntarily, additional barriers posed by COVID-19 did impact PrEP usage among users. This raises the question, how many individuals not surveyed have experienced similar challenges?

→ Another finding presented at the 2020 IAC was a [study conducted by Fenway Health in Massachusetts](#).²² During the study period of January 2020 to April 2020, findings identified lapses in PrEP refills “surged” by 191 percent, while new PrEP patients decreased by approximately 72 percent. While this study did not survey individuals from the South, it can be inferred that some of the challenges experienced by the PrEP cohort in Boston may have been compounded by additional barriers to PrEP experienced in the South. These challenges and more have led individuals to wonder how COVID-19 is overall impacting the EHE initiative.

→ Lastly, in a [national virtual cohort study of gender minority adolescents and young adults](#) released February 2021, 3445 participants aged 13-34 years, mostly from the mid-west and southern regions were surveyed to assess COVID-19's impact on participant's emotional and financial well-being, and access to routine HIV/STD testing and PrEP. The survey results showed that a “significant minority of PrEP users (42.3%) reported changing or stopping PrEP during the pandemic, due to disrupted PrEP follow-up care (43.8%), while 20% reported difficulty accessing HIV/STD testing during the pandemic.” These three studies all demonstrate the impact COVID-19 has had on PrEP uptake and utilization, directly affecting the goals to end the HIV epidemic.

These three studies all demonstrate the impact COVID-19 has had on PrEP uptake and utilization, directly affecting the goals to end the HIV epidemic.²³

IMPACT ON ENDING THE HIV EPIDEMIC

COVID-19 is impacting jurisdiction's work on ending the HIV epidemic plans and reaching program goals.

While the United States focuses on the COVID-19 global pandemic, work towards the [Ending the HIV Epidemic: A Plan for America](#) (EHE) continues. Announced by the federal government in 2019, the EHE plan focuses on four key strategies (also known as the four pillars): Diagnose, Treat, Prevent, and Respond to reduce new HIV transmissions by 75 percent in 2025, and 90 percent by 2030. The first phase of the EHE plan includes 57 high incidence jurisdictions, approximately half of which are in the South. The jurisdictions included in the EHE plan are also high prevalence areas for the COVID-19 pandemic. The prevent pillar includes proven interventions to prevent HIV transmission, including: PrEP, PEP, and syringe service programs. For this paper, PrEP and PEP will be the main focus when discussing this pillar. While COVID-19 has impacted each pillar of the EHE plan, the prevent pillar has been particularly impacted.

In a southern specific workshop held by NASTAD in November 2020, participants were asked to share some challenges they've experienced in ending the HIV epidemic during COVID-19. Participants shared that the staff bandwidth has decreased due to COVID-19 response, HIV and STD testing has decreased (due to less testing and appointment availability), and individuals shared challenges conducting community engagement due to social distancing. As community engagement was a significant component to developing EHE plans, jurisdictions had to get creative to receive necessary plan feedback in time to be submitted by December 31, 2020, the deadline for the final plans (an extension from the original due date). All EHE plans were submitted to the CDC and can be viewed on this [map](#).

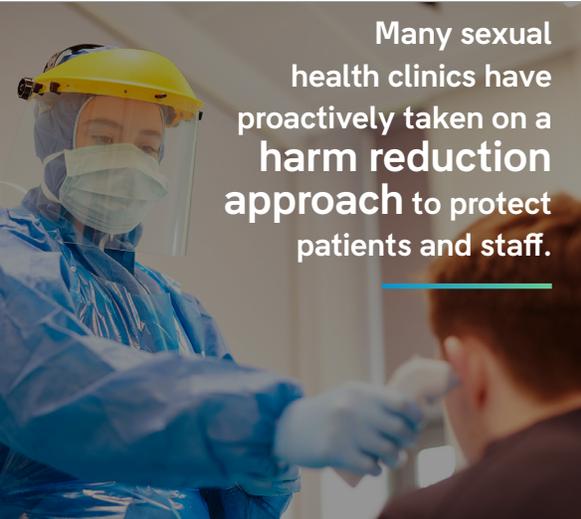
HOW CLINICS MAINTAINED ACCESS

Clinics implemented various harm reduction strategies to provide sexual health services safely.

Some of the best practices that have evolved during the pandemic are limiting routine screening, instituting appointment only policies for visits at clinics, advising patients with symptoms of COVID-19 to avoid coming in, and prioritizing higher risk patients with symptoms for treatment. For example, suppose a patient demonstrates COVID-19 symptoms and they require STD services. In that case, they are seen in a dedicated exam room by providers attired in full PPE. Some clinics have prioritized treatment for syphilis and resistant gonorrhea and have halted pharyngeal chlamydia and gonorrhea tests to reduce risk. The CDC has advised that safety measures and harm reduction practices need

to be tailored for each context. Staff and provider safety should be the foremost priority.²⁴ Measures that do not require or minimize physical contact, such as phone calls, video chats, or texting are recommended.

Many sexual health clinics have proactively taken on a harm reduction approach to protect patients and staff. Sexual health clinics have also adopted practices such as asking patients to wait in the parking lot until their appointment, measuring temperatures at the entrance of facilities, limiting visit durations, requiring face masks, spacing out seating in waiting rooms to enable social distancing, and implementing enhanced cleaning procedures. Others have made staffing changes such as having only essential staff come into work, rotating staff workdays to limit exposure, and asking staff such as insurance navigators, PrEP coordinators, and DIS to work remotely.²⁵



Many sexual health clinics have proactively taken on a harm reduction approach to protect patients and staff.

for [HIV Testing and PrEP Access](#)” series. While self-collection has shown to be a promising alternative to in-person testing, preliminary data [presented at NCSD's 2020 Engage conference](#) indicates that these innovative self-collection by mail programs do not elicit comparable STD morbidity rates to brick-and-mortar STD clinic prior to the pandemic, which suggests that there may be key demographics that are still not being reached through these innovations as the pandemic continues.

When evaluating PrEP access points and PrEP delivery models in the context of COVID-19, telePrEP programs come to mind immediately as providers seek to support PrEP maintenance while adhering to current public health recommendations for social distancing. Increased access to telehealth and HIV/STD self-testing has helped make it possible for more jurisdictions to add telePrEP programs to their offered services. NASTAD has seen an increase in telePrEP programs becoming available over the course of the pandemic, state-specific telePrEP services can be shown on this [map](#). For programs interested in designing and implementing a telePrEP program, the [telePrEP hub toolkit](#) provides helpful resources to assist clinics getting started.



CLINIC SPOTLIGHT

- When COVID-19 hit Jackson, Mississippi in the Spring of 2020, the **Express Personal Health Clinic** managed by the University of Mississippi Medical Center quickly pivoted to offering telePrEP to ensure patient adherence, particularly as a significant portion of the clinic's patient population were college students being sent home as campuses faced critical closures. The program had exceptional success keeping patients on PrEP from wherever they sheltered in place. The clinic continues to offer this convenience as a sustainable innovation in response to COVID-19.
- The [Testing123 program](#) housed in the Harris County Public Health HIV and STD Prevention in Houston, Texas, is an HIV prevention program in its fourth year that conducts rapid HIV testing and conventional syphilis testing 24 hours per day, seven days per week by way of a mobile van. Services are available by texting a phone number which prompts the van to come to the individual seeking testing at any location. The Testing123 program plans to expand due to decreases in traditional services secondary to COVID-19 and through support from EHE funding. Testing123 provides an immediate connection to on-call linkage to care services if needed around the clock.

TECHNICAL ASSISTANCE IS AVAILABLE

As part of NCSD's [Clinic+](#) initiative, technical assistance is available to clinics around the nation. If you have clinic-related requests, questions, or responses, please contact NCSD's [Jennifer Mahn](#).

CDC funded health departments and community-based organizations in the South are eligible to receive technical assistance and capacity building support! The South includes: AL, AR, Baltimore, DC, DE, FL, GA, Houston, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, and WV. Capacity building in the South is provided by, [My Brother's Keeper, Inc.](#), [the Latino Commission on AIDS](#), and [NASTAD](#).

This document was developed by NASTAD with support from the Centers for Disease Control and Prevention's Capacity Building Assistance Branch, grant number NU65PS923675.

SOURCES

- ¹ COVID-19 Data Tracker, <https://covid.cdc.gov/covid-data-tracker/#datatracker-home>
- ² Association of American Medical Colleges, 2019 State Physician Workforce Data Report <https://store.aamc.org/2019-state-physician-workforce-data-report.html>
- ³ Grady is full': Hospital CEO says they may have to make 'tough choices' on providing care <https://www.11alive.com/article/news/health/coronavirus/grady-hospital-full-coronavirus/85-de5d5203-3da3-4170-a616-3528c75b217c>
- ⁴ <https://www.kff.org/racial-equity-and-health-policy/issue-brief/health-and-health-coverage-in-the-south-a-data-update/>
- ⁵ <https://www.cdc.gov/hiv/pdf/policies/cdc-hiv-in-the-south-issue-brief.pdf>
- ⁶ <https://aidsvu.org/prep-use-across-the-u-s-at-the-county-level/>
- ⁷ Kaiser Family Foundation. Status of State Medicaid Expansion Decisions: Interactive Map. Available at: <https://www.kff.org/medicaid/issue-brief/status-of-state-medicaid-expansion-decisions-interactive-map/>
- ⁸ <https://www.kff.org/other/state-indicator/total-population-in-u-s-adult-correctional-systems-by-correctional-status/?dataView=1¤tTimeframe=0&sortModel=%7B%22colId%22:%22Incarcerated%22,%22sort%22:%22desc%22%7D>
- ⁹ Federal Bureau of Prisons, COVID-19: <https://www.bop.gov/coronavirus/>
- ¹⁰ UNODC, WHO, UNAIDS and OHCHR joint statement on COVID-19 in prisons and other closed settings, https://www.unaids.org/en/resources/presscentre/pressreleaseandstatementarchive/2020/may/20200513_joint-statement-covid19-prisons
- ¹¹ <https://www.cdc.gov/nchhstp/newsroom/2021/2018-STI-incidence-prevalence-estimates-press-release.html>
- ¹² <https://www.ncsddc.org/resource/sexual-health-clinics-and-our-nations-covid-19-response/>
- ¹³ <https://www.ncsddc.org/resource/covid-19-and-the-state-of-the-std-field-phase-iii/>
- ¹⁴ <https://www.cdc.gov/std/dstdp/DCL-STDTreatment-COVID19-04062020.pdf>
- ¹⁵ https://www.cdc.gov/mmwr/volumes/69/wr/mm6950a6.htm?s_cid=mm6950a6_w
- ¹⁶ <https://www.ncsddc.org/resource/sexual-health-clinics-and-our-nations-covid-19-response/>
- ¹⁷ Defining the HIV pre-exposure prophylaxis care continuum <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5333727/>
- ¹⁸ https://www.cdc.gov/nchhstp/dear_colleague/2020/dcl-051520-PrEP-during-COVID-19.html
- ¹⁹ Unemployment Rates During the COVID-19 Pandemic: In Brief <https://fas.org/sgp/crs/misc/R46554.pdf>
- ²⁰ <https://www.cdc.gov/hiv/basics/prep/prep-decision.html>
- ²¹ One Third in US Stopped PrEP During COVID Shutdown, 90% Trimmed HIV Risk, https://www.natap.org/2020/IAC/IAC_35.htm
- ²² COVID-19 Disrupts PrEP Starts, Refills, HIV/STI Testing in Boston Clinic, https://www.natap.org/2020/IAC/IAC_95.htm
- ²³ Social, economic, mental health, and medical care impacts of COVID-19 in a US cohort of sexual and gender minority adolescents and young adults (SGM AYA) at-risk for HIV, [natap.org/2021/HIVR4P/HIVR4P_35.htm](https://www.natap.org/2021/HIVR4P/HIVR4P_35.htm)
- ²⁴ [cdc.gov/coronavirus/2019-ncov/hcp/guidance-hcf.html](https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-hcf.html)
- ²⁵ <https://www.ncsddc.org/resource/sexual-health-clinics-and-our-nations-covid-19-response/>
- ²⁶ <https://telehealth.hhs.gov/providers/policy-changes-during-the-covid-19-public-health-emergency/hipaa-flexibility-for-telehealth-technology/>
- ²⁷ <https://www.phe.gov/emergency/news/healthactions/phe/Pages/covid19-07Jan2021.aspx>
- ²⁸ <https://www.cms.gov/about-cms/emergency-preparedness-response-operations/current-emergencies/coronavirus-waivers>