

Changes in the time of COVID-19: a quality improvement initiative to maintain services at a youth sexual health clinic

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Received 17 August 2021

Accepted 26 November 2021

ABSTRACT

Objectives Adolescents and young adults (AYAs) face difficulties accessing sexual and reproductive health services. These difficulties were exacerbated for a variety of reasons by the COVID-19 pandemic. We document strategies and outcomes implemented at an urban youth sexual health clinic in Florida that allowed uninterrupted provision of services while protecting against spread of COVID-19.

Methods The plan–do–study–act (PDSA) model was used to implement COVID-19 interventions designed to allow continued service delivery while protecting the health and safety of staff and patients. This method was applied to clinic operations, community referral systems and community outreach to assess and refine interventions within a quick-paced feedback loop.

Results During the COVID-19 pandemic, changes made via PDSA cycles to clinical/navigation services, health communications and youth outreach/engagement effectively responded to AYA needs. Although overall numbers of youth served decreased, all youth contacting the clinic for services were able to be accommodated. Case finding rates for chlamydia, gonorrhoea, syphilis and HIV were similar to pre-pandemic levels.

Conclusions Quality improvement PDSA initiatives at AYA sexual health clinics, particularly those for underserved youth, can be used to adapt service delivery when normal operating models are disrupted. The ability for youth sexual health clinics to adapt to a changing healthcare landscape will be crucial in ensuring that under-resourced youth are able to receive needed services and ambitious Ending the HIV Epidemic goals are achieved.

OBJECTIVES

Adolescents and young adults (AYAs) disproportionately face difficulties accessing sexual and reproductive health services with barriers such as lack of health insurance, inconvenient clinic hours, lack of transportation and confidentiality fears impeding access to services.^{1–4} The onset of COVID-19 exacerbated difficulties and erected additional barriers for AYA in the USA. New barriers include financial insecurity, decreased confidentiality from familial cohabitation and provider shortages with services shifting from sexual health to COVID-19.⁵ The ultimate effect, confirmed by the National Coalition of STD Directors' January 2021 field survey of STI services during the pandemic,⁶ has been decreased

AYA access to STI/HIV screenings, treatment and prevention services.

Plan–do–study–act (PDSA) cycles are an innovative method for evaluating and refining interventions to improve workflow and clinical outcomes.⁷ PDSA provides a structured framework for testing changes on a small scale and rapidly applying what is learnt to inform interventions before large-scale implementation.⁸ Recent findings demonstrate how adaptations to quality improvement efforts are necessary when facing crisis situations like the COVID-19 pandemic to allow a quick response while optimising patient safety.⁹ To add to the current research, we document PDSA strategies and related outcomes implemented during the pandemic at an urban youth sexual health clinic in Florida.

METHODS

The clinic is located in a high STI and HIV incidence area of a major metropolitan area in an Ending the HIV Epidemic (EHE) priority county within Florida. The 50 designated EHE priority counties across the country account for more than 50% of new HIV diagnoses made yearly in the USA.¹⁰ The clinic serves under-resourced youth from the ages of 13–24 years in an environment tailored to their needs. Services include free walk-in STI/HIV testing and no-cost to low-cost appointment services for STI/HIV treatment, birth control, risk reduction counselling and referrals to other community agencies for additional services.

The PDSA model was used to test, refine and evaluate COVID-19 interventions designed to allow the continued provision of services while protecting the health and safety of staff and patients. [table 1](#) shows how the PDSA model was used in each of the three phases of clinic operations—clinical services, community referral systems and community outreach—to assess and refine interventions within a quick-paced feedback loop. From 18 March 2020 to 31 December 2020, multiple PDSA cycles were used to implement and assess changes, with clinical services requiring the most cycles to adjust to changing patient needs as the pandemic progressed.

This framework helped guide the team in fine-tuning programming based on data analysis and lessons learnt. Data regarding clinic services, requested and completed referrals, STI/HIV positivity rates and social media metrics were collected



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To cite: Lim AC, Venkatesh M, Lewald DL, *et al.* *Sex Transm Infect* Epub ahead of print: [please include Day Month Year]. doi:10.1136/sextrans-2021-055265

Table 1 PDSA cycle outcome

	Clinical services	Community referral system	Community outreach and engagement
Plan	<ul style="list-style-type: none"> ▶ Ensure patient care continues with recommended COVID-19 safety precautions in place. 	<ul style="list-style-type: none"> ▶ Maintain patient access to navigation support and linkage to needed resources. 	<ul style="list-style-type: none"> ▶ Offer virtual youth engagement opportunities to strengthen patient connections and supports despite limited in-person outreach.
Do	<ul style="list-style-type: none"> ▶ Discontinue walk-in HIV/STI testing. ▶ Offer free home HIV testing option. ▶ Develop call-in testing protocol with assigned testing times. ▶ Begin preappointment COVID-19 screening. ▶ Increase use of telehealth as appropriate. 	<ul style="list-style-type: none"> ▶ Shift to providing virtual navigation support. ▶ Obtain remote access to electronic health record. ▶ Initiate use of online referral management systems to improve linkages and tracking. ▶ Increase use of phone, text and email outreach. ▶ Leverage digital platforms to share youth-friendly resources. 	<ul style="list-style-type: none"> ▶ Increase frequency of youth engagement events. ▶ Increase incentives for youth participation in engagement events. ▶ Transition to virtual engagement, including monthly youth advisory boards on Zoom and Q&A sessions on Facebook Live and Instagram.
Study	<ul style="list-style-type: none"> ▶ Schedule weekly virtual leadership meetings to review operations and discuss plans for continuous improvement. ▶ Monitor testing and appointment numbers to ensure patient needs met. ▶ Track case finding rates for STIs/HIV. 	<ul style="list-style-type: none"> ▶ Record virtual outreach experiences with each patient interaction. ▶ Assess challenges reaching youth by phone and test process improvements to overcome. ▶ Track patient resource needs monthly and use to inform updates to resource directory. ▶ Track patient referrals, number of outreach attempts and patients lost to follow-up. 	<ul style="list-style-type: none"> ▶ Obtain youth feedback during virtual meetings and via social media and use to inform topics for online Q&A sessions and youth forums. ▶ Track analytics of new social media efforts. ▶ Measure changes in the types of referrals from youth resource navigator. ▶ Track board meeting attendees, social media postings and social media engagement metrics.
Act	<ul style="list-style-type: none"> ▶ Hold trainings and issue guidelines for staff on use of technology during COVID-19. ▶ Develop innovative and socially distant HIV/STI testing events with community partners. ▶ Increase dissemination of health education materials on social media. 	<ul style="list-style-type: none"> ▶ Increase collaboration with providers to facilitate connections with patients during visits. ▶ Update online resource directory to highlight telehealth options and resources of highest need during COVID-19. ▶ Change patient intake form to include email address and best time to contact. 	<ul style="list-style-type: none"> ▶ Disseminate COVID-19 resources in new virtual newsletters. ▶ Strengthen partnerships with agencies providing services to support online referrals. ▶ Hold monthly youth advisory board meetings on COVID-19 related topics to meet youth needs.

for review at monthly full-staff meetings, and PDSA progress was assessed weekly at clinic leadership meetings.

RESULTS

In the USA, early governmental response to the pandemic focused on vaccine development and deployment of resources towards COVID-19 diagnosis and treatment with limited guidance given as to how to maintain the type of outpatient medical services we provide. Recognising the ongoing need for our services, we responded by adjusting clinical activities and service delivery procedures as the pandemic unfolded and understanding developed of how this could be done safely. Because we are affiliated with an academic health centre as opposed to a community-based organisation, adequate personal protective equipment was more readily available for clinic personnel and COVID-19 infection control procedures such as patient masking, elimination of pharyngeal sampling, limited waiting room occupancy and surface sterilisation were mandated by our health centre and followed. To reduce the risk of COVID-19 among patients and providers, on 18 March 2020, walk-in testing was eliminated, and provider appointments were switched to telehealth when feasible. The availability of free at-home HIV testing was advertised and encouraged but few patients took advantage of this, something we have experienced previously with home-testing initiatives in our youth population. In-person STI/HIV testing was reintroduced on 13 April 2020, by creating a call-in system to screen patients for COVID-19 with questioning by phone regarding exposure and symptoms preappointment and then assigning a testing time slot so that physical distancing could be maintained in clinic. Rescreening with COVID-19 specific questions and temperature check at the time of the appointment also occurred. While this system led to a decrease in the overall number of patients that could be served (1817 patients in 2020 vs 2227 in 2019), all patients that called to request testing were accommodated. The fewest patient visits occurred in April 2020 (74 visits) due to transitioning to the new system, with patient numbers gradually increasing until levelling off in June 2020 (150 visits). Despite performing fewer tests, the proportion of youth testing positive for gonorrhoea, chlamydia or syphilis

was not significantly different from 2019 to 2020 (22.52% vs 22.07%). Positivity rates for HIV screening also remained consistent when compared with pre-COVID-19 rates with annual HIV case detection rates 0.73% in 2019 and 1.36% in 2020 ($p=0.097$). For youth diagnosed with STI/HIV infection, treatment services were maintained throughout the pandemic, so that all patients received timely in-person, appointment-based treatment. With the mitigation protocols employed, no known case of COVID-19 transmission occurred in clinic staff or patients.

All clinic patients are routinely screened for additional needs such as mental health counselling, food or housing insecurity, health insurance and access to other medical providers. Prior to the COVID-19 pandemic, an onsite navigator was available to assist with this. In March 2020, referrals and navigation services shifted to virtual support through phone, text and email. Challenges included unresponsiveness to virtual outreach that resulted in missed opportunities for patients lost to follow-up. Strategies to improve outcomes were tested, including introducing an online referral management system to securely track referrals to partner agencies and working with providers to establish warm hand-offs to build trust and increase outreach response. Both strategies showed promise for overcoming referral barriers. Despite COVID-19 challenges, the average number of individual patient referrals completed per month increased from 11 in 2019 to 14 in 2020, and the average number of total referrals provided per month increased from 21 to 26. Both before and after the start of the pandemic, mental health needs were the most requested referral service, followed by insurance counselling and food and housing assistance.

The clinic's COVID-19 outreach response was characterised by timely and accurate messaging to young people using methods most accepted by them. To break down barriers between academic entities and youth communities, staff disseminated COVID-19 information from state and federal public health agencies in a variety of youth-friendly media. Multiple forms of digital media were used including blog articles, listserv emails, social media (Facebook, Instagram, Twitter and LinkedIn), the clinic website and synchronous and asynchronous Q&A sessions across platforms. Social media metrics found that Instagram was

most effective in reaching youth with posts receiving a mean of 1086 monthly impressions and engagement rate of 10.75% from April to December 2020.

Ongoing youth engagement informed necessary shifts in communications strategies, referral resources and information sharing. Youth input was acquired during monthly virtual meetings with two youth boards—one composed of clinic youth stakeholders ages 13–24 years and another of 14–18 years old local high school students. This feedback guided the development of virtual seminars, Q&A sessions, blog posts and updates to online resources. An existing online resource directory was expanded and leveraged to share real-time updates, including information about youth mental health resources and opportunities for youth to stay connected virtually. Patient feedback guided collaboration with local youth-serving organisations and response to changing resource needs. This continuous feedback loop allowed the clinic to quickly adjust its outreach approach to engage youth in innovative ways.

CONCLUSIONS

COVID-19 disrupted clinical care and placed increased burdens on the lives of AYA patients. Interestingly, although we saw fewer requests for services at our clinic after March 2020, the proportion of youth testing positive for an STI or HIV was unchanged from prepandemic levels highlighting the continued need for our services. Documenting and critiquing how professionals adjusted during this crisis is important so that lessons learnt can be applied after the pandemic abates. While we report our own experiences with some limitations in generalisability due to our single-site, university-affiliated, southern, urban location, the initiatives undertaken and lessons learnt can have broader applications for other clinics providing similar services. Located in the Southern USA—which experiences the greatest burden of HIV cases in the USA—our clinic is a vital resource for AYA with little access. To reach the national EHE goal of reducing HIV infections by 90% by 2030, providers will need to engage with difficult-to-reach AYA who are less likely to access services.¹⁰ Continuous quality improvement of these efforts will be vital to scale up prevention services. Our PDSA-driven quality improvement effort during COVID-19 demonstrated the effectiveness of this approach and resulted in several permanent changes, like our enhanced use of

social media and online youth engagement. This PDSA initiative aided us during a challenging time for healthcare delivery and will be used again as we continue to respond to patient needs postpandemic.

Handling editor Jamie Scott Frankis

Acknowledgements The authors would like to thank the staff of the Ybor Youth Clinic, members of the Youth Community Advisory Board and Teen Connect Youth Advisory Board and our community collaborators. Their dedication to continuing to provide services for patients in need during the COVID-19 pandemic formed the basis for the information presented in this article.

Contributors All authors contributed to the conceptualisation and design of this quality improvement process. Material preparation, data collection and analysis were performed by ACL, DLL, MV and LS. The first draft of the manuscript was written by ACL and DLL. All authors commented on previous versions of the manuscript, contributed to the reviewer requested edits and read and approved the final manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not applicable.

Ethics approval This study does not involve human participants.

Provenance and peer review Not commissioned; externally peer reviewed.

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Key messages

- ▶ Accessing sexual health services is challenging for youth and young adults and has been made more difficult by the COVID-19 pandemic.
- ▶ STI detection rates among youth at our clinic were similar pre-COVID-19 and during the COVID-19 pandemic highlighting the need for continued services.
- ▶ The plan–do–study–act model for quality improvement allowed rapid adjustment of clinic services to meet youth needs in the face of the pandemic.