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Facilitators and Barriers to Sexual and Reproductive Care in the Midst of the COVID-19 Pandemic: An Evaluation of Clinics in Jamaica

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B.A. in Psychology
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Abstract

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The COVID-19 pandemic has disrupted health systems across the globe, including sexual and reproductive services. The extent of these impacts has yet to be understood, especially in Jamaica. Therefore, this thesis sought to explore provider perspective on sexual and reproductive care before and during COVID-19. More specifically, this research used a mixed-methods approach to answer the question: What are the barriers and facilitators to service delivery of sexual and reproductive healthcare in two Jamaican regions as a response to COVID-19? Interviews and surveys were administered to 66 participants at 7 sites to identify the challenges and adaptations to specific services like STI testing and treatment, family planning education, and contraceptive access. The data found themes of: an existing integrated model of care, prior existing challenges, exacerbated and unique challenges due to COVID-19, and adaptations and resilience in the face of the pandemic. Jamaican healthcare providers are aware of the community's needs, even before the introduction of COVID-19. Because of this and the strong existing model of integrated HIV and sexual and reproductive care, health staff was able to respond to added barriers with ingenuity and resilience. The findings from this thesis align with similar other COVID-19 related research, but allows for unique insight into provider perspective.

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Introduction

1. Introduction

Jamaica, an island nation, has a population of approximately 2.96 million people, and offers its citizens a robust health system (The World Bank, 2022). In 2015, the Human Development Report ranked the country 96th out of 189 countries on the human development index, indicating a good standard of living, and access to healthcare and education (UN Development Programme, 2019). As part of the strategy to fulfil the United Nations Sustainable Development Goals created for the 2030 Agenda for Sustainable Development, Jamaica has made advancements in care over the last two decades in the field of sexual and reproductive health services (United Nations General Assembly, 2015). However, challenges remain due to cultural, religious, and socioeconomic factors.

In Jamaica, rates of sexually transmitted infections are rising leaving a gap in the need for treatment of these infections (Ward et al., 2001). Additionally, there are an estimated 32,000 people living with HIV in the country, with the highest rate of new infections occurring in women between the ages of 9 and 19 (AHF Jamaica, 2021). Jamaica also reports higher rates of unintended pregnancies, with 45% of pregnancies being reported as unplanned. Similarly, there are higher numbers of adolescent pregnancies, as sexual initiation is earlier, at 14.7 years (Jarrett et al., 2018). This has resulted in 12% of the female populations aged 15 to 19 having reported two or three pregnancies (JMOH, 2001). Despite the concerns of sexually transmitted infections and unplanned pregnancies, the country has a contraceptive prevalence rate of 72% and an unmet need for family planning rate of 7.2% (JMOH, n.d.). While the rate of unmet need

for family planning is considered on the lower end of the spectrum (the range is 0 to 100), there appears to be a gap between sexual health intention and action (United Nations, 2017).

Jamaica has made strides to integrate sexual and reproductive health services into HIV/AIDS prevention and treatment into primary care between 2014 and 2019 (JMOH, n.d.) to increase access for all citizens to sexual and reproductive health services by 2030 (JMOH, n.d.). The nation's healthcare options consist of both public health facilities with little to no fees, as well as a growing private sector with options for those who can afford it. Today, these public health facilities include many sexual and reproductive health (SRH) services such as family planning and contraceptive options, STI testing and treatment, and HIV/AIDS testing and care (JMOH, n.d.). Additionally, international agencies such as USAID and the United Nations Population Fund have been crucial in increasing contraceptive services in the country and continue to supply commodities such as male condoms (USAID, 2016).

Within the Jamaican health system and its service delivery, there are also challenges. Although services are available to its citizens, health centers often face a shortage of personnel, insufficient infrastructure, and outdated health data systems (PAHO, n.d.). There are a reported 4.5 doctors, 9.4 nurses and midwives, and 0.22 pharmacists per 10,000 people in the country (WHO, 2021). According to the WHO, these numbers are considered to be low and remain a major challenge to care. Public health centers and hospitals are often overwhelmed, leading to long wait times or even

insufficient medication and supplies (PAHO, n.d.). These issues can hinder or delay appropriate care for the population, especially in times of crisis.

Research on sexual and reproductive care in Jamaica is limited. The last thirty years have particularly focused on the HIV epidemic and access to these services. Research has also been published on cultural influences on both HIV care and family planning (Crawford et al., 2009; Bourne et al., 2010; Hylton-Kong, 2021). However, there is still much to be considered in order to gain a more holistic understanding of the SRH services available. The introduction of the COVID-19 pandemic has also created new challenges to the health system. More importantly, there is a great need to evaluate not just population data, but to understand regional and facility-level changes. To contribute to the research of SRH within the COVID-19 global context, Jamaica must be included.

COVID-19 has posed a threat to health systems. Jamaica quickly implemented ongoing social measures to curb the spread of illness. The lockdowns and isolation have been particularly hard for it's citizens due to Jamaica's tourism-driven economy, leading to increasing unemployment. The demand of COVID care, the increasing needs of the population, and the already strained health system creates a perfect storm.

From the early days of the pandemic, international research showed an expected severe impact on sexual and reproductive health services. Nationally implemented protocols to restrict movement, overcapacity at health facilities, commodity shortages, and even community fear of COVID, all contributed to a disruption in basic health

services (Banke-Thomas & Yaya, 2021). The impact of the pandemic would also regress years worth of global progress made to meet the Sustainable Development Goal's, especially those in focus for Jamaica's Vision 2030 (The Planning Institute of Jamaica, 2022). As the pandemic continues, more research is needed to see how these impacts have matched up to the estimates.

Broadly, this thesis will be evaluated through the Social Ecological Model (Figure 1). To better understand the challenges and facilitators to sexual and reproductive care, this paper will discuss the society, community, relationship, and individual level factors typically included (Bronfenbrenner, 1979). The individual level factors relate to sex, age, or health status. The relationship factors speak to peer, family, and health provider interactions. The third level, community, encompasses factors such as schools, neighborhoods, and clinic access. Lastly, societal components include the broader social and cultural norms that influence decisions (Bronfenbrenner, 1979). However, to conceptualize the impact the COVID-19 pandemic has had, a more focused lens is required. The *Conceptual Framework for Family Planning and Reproductive Health* was modified from an EVALUATION Project created by Measure Evaluation PRH (Judice & Snyder, 2012). Like the Social Ecological Model, there is an analysis of larger systems at play, including social, cultural, economic, political, and legal. However, these are divided and intersect at service utilization by the population in focus. From there, health outcomes point to long-term outcome achievements. For the sake of this research, the focus will primarily be on the individual factors influenced by social norms, economic considerations, and social policies as well as the evolving service delivery structure.

These focused areas are highlighted in the Conceptual Framework in Reproductive Health Programs.

Figure 1. The Social-Ecological Model, Bronfenbrenner, 1979

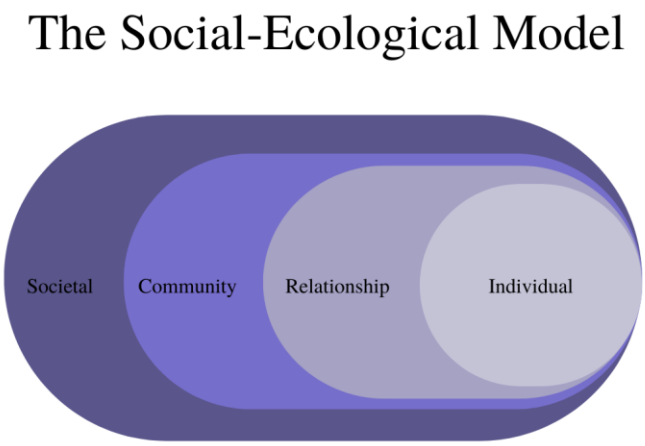
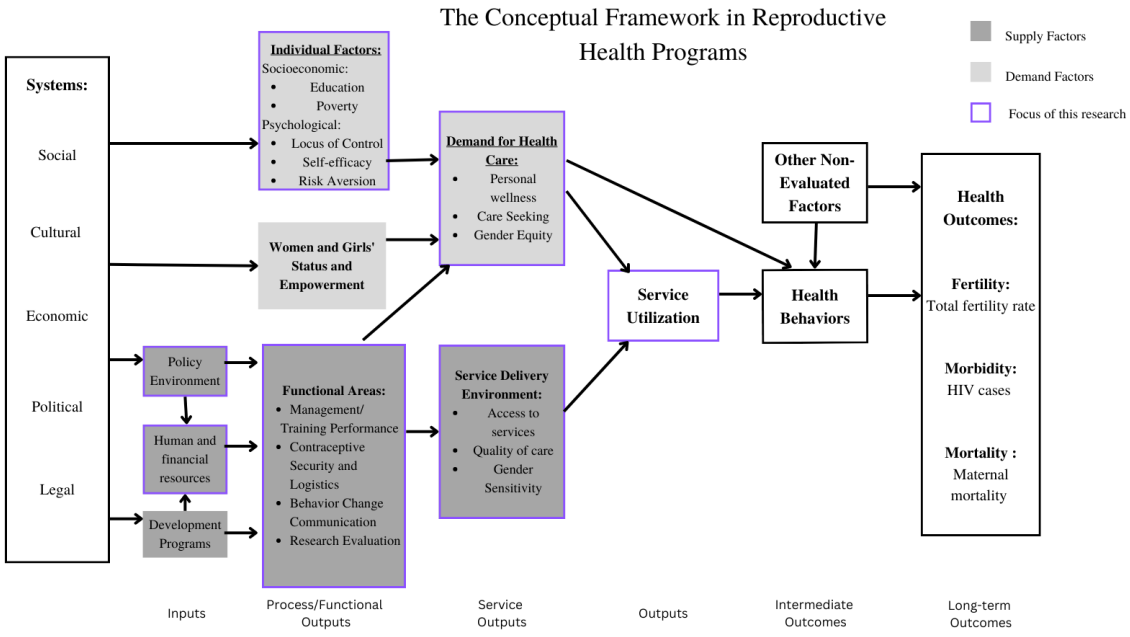


Figure 2. The Conceptual Framework in Reproductive Health Programs, Adapted from & Snyder, 2012



In order to evaluate the data collected, this research will draw on both the Social Ecological Model and The Conceptual Framework in Reproductive Health Programs. This thesis therefore aims to contribute to the SRH field by focusing on this scope of care at health centers during times of crisis and seeks to answer the research question: *What are the barriers and facilitators to service delivery of sexual and reproductive healthcare in two Jamaican regions as a response to COVID-19*?

2. Literature Review

2.1 Sexual and Reproductive Health as an Essential Component of Care

Sexual and reproductive health (SRH) is a cornerstone of a holistic and comprehensive healthcare approach. For years, attention has been paid to what exactly comprises SRH. The Guttmacher-Lancet Commission on SRHR created a list of the essential SRHR interventions which countries are encouraged to implement or strengthen (Starrs et al., 2018; Kaiser et al., 2021). These include comprehensive sex education, safe and effective abortion access, detection and treatment of STI's, and more. Additionally, these services are considered crucial during humanitarian crises. The Inter-Agency Working Group for Reproductive Health in Crisis (IAWG) created the Minimal Initial Service Package Access to further emphasize the basic services required to maintain care during humanitarian emergencies. Among the six objectives of this manual are preventing: sexual violence, transmission of HIV and STIs, excess maternal and newborn morbidity and mortality, and unintended pregnancies (IWAG, 2018). These further establish the importance of having the most basic SRH services needed in times of crises. SRH services are therefore considered an essential component of a strong health system able to meet the needs of its population. However, because these recommendations are comprehensive, this thesis will evaluate a small aspect. This literature review and subsequent analysis will only discuss STI services and family planning within the SRH spectrum of health.

2.2 The Health System of Jamaica

Jamaica is recognized as an upper-middle income nation with a thriving tourism industry. In the last decade it's population demographics have shifted, however there are

an estimated 1, 029,514 female citizens ages 15-64, with 18% of this group being between the ages of 20-29, or peak reproductive age (United Nations Population Division, 2022). Despite 50.4% of the population identifying as female there are components of sexual and reproductive healthcare that remain to be tackled. In order to meet the population's needs, including SRH access, the Jamaican National Health Fund was established in 2003 and user fees at public health facilities were abolished in 2008 (Chao, 2013). Today it remains a mix of public and private sector options and is divided into four regional health authorities: North East, South East, South, and West (Chao, 2013; JMOH). In 2009 the Vision 2030 Jamaica National Development Plan was published (Planning Institute of Jamaica, 2009). Under goal one- Jamaicans are empowered to achieve their fullest potential- outcome one aims for a healthy and stable population. To accomplish this, Jamaica must "provide and maintain an adequate health infrastructure to ensure efficient and cost effective service delivery" (Planning Institute of Jamaica, 2009).

Despite the goals set forth to improve population health, documented challenges of Jamaican healthcare system remain. For years the medical workforce has faced strain, with a last reported 4.5 doctors, 9.5 nurses and midwives, and 0.22 pharmacists per 10,000 people (UNFPA, WHO, IAWG on SRH and HIV Linkages, 2021). In comparison, the Dominican Republic, another Caribbean upper-middle-income nation, has a reported 14.52 doctors, 14.59 nurses and midwives, and 1.18 pharmacists per 10,000 people (WHO's Global Health Workforce Statistics, 2023). Annually, 300-500 nurses leave Jamaica to settle in other countries (Cuesta et al., 2020 IDP report). Among

the professionals that practice SRH care, there are also concerns about comprehensive training. Family planning training is either accomplished through basic training (i.e. nursing or medical school) or through specialized family planning training provided by the Ministry of Health. Among those with training as part of their curriculum, two-thirds had studied family planning, with midwives and nurses most likely to have done so (McFarlane et al., 1996). Matthews and colleagues also found among medical students at a university in Jamaica, 78.8% reported abortion care was not included in the curriculum (2018).

The health system has also experienced disruptions to services in other capacities. The clinic centers face continued inadequate infrastructure and outdated information systems (PAHO). Measured by the indicator for supply chain, Jamaica was ranked 107 out of 195 countries, indicating gaps in procurement of supplies for both routine and emergency needs (GHS Index, 2022). Although the prevalence of contraceptive stock-outs has decreased annually, in a six-month reporting period in 2019 it was still a frequent occurrence (NFPB, 2019). More specifically, a 2021 report found at least one male condom stock-out in the year prior (UNFPA, WHO, IAWG on SRH and HIV Linkages, 2021).

2.3 Sexual and Reproductive Care and HIV/AIDS Services in Jamaica

In recent years the Jamaican health system has made strides to improve access to sexual and reproductive care. Developed as an extension to the Vision 2030 National Development Plan, the Jamaica National Integrated Strategic Plan for Sexual and

Reproductive Health and HIV (NISP) 2014-2019 focused on increasing access by utilizing an integrated model of sexual and reproductive health and HIV services (JMOH, 2015). In 2013 this model focused on integrating: services to prevent unintended pregnancies and HIV/STIs, confidential counseling on SRH for PLHIV, addressing SRH needs of vulnerable groups, preventing, diagnosing and treating non-HIV STIs, and referring for prenatal care and advanced obstetrical services (NFPB, 2015). Today the Jamaican National Family Planning Board oversees the integrated services and reports to the Ministry of Health (JMOH, n.d.).

The NFPB, with support from aid agencies and others have worked to improve both HIV prevention and treatment and support for those living with HIV. In 2017 the National Public Health Lab modernized and enhanced communication channels between testing sites and labs. As a result viral load testing increased by 11% and additionally reduced the number of rejected samples (UNAIDS, 2019). In an attempt to also bolster support and adherence for PLHIV, the HSTU included capacity building of staff, increased the number of private pharmacy providers, and the development of an enhanced package of care for key and vulnerable populations (UNAIDS, 2019).

2.4 Sexual and Reproductive Health Service Delivery in Jamaica

There are few statistics on utilization of SRH services in Jamaica. In the 2008 Reproductive Health Survey, only 43% of women of reproductive age (15-49) were found to have ever received a routine gynecological exam and 62% had received a pap smear screening for cervical cancer (NFPB, 2008). This same survey reported 90% of

young women and 84% of young men had received some form of ‘family life’ education, or sexual health guidance (NFPB, 2008). Pregnant persons have also successfully utilized prenatal and antenatal care services. 99% of pregnant persons in Jamaica have used services for prenatal care at least once and 98.6% of documented births were attended by a skilled professional (JMOH, n.d.). Use of modern contraceptives is on the rise. Since 1993, the percentage of unmet need for contraceptives among women has fallen from 13.7 to 7.2 in 2008 (JMOH, n.d.). More specifically, the use of modern contraception among married women has increased by over 36% since 1970 (USAID, 2016). However, Jamaica has a unique culture of early sexual initiation and a reported adolescent birth rate at 52.8 per 1,000 women aged 15 to 19 (UNFPA, WHO, IAWG on SRH and HIV Linkages, 2021; Jarrett et al., 2018). Additionally, non-HIV sexually transmitted infection rates are difficult to pinpoint. Between 2011 and 2013 the number of new patients visiting STI clinics had steadily declined, indicating less infection in the population (JMOH, n.d.). However, research indicates a continued inconsistency of condom use among Jamaicans of reproductive age (Bourne et al., 2010; NFPB, 2008).

In addition, Jamaica has an HIV prevalence rate of 1.8%, just over the regional rate of 1.6%- the second highest in the world (UNAIDS, 2020). The rate of infection is even higher among certain populations like in men who have sex with men (MSM) (29.8%) and transgender women (TSW) (51%) populations (UNAIDS, 2019). Strides have been made since the implementation of the WHO Treat All guidelines in 2017 to increase access to treatment and related services, however, there has been increased loss-to-follow-up with patients receiving antiviral treatment (UNAIDS, 2019). Among young

adults especially, this trend is concerning. The retention rate is the lowest among the 15-35 age group, ART coverage is the lowest in the 15-19 age group, and suppression is the lowest in the under 40 group (MHW, 2021).

2.4a Barriers to Sexual and Reproductive Healthcare Access in Jamaica

Generally, there are a handful of documented barriers to SRH care, both at the clinic and patient level. Homer et al. has found, among healthcare workers that administer sexual, reproductive, maternal, adolescent and newborn health, identified challenges were as such: insufficient size of workforce, user fees and costs, lack of transportation, and public mistrust of health force (2018). Similarly, within Jamaica, there are numerous factors that can hinder the health of Jamaican citizens, especially with regards to sexual and reproductive care access. Traditional gender norms and stereotypes have influenced the culture of early sexual debut, multiple partners, beliefs about contraceptive use, and high levels of transactional sex (JMOH, 2015). Jamaica is also a religious nation, with 84.6% reported identifying with Christianity (ARDA, 2022). This has influenced how youth approach sexual health and perhaps influence secrecy behind sexuality. One study found youth remain fearful of how the Church handles SRH matters, therefore leading to internal conflict (Crawford et al., 2011). In addition, Jamaicans have strong community and familial ties, which play a role in health decisions. Women often forego STI testing and treatment for fear of partner and family rejection (JMOH, 2019). Similarly, these social networks have also influenced contraceptive method prevalence, where Jamaican women may be more suspicious of the copper IUD and implant (Hylton-Kong et al., 2021).

It is known that social and economic factors such as poverty, education, and social standing increase health risks such as STI prevalence (Tapp & Hudson, 2020). The Jamaican economy is driven by tourism and has experienced negative GDP growth as well as increased foreign debt in the last 20 years (Chao, 2013). Even more recently, the poverty rate in the country has increased from 19% in 2019 to 23% in 2020, further driving social determinants of health (UNAIDS, 2022). In times of economic downturn, accessing healthcare may be the least of individuals' worries. There is also a social component to SRH care, with stigma being a strong predictor to access. This is particularly true for HIV infections, where social exclusion or even violence may accompany a diagnosis (JMOH, 2019).

2.5 Challenges to SRH Service Delivery and Health Systems during COVID-19

When COVID-19 was officially declared as a pandemic in March of 2020, global health systems braced for impact. Very quickly, the dangers of the disease became apparent as well as the expansive services needed to treat and control the spread. Health facilities became overwhelmed, burdened by the influx of patients who required specialized critical care services (Chang et al., 2021). Because of this, disruptions to other services occurred. Cancellations of elective care, changes in treatment policies, insufficient staff due to COVID deployment, and insufficient personal protective equipment were all reported reasons for the disruptions (WHO, 2019). Similarly, the demand for non-essential care was reduced, with people experiencing financial strain or even being fearful of COVID at health sites (WHO, 2019).

SRH services were particularly impacted by the COVID-19 pandemic. Many of these appointments were considered non-essential and were therefore delayed or canceled altogether (Mukherjee et al., 2021; Tang et al., 2020). Public health experts have warned of the devastating impacts this could have, particularly in low- and middle-income countries. At the start of the pandemic a WHO Pulse Survey found 24% of participating countries saw an average of 5-25% disruption in reproductive, maternal, newborn, child, and adolescent health (WHO, 2021). Further, a review has found a significant reduction in access specifically to "abortion, contraceptives and OB/GYN service provision" (Mukherjee, 2021). While the population impacts may not yet be fully documented, Riley et al. estimated even a 10% decline in contraceptive use among 132 low- and middle-income countries would result in 49 million additional women with an unmet need for modern contraception (2020). There is also significant concern for temporarily undetected gynecological cancers and sexually transmitted infections, as well as increased gender based violence and domestic violence (Banke-Thomas & Yaya, 2021; Tang et al., 2020).

Jamaica reported it's first case of COVID on March 10th, 2020 and quickly took action to mitigate the spread. As a country that relies on tourism, the government of Jamaica made the decision to close borders to incoming ships and airplanes on March 21st (Cuesta et al., 2020). The Ministry of Health and Wellness trained case investigators in COVID-19 case-finding and tracking and implemented quarantine and isolation guidance (Cuesta et al., 2020). The public and private sectors came together to increase laboratory capacity as well as technology and resource procurement (PAHO, 2020). Global AID

agencies also facilitated assistance by donating personal protective equipment and antigen tests (PAHO, 2020). However, despite the domestic and international collaborations and increased efforts, Jamaica has not been immune to the waves of COVID variants. At the time of writing, there have been 152,306 confirmed cases and 3,350 deaths, with significant peaks in March and August 2021 and January 2022 (WHO, n.d.).

2.6 Sexual and Reproductive Research in Jamaica

Research on SRH in Jamaica is scant, with a small number of studies focusing on three areas, people living with HIV, family planning norms, and access to adolescent services (Eggleston et al, 1999; Hylton-Kong et al., 2021; Jarrett et al., 2018; Barrow & Brandeau, 2019). In an older study of 945 adolescents, Eggleston and colleagues surveyed attitudes and knowledge of sexuality and gender, including contraception (1999). The team found complicated beliefs about sex, but that teenagers saw it as a way to show love or prove maturity (Eggleston et al., 199). Another study found these beliefs to be connected to early age of sexual debut that can increase various health risks, but can be mitigated with early education intervention (Jarrett et al., 2018). Hylton-Kong and colleagues documented significant misunderstandings about long-acting reversible contraceptives among 225 Jamaican women aged 18-25, but similarly, exposure to culturally sensitive education can improve misconceptions (2021). Lastly, Barrow and Brandeau analyzed a continuum of care model for patients living with HIV and expanded existing testing and treatment plans (2019). Data from an HIV clinic found certain challenges with viral load testing, but could be improved with a focus on retention as well

as streamlining pharmacy level data (Barrow & Brandeau, 2019). These three studies have highlighted specific gaps in SRH services, whether it is education or clinic level needs.

Research Contribution

There is room to explore service delivery in the wider SRH context, like SRH counseling, STI testing and treatment, and the prevention and treatment of reproductive cancers (Starrs et al., 2018). Particularly within the context of COVID, there is a great need to discover the barriers and adaptations made to access these essential services in Jamaica. Globally, research has analyzed the impact of the COVID-19 pandemic on SRH care delivery, however, to date, no work has been done in Jamaica.

Chapter 3: Methods

This study was developed for the Emory Global Health Institute Global Field Scholars as a student-led project**.** Titled- "*Assessing Changes in Sexual and Reproductive Health and HIV/AIDS During the COVID-19 Pandemic in Jamaica: A Facilities-Based Study"*- data collected was used to inform this thesis. Research assistants represented the Emory Rollins School of Public Health, Emory Laney Graduate School, Emory College of Arts and Sciences, and University of Technology, Jamaica's School of Public Health and Health Technology. Dr. Subasri Narasimhan and Dr. Kevin Harvey served as the Principle Investigators. Dr. Harvey was the collaborative head for both the AIDS Healthcare Foundation Jamaica (AHF) and University of Technology, Jamaica (UTech) partnerships on this project. AHF Jamaica works with the Jamaican Ministry of Health as the country's national HIV partner, providing testing and treatment to over 17,000 clients across the regions (AHF Jamaica, 2020). UTech's School of Public Health and Health Technology is a unit of the Joint Colleges of Medicine, Oral Health and Veterinary Sciences (University of Technology, Jamaica).

Research Question

This thesis aims to answer the question, "What are the barriers and facilitators to service delivery of sexual and reproductive healthcare in two Jamaican regions as a response to COVID-19?"

3.1 Study Design and Recruitment

This cross-sectional study utilized concurrent mixed-methods, consisting of simultaneous quantitative surveys and semi-structure in-depth interviews to evaluate sexual and reproductive care service delivery at the health center level. Participants were recruited through purposive and convenience sampling. With the assistance of our partners, AHF, the team identified clinics and professional titles that would be most useful for both the survey and in-depth interview. AHF would contact these professionals in advance and inform them of our objectives. Those who wished to participate were added to a list with their contact information. They were then contacted by research team members and AHF partners and if possible, scheduled in advance. Additionally, on-site recruitment would occur if the research time identified individuals who would be knowledgeable on COVID impact on SRH care. Physicians, nurses, nurse midwives, contact investigators, and pharmacists were included. Inclusion criteria were: aged 18 years and older, specific roles at clinic, currently employed at the clinic, knowledge of pre-pandemic operations, and experience with sexual and reproductive health services at site. Participants were not compensated for their participation.

3.2 Setting

Participants were recruited from clinics that work in partnership with AHF. The health sites were primarily public health centers in the Northeastern and Southern regions (Figure 1). Health centers are categorized based on services available and these can range from Type 1 to 5. Regional hospitals also have their own ranking system from A to C, with A being the most comprehensive (Fletcher, 2003). The health centers used for this research are primarily type 3 and 4 and offer general care and preventative services as

well as basic sexual and reproductive care. The team was also able to recruit a small number of participants from the private AHF clinic in Kingston, located in the Southeastern Region.

Figure 3. Map of Jamaican Health Regions and Location of Clinics Visited, Adapted from McCartney, 2015)

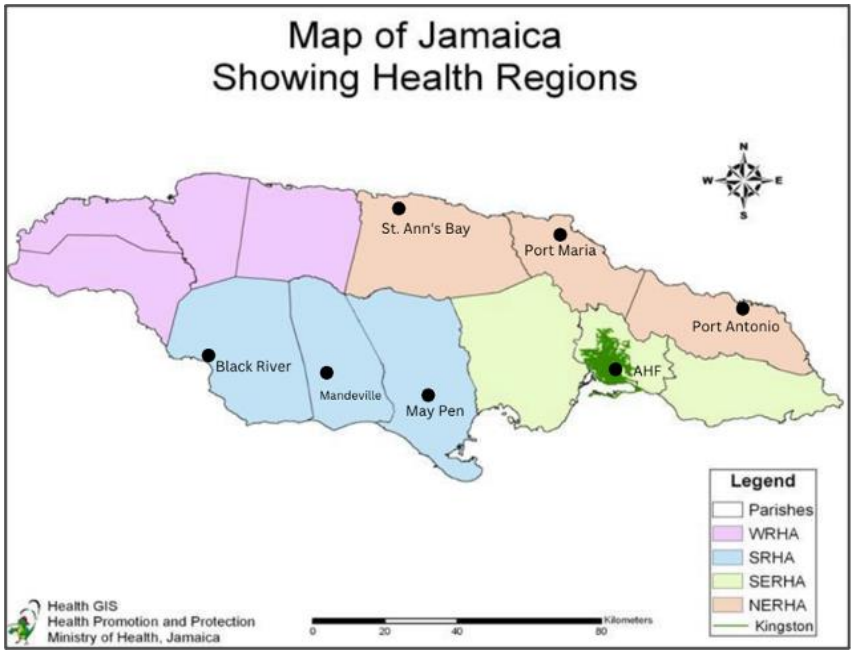


Table 1. Participants from Each Health Sites (N=66)

Name of Health Facility	**Number of Participants**
Port Antonio (Type 4)	10
Port Maria (Type 4)	5
Ocho Rios (Type 3)	1
St. Ann's Bay (Type B)	7
Mandeville (Type 4)	10

Black River (Type 4)	9
May Pen (Type 4)	10
Bamboo (Type 2)	1
Port Antonio Hospital (Type C)	6
Brown's Town (Type 3)	1
Fellowship	1
Annoto Bay Health Centre (Type 3)	1
Steer Town Health Centre (Type 1)	1
AHF Clinic (Private)	3

3.3 Procedures

All data collection was done between May 13th and June 26th, 2022 when the team was in Jamaica. Research assistants were trained on appropriate data collection protocol for both the in-depth interviews and surveys. Participants were identified and eligible based on their position at the health site. If interested, the participant would then be consented and either allowed to read the consent alone or had it read to them. For in-depth interviews, participants were also asked consent for audio recording. If refused, the note-taker would take detailed notes while the interviewer asked questions. Because of the nature of the research, signatures were either collected by proxy or by the participant themselves on paper copies or tablets. Data was then collected on tablets via either REDCap (Research Electronic Data Capture) Mobile for surveys or using the audio recording application for in-depth interviews (Harris et al., 2019). Ultimately, 66 healthcare professionals were included in study. 51 surveys were collected (14 virtually)

and 29 interviews were completed (5 virtually). In-depth interviews were transcribed at the end of the data collection period using Happy Scribe™ automated transcription software.

3.4 Instruments

3.4a Survey

The survey was designed and modeled after previous COVID impact surveys (Adelekan et al., 2021; Mukherjee et al., 2021; Michielsen, et al., 2021). It consisted of six sections including individual demographic information, contraceptive method availability, sexual and reproductive health services, HIV/AIDS services, domestic violence services, and health center information. This thesis will focus on questions pertaining to SRH/HIV/AIDS services available and impact of COVID on said services at the peak of the pandemic and at time of survey (Appendix A). 51 participants completed the survey, however one survey was incomplete and was not included in analysis. Questions in each section asked about services before, during the peak of the pandemic, and currently. All participants could answer the demographic and health center information, however, if participants could not answer questions on other sections, there was an option to skip.

3.4b In-Depth Interview Guide

The in-depth interview was designed by the research assistants and reviewed by Principle Investigator, Dr. Narasimhan. The guide was semi-structured and included proves to be expanded on by the interviewee (Hennink et al., 2020). Twenty-four

questions were sectioned into individual demographic information, clinic background information, opening questions, service delivery of sexual and reproductive care before and during COVID-19, and closing questions. This guide was designed to compare clinics' service delivery prior to and after the COVID-19 pandemic as it related to topics of: HIV/AIDS services, STI services, domestic violence/GBV services, contraceptives and family planning services, health personnel experience, organizational structure, commodities, and a broad view of the Jamaican health system. For the purpose of this thesis, the questions relevant to analysis are highlighted and focus on service delivery after COVID onset, patient SRH needs, and health systems structure (Appendix B). Team-members developed the interview guide through rounds of editing based on both COVID-19 and Jamaican healthcare system research. Interview time ranged from 18 minutes and 53 seconds to 1 hour and 4 minutes with the average time being 37 minutes and 48 seconds.

3.5 Data Analysis

Data cleaning began in June 2022 and consisted of transcription review for interviews and addressing any missing or inconsistent data for surveys. Analysis of both the survey and interview data then began in August 2022. The preliminary descriptive statistics, as well as the bivariate and inferential statistics, of the quantitative portion were conducted using SAS Analytics Software (Treiman, 2009). After transcription and de-identification, qualitative data was evaluated using MAXQDA. Team members worked together to create a deductive codebook of parent codes and subcodes related to: COVID, HIV/AIDS Care, Gender Based Violence, Family Planning, STI Care, Service Delivery,

Privacy and Confidentiality, Patient Challenges, Challenges to Providing Care, Clinic Services, and anything outstanding to note. For coding fidelity checking, research assistants were paired and had to review together 3 transcripts. Subsequent transcripts were coded individually. Transcripts were then merged and thematic analysis was used to create thick descriptions further evaluation (Hennink et al., 2020).

3.6 Ethical Considerations

Both the Emory Institutional Review Board (IRB) and the University of Technology Jamaica Ethics Committee reviewed this study protocol. This study was evaluated and received the Not Human Subjects Research Determination (NHSR) under "quality improvement" designation by Emory's IRB in February 2022. The project was also submitted to UTech's Ethics Board and was revised and cleared in April 2022. Lastly, the project was also submitted to the Ministry of Health Ethics Committee and approved February 2023 for health clinic admittance and permission to contact providers (Ministry of Health and Wellness, 2022).

Each survey and interview participant was instructed on informed consent and either signed themselves or signed by proxy. They were also given the opportunity to ask questions about the research and received information on how to contact researchers for further information. All participants had the option to withdraw from the study at any point. Except for the consent forms, no names were recorded, identifying information was removed and all participants received unique record ID's. The in-depth interview transcriptions also removed any identifiers like provider names and clinic titles.

4. Results

4.1 Participant Demographics

The survey sample (N=50) that had knowledge about sexual and reproductive health services was primarily women, Bachelor's degree educated, midwives above the age of 30 with over 6 years of experience in the healthcare field. The majority of participants identified as female (94.0%, n=47), were 31 to 40 (36.0%, n=18), or 41 and 50 (24.0%, n=12) years old. Most of the participants also had a Bachelor's degree (82.0%, n=41) and a small percentage held more advanced degrees (10%, n=5). In addition, almost half were midwives (48.0%, n=24) with the second largest surveyed group being contact investigators (20.0%, n=10). Over one-third reported working at the health clinic between 2 and 5 years (36.0%, n=18) and over one-third between 6 to 10 years (34.0%,n=17). Additionally, 19 respondents worked in their field between 6 to 10 years (38.0%) and 12 between 11 to 20 years (24.0%).

Table 2. Demographic Characteristics of Survey Sample (N=50)

Characteristics	Frequency (n)	Proportion (%)
Age		
18-30	6	12.0
31-40	18	36.0
41-50	12	24.0
51-60	11	22.0
61+	3	6.0
Gender		
Women	47	94.0
Men	3	6.0

Title/Position at Clinic		
Physician	3	6.0
Pharmacist	2	4.0
HIV Clinic or Nurse Manager	1	2.0
Public Health Nurse	7	14.0
Midwife	24	48.0
Contact Investigator	10	20.0
Medical Investigator	1	2.0
Nurse (other)	2	4.0
Highest Level of Education		
Less than a Bachelors	4	8.0
Bachelor's Degree	41	82.0
Master's Degree	2	4.0
Professional Degree	3	6.0
Total Time Worked at Health Center	3	6.0
1 Year or Less	18	36.0
2 to 5 Years	17	34.0
6 to 10 Years	6	12.0
11 to 20 Years	3	6.0
21 to 30 Years	3	6.0
31 Years or More		
Total Time Worked in Health Field	3	6.0
1 Year or Less	9	18.0
2 to 5 Years	19	38.0
6 to 10 Years	12	24.0
11 to 20 Years	5	10.0
21 to 30 Years	2	4.0
31 Years or More		

The sample of interviewees (N=29) reflected similar demographics, as they were primarily women, Bachelor's degree holding, with at least two years of experience of working in the field. Twenty-six of the interview participants identified as female (90%, n=26). The majority of the interviewees were also between the ages of 31 and 40 (31%, n=9) and then 51 and 60 (28%, n=8). Most of the participants had at least a Bachelor's degree (97%, n=28) and the majority had between 11 and 20 years of work experience in their field (35%, n=10).

Table 3. Demographic Characteristics of Interview Sample (N=29)

Characteristics	Frequency (n)	Proportion (%)
Age		
18-30	5	17.0
31-40	9	31.0
41-50	4	14.0
51-60	8	28.0
61+	2	7.0
Missing	1	4.0
Gender		
Women	26	90.0
Men	3	10.0
Title/Position at Clinic		
Physician	8	28.0
Pharmacist	1	3.0
Public Health Nurse	3	10.0
Midwife	3	10.0
Contact Investigator	5	17.0
Social Worker	3	10.0
Adherence Counselor	1	3.0
Psychologist	1	3.0
Nurse (other)	4	14.0
Highest Level of Education		
Less than a Bachelors	1	4.0
Bachelor's Degree	20	69.0
Master's Degree	3	10.0
Professional Degree	5	17.0
Total Time Worked at Health Center		
1 Year or Less	4	14.0
2 to 5 Years	13	45.0
6 to 10 Years	3	10.0
11 to 20 Years	5	17.0
21 to 30 Years	4	14.0
31 Years+	0	0.0
Total Time Worked in Health Field		
1 Year or Less	3	10.0
2 to 5 Years	6	21.0
6 to 10 Years	3	10.0
11 to 20 Years	10	35.0
21 to 30 Years	3	10.0
31 Years+	4	14.0

Participants in this study had the years of expertise and knowledge of clinic systems to speak to facilitators and barriers to sexual and reproductive care. From the 66 total participants of the project, results explaining conditions of SRH services in the wake of the COVID-19 pandemic were found. Themes related to pre-pandemic services, COVID-19 unique challenges and their impacts, and clinic resilience and adaptation are explained below.

4.2 Specialized Services: How Clinics Have Served Their Community

All providers, irrespective of health center position described how many services are offered to best serve their community. As a nation with a high HIV rate and unique cultural influence on sexual practices, sexual and reproductive health care has continually been adapted to fit the needs of the population. Participants continually described how the already existing HIV care model has proven effective and accessible to the Jamaican population. Therefore, these participants emphasized how the existing system is able to support additional ancillary services.

4.2a The HIV Care Model and The Integration of SRH Services

For patients living with HIV or at risk of contracting HIV, health centers have always offered a plethora of access points to care. Participants with many years of experience described how years of trial and error and funding from both the Ministry of Health and outside agencies evolved how services are provided. Many spoke highly of the level of care and how these clinics have successfully implemented an efficient HIV testing-to-treatment model. All departments are involved and create a robust team, which includes special consideration for psychosocial support. Participants described how social workers and psychologists make up part of the patient's treatment team to also assess

mental health. When asked about the kind of HIV care services available at the health center, one physician located out of the Southern region, described the many roles involved in their profession,

"And a big part of our care for patients here, we have a good team. We have our psychologist, social worker, adherence counselor, we have a nurse assigned here on these days, our staff nurse, we have contact investigators."

Additionally, patients with unique needs like HIV treatment had assigned social workers that facilitated access to other services. These often included other sexual and reproductive care, like family planning, but also included specialized care. To ensure a patient was taken care of in a holistic manner, the care team could also bring in outside specialists. A social worker from the Southern region described the additional staff needed to care for patient's holistic needs.

"Oh, we have the nutritionist. We work with her as well, to make sure that because some of them you know, they have other underlying conditions. They know that if you have other underlying, it may affect your immune system so you have to ensure that the holistic part of them is taken care of."

In certain regions and clinics, there were dedicated outreach specialists for SRH care. The primary role is community education on contraception, sexually transmitted infections, HIV prevention, and more. A contact investigator described the mode of service delivery as less formal which included "talks" with demonstrations. However, the frequency of these services mentioned emphasize how SRH education is at the forefront of interventions.

"[We have]*...a board where they show different types of methods that you can use to control you know, pregnancies and so forth, so that's given… They also have the contact investigators that if per chance, there is any, say, for example, anyone is having any infections: STI's, STD's, they do the testing for these things. Right? So I know they offer that as well as I think they do offer handouts, if my memory serves me well. I've seen where there's been handouts on sexual and reproductive health."*

These educational sessions are also accompanied with invitations to support groups that are tailored to meet the needs of different groups, for example adolescents living with HIV. Several participants described the need to strengthen networks and increase community engagement. This was especially true for populations like adolescents, men, and new mothers, who were described as requiring specialized attention. Providers recognized the importance of these additional services and continually make them available. One such provider from the Southern region touched on the segmented services offered:

"We have five support groups. The men's support group, women's therapeutic group, we have the adolescent group, we have the adult support group, and we have the adherence support group."

4.3 Pre-COVID-19 Barriers to Care: Systemic Challenges to Providing Integrated Care

Many participants described challenges to service delivery existing before the COVID-19 pandemic began. While there were barriers on the clinic level, such as occasional stockouts, oftentimes the larger issue was the patient's ability to access the

care. Many described that care access was heavily influenced by social drivers, such as poverty and transportation limitations. For example, many participants in both the Southern and Northeastern regions said community violence and reliable transportation were concerns reducing patients' ability to access SRH care. A physician located in the Southern region, with 5 years of experience explained it as:

"A lot of our patients have a low socioeconomic status. So, being able to find bus fare to come to the clinic has always been an issue for most of them, a lot of them… Being able to come to the clinic to collect the medications, not having enough fare to do that, taxi fare or bus fare has also been a problem."

These health centers serve populations in need, often in rural parts or under-resourced townships. Participants were very aware that for patients, getting to a health center would require multiple taxis or having access to a vehicle. While most services conducted at the clinic are free, the difficulty was getting to the sites. All the interviewees acknowledged these hardships. Providers also spoke to patient disclosure when home situations were complicated and discussed how other priorities took precedence. If finances were tight, patients had to consider putting food on the table rather than refilling a prescription. Providers agreed the needs in the community were great, and sympathized with the decisions patients had to make.

Most participants also highlighted inadequate clinic infrastructure and resources as ongoing issues. Many participants pointed out that funding, limited space, and less than optimal amounts of equipment could prove challenging to provide care for patients. Typically, there were not enough office and patient rooms available, with staff having to share spaces. The health staff described situations that were not ideal for patient privacy

and confidentiality, which could hinder the quality of care. A psychologist practicing at a type 3 health site emphasized how this challenge can make patients feel.

"The space is a big issue for us… It's not enough to hold all the staff members, and sometimes we're oftentimes displaced. Right? So, clients have that… I think they feel vulnerable because they're not able to speak to a particular person or staff member without other persons in the area, [or] without public persons coming into the room. And they [patients] feel vulnerable because confidentiality cannot be in a place where you have so many persons working in the mix."

In the shared spaces, some participants discussed a need for updated equipment in order to better facilitate care. While the requests were often simple, regional or national budget constraints were a cited as a barrier. Because of more important needs to be met, smaller resource issues could be overlooked, like having enough waiting room seating. A physician with many years of practice commented on the resource gaps of that particular health center and how it can make a difference in patient care.

"But other infrastructural things? that are needed. Sometimes even furniture, (…) it takes a while to get malfunctioning furniture equipment replaced. So those are some of the things for the assistant to be able to be a bit more responsive in starting off. Some of the furniture and equipment needs to make the job easier. So it's not that they don't try, I don't want to give about it, [inaudible] but it still takes too long to get some."

Another evident theme that appeared was the discussion of staffing issues across the country. Participants described staffing shortages were ongoing, especially for specialist positions and general positions like nurses and social workers. A shortage of staff would impact when patients could be seen, leading to long wait times and scheduled delays in care. For the Southern region there was particularly discussion around sharing specialists among other clinics. Staff like psychologists would often rotate around the parish or even region, which limited the number of days patients could be seen per clinic. Additionally, services like IUD placement and removal required a trained nurse or midwife, which was described as not always available on site. When asked about what could improve the health system, a contact investigator out of the Northeastern region responded,

"I think one of the things we need is more specialist services available locally…And especially in the public settings. Because presently a lot of the specialist in- you have to refer them to a private services which could be a cost that is out of their range. For example, I've mentioned in the last time that we- we don't-we provide like- contraceptive like the pills, injections, but we haven't- we don't have the facility to provide like the long term- like the implants and so forth. So, if we have services like those."

4.4 COVID-19 Specific Challenges: The Introduction of Unique Barriers

The COVID-19 pandemic introduced a new set of challenges to overcome. Providers explained how local health centers not only dealt with controlling COVID infection, but found new barriers for delivering sexual and reproductive health services.

Many of these challenges were similar to the existing pre-pandemic barriers that were described earlier, only now exacerbated under the new social circumstances.

4.4a Social and Health Security

As the first wave of the pandemic began, the government agencies of Jamaica made swift decisions to mitigate the spread of illness. These included closing borders, introducing curfews, and even full lockdown days at the peak. All health staff, regardless of position, saw the negative effects of these measures and acknowledged an increase in the financial and social need of its patients. Communities faced widespread job loss, school closures, and added financial stress. More than ever, providers saw patients prioritizing necessities like food and shelter over medical care. Oftentimes, patients told providers the cost of traveling to a health center, alone, was too much. When asked about the impact of COVID-19 on their patients a seasoned physician located out of the southern region, spoke to the changing priorities. They stated,

"If you for instance lost your job, you have less financial resources. If you can use the money that you would normally use to come to clinic to go buy food for yourself and your family, you're going to do that. So unfortunately, although a number of our patients do think that clinic visits are very important, they had to prioritize other things…"

Providers also described a great fear that arose about COVID-19 that often kept patients voluntarily at home. Health staff saw how the COVID-19 infection became stigmatized. The community initially saw shame in contracting the virus and thus to avoid illness, individuals stayed away from health sites. Physicians and contact investigators at the centers spoke about lighter SRH patient loads at the start of the

pandemic, with the focus shifting to primarily respiratory cases. The same physician, who's practiced medicine for over 15 years saw the early impacts of the pandemic and said,

"The thing is though, for a period during the pandemic, the number of patients who would come in actually went down because they were actually scared to come out, because a number of them, and some persons still do think that COVID is at the clinic or COVID is at the hospital. So if I stay away from the clinic or the hospital, I should be fine. Or if I stay home I should be fine."

4.4b COVID Mandates

In interviews participants spoke to the changes that had to happen at health sites to comply with the government mandates. In order to keep all patients safe, regardless of the service they were seeking, sanitizing and social distancing was enforced at the centers. A handful also mentioned how some services were cut all together because of mandated curfews. Cancelled evening clinic was commonly discussed as one of the first major impacts on patient health. These late clinic hours were especially important for HIV care. A provider from the Southern region, participant 27 spoke to many challenges, but that,

"…the biggest difference was maybe the time that we could spend with our patients and evening clinic because we actually had- so we have the clinics during the day and then on a Monday and a Thursday we have our evening clinic which would run from five to 9, 5:00 pm to 09:00 p.m. But when the pandemic came around and there were curfews implemented in the island so it would not have been feasible or in a sense, well, because

we are healthcare workers, we could have stayed, but there would have been an issue for our patients to get transportation to go home after we had finished clinic. So we weren't able to continue that clinic. And unfortunately, some persons, they were actually more comfortable with that clinic for a number of reasons. In the night they were less likely to come in contact with other persons who might know them and there might be inadvertent disclosure. And also the fact that a number of persons, they did not have to miss work to come to clinic here."

In guidance from the Ministry of Health and the World Health Organization, clinics also took it upon themselves to set new temporary standards of care. To protect patients from COVID, waiting areas were expanded and created outdoors, requiring more space and not ideal during inclement weather. Midwives and nurses described how some sexual and reproductive health services could be delayed altogether in order to avoid close contact. For SRH appointments that were required, adaptations had to be made to best keep social distance. A contact investigator from the Northeastern region spoke to the challenges with infection risk and the subsequent impact on patient care.

"In the sense that you know, for some- for most patients, we have to do examination. So it impact in the sense that we weren't doing as much examination as we used to. Because nobody wants to get too close to persons. So, I'm not going to say though, that they didn't get proper treatment. But we didn't get to the examine to go in depth to look for certain things. Yeah, so in a whole that was impacted."

Similar findings from the survey indicated health professionals thought the mandates impacted care. When asked how much of an impact social distancing, PPE use, curfews, restrictions on social gatherings, and travel restrictions had on a scale from no

impact to significant impact (0-4), respondents confirmed interview reports. Zero being no impact, 1 minimal impact, 2 notable impact, 3 moderate impact and 4 significant impact. Of those able to speak to this knowledge, implemented curfews was the most disruptive, with the median being a 4, significant impact. Restrictions on social gatherings and travel had a median report of 3, moderately impactful.

4.4c Resources and Staffing Responsibilities

Staff explained how any prior existing challenges with resources and staffing were exacerbated during peak points of the pandemic. Most notably mentioned, were the concerns for delays, shortages, and stockouts of certain sexual and reproductive health specific commodities. This was not documented at all health sites, but some participants described challenges particularly for antiretroviral treatment and contraceptive availability. A newer counselor from the Southern region described how prior to the pandemic patients living with HIV would receive a supply of ARV medication to last for three months, however,

"...Since I've been here, I think that has been limited to just one month supply. So, each time they come to the doctor and go to the pharmacy, they only get one month's supply and that has been a big disadvantage for the system and to keep our patients adhering to the medication because there has been gap in between where they come off medication and if out of parish they're not able to come in on time, so they go like probably a week without taking their medication because of that. So that has been a great impact that I have noticed since I started working here."

Medications were not only thing impacted by the global supply chain delays. The survey data pointed to contraceptive method availability decreasing after the pandemic began (Chart 1) and was confirmed by various professionals interviewed. Additionally, other supplies needed for SRH services were sometimes not available, negatively impacting patient care. A psychologist gave examples of some of the shortages they have seen on site,

"But that's the thing, the resources, we need more resources within the health care center. As I told you before, they were saying that they were short on speculums for pap smears and so forth. So, there is a need for things in the health care center sometimes… Cups for patients to pee in, to do a pregnancy test, wasn't there. They had to be using bottles. Do you understand me? Situations like a lack of pregnancy test within the facility, patients have to go and buy one from a pharmacy and come back with it. Those are things that occurred."

Because of some of the already existing staffing shortages, respondents felt the introduction of COVID shifted their responsibilities. The survey data showed 44% believed there was no change in the centers' workforce (table 4), but many described how the staff took on additional roles to keep meeting the patient's needs. Expectations were set to meet the demands of routine patient care as well as now COVID testing, treatment, and education. Once again, participant 3 from the Northeast region summarized how they had to pivot their work to accommodate for COVID demand:

"…So, because-a lot of focus was on COVID. They took some staff from some areas to help with COVID. So, there was- we had a gap there. Right. Because even persons who work with the HIV program, the preventative arm of the HIV program, they were trained

to do swabbing for COVID and stuff like that. So, (…) so it affects us, in the sense that stuff. We're doing other things. Yeah staff were doing other things- focusing on other things."

Figure 4. Changes in contraceptive availability (N=25)

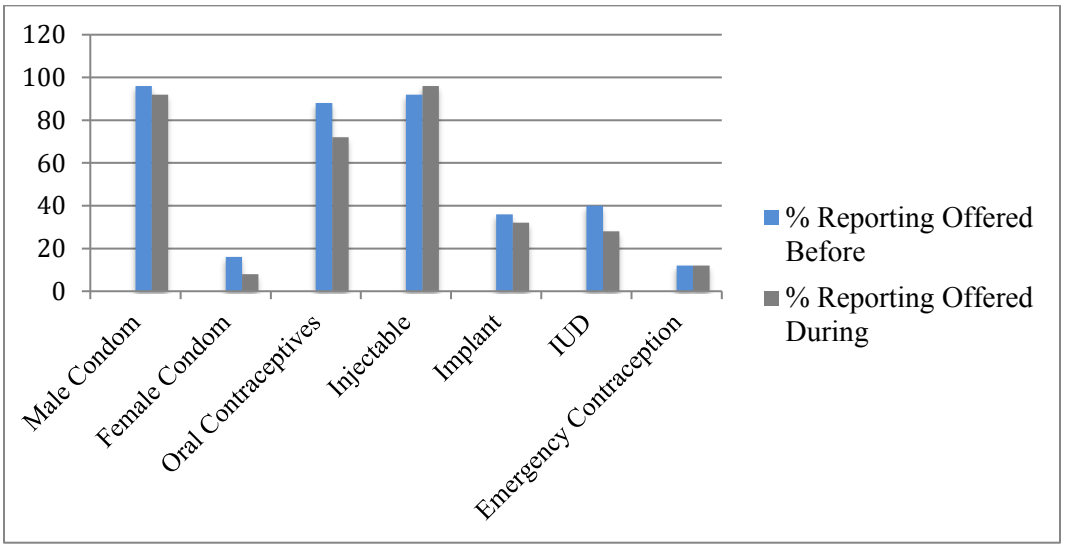


Table 4. Change in Health Center's Workforce Since Pandemic (N=50)

	Frequency (n)	Proportion (%)
Decrease in Workforce	4	8.0
Increase in Workforce	19	38.0
No Change in Workforce	22	44.0
Other	4	8.0
Don't Know	1	2.0

4.5 Adaptations to Strengthen the SRH Care Continuum in the Face of a Pandemic

Despite the existing and newfound challenges clinics faced, participants felt adaptations were quickly made. More than anything, staff reported resilience and fortitude to continue providing sexual and reproductive care while also mitigating COVID spread. In fact, the survey found over half of participants reported services like injection administration (57.4%, n=27), pap smears (57.4%, n=27), SRH counseling

(55.3%, n=26) STI counseling (61.7%, n=29) and STI testing and treatment (57.4%, n=27) were available at the peak of the pandemic (table 3). These services continued because clinics prioritized SRH care. While many of these adaptations were created for patients living with HIV or at-risk, clinics continued to integrate other SRH services into these changes.

Table 5. Reported Services Available at The Peak of the Pandemic (N=47)

What SRH services did this center offer at the peak of the pandemic, between April to June of 2020 (n=47)		
	Frequency	Percent
Injection Administration	27	57.4
IUD Insertion	11	23.4
IUD Removal	14	29.8
Implant Insertion	9	19.1
Implant Removal	9	19.1
Pap Smear	27	57.4
SRH Counseling	26	55.3
STI Counseling	29	61.7
STI Testing and Treatment	27	57.4
Lab Testing	20	42.6
Other	2	4.3
Don't Know	0	0.00

4.5a Telemedicine

Participants described how telemedicine was quickly introduced as a way to increase patient retention, if it was not already in place. Particularly for hard-to-reach populations or those with specialized consistent care, they discussed how it became an essential component to navigating the pandemic. The use of telemedicine was particularly important for patients who were immunocompromised and risked exposure when coming to the health sites. As a way to keep patients who had chronic, but well-managed illnesses

safe, participants also spoke to the utilization of this service to maintain care from a distance. Telemedicine was often conducted through phone calls and served as reminders for appointments, prescription pick-up, and for certain patients, check-ins. Interviewee 27, a physician with 15 years of experience at that site, described how telemedicine was applied at their health center,

"So, what we did, we- in collaboration with CTECH, we happen to call it telemedicine initiative where the clients would have been contacted by a phone and interviewed by a clinician, and then based on that response, then their script will be written, and it will be filled and delivered to them. That will be alternate months though, so we don't have them being served by just telemedicine all the time. So, they will come to client this month, and next month they will get the tele-care and then they will be scheduled to come in person the following month and then it's continues like that."

Health providers had a concern the lost to follow-up numbers would increase as a result of fear of COVID-19. However, providers and social workers worked diligently to make sure communication was established even from a distance. Telemedicine allowed clinics to prioritize in-person care for patients in need of immediate assistance, while still maintaining treatment and counseling for others.

4.5b Other Touch Points of Care

With telemedicine now being commonly used, clinics and providers found other ways to support patients away from the health center. Interviewees described how between lockdowns and curfews and not having transportation funds, patients required more. To also assist in alleviating congestion and long wait times at the center, many

sites expanded their home health models. This included patient visits at their homes, mobile services, and community outreach. Those who worked closely with immunocompromised patients, like psychosocial team members, spoke to the demand for outreach services. Patients living with HIV was a group repeatedly mentioned because of their risk for COVID infection. Home services became a crucial part of their care described by a psychologist practicing out of a type 3 clinic.

"Because the patients were afraid to come out, we had to go to them to offer counseling. We had to go to them to give them the medication because of the fear that because of the HIV they were more prone to getting sick. Right? So, we had to understand their concerns and we rose to the occasion to get the job done."

Initiatives were started to make sure patients were getting the care they deserved. Outreach was described as an essential component to educating the community not only about safe COVID practices, but to continue to bring awareness to sexual health risks. When speaking to teenage pregnancy and contraceptive access, participant #7, a registered midwife spoke of the efforts continuously made by the outreach team:

"…I know that our prevention team could not have gone out to do certain targeted interventions on this basis because they would have operated in the nightclubs and bars and stuff. They were not able to do that, so they would have done more interventions in open community spaces. So, maybe young people have access [to] more condoms…"

This fieldwork exposure has allowed providers and staff to better understand the needs of patients. Many described how home visits changed their perspective on care. Especially as patients struggled through the pandemic, providers became more aware of

the additional resources required for care. The same counselor from the Southern region, participant 37, spoke to the benefit of fieldwork and how beneficial it became.

"We get to see our patients…Because COVID forced us to go out more, we get to see what is happening more. And what is also an advantage for us when we're able to do more follow up with our patients, because coming to clinic for one day for like three months because for our patients we categorize them – so we have those that are suppressed and those who are unsuppressed. For those who are suppressed, we give them like a six month appointment to come back here. For those who are unsuppressed will get three month so between that period, we wouldn't have really communication with them and so they come back. So exploring more as it relates to being out of the office more and go out there more, interacting with them. It has been an advantage in the sense we were able to monitor what they're some more."

4.5c Above and Beyond the Call of Duty

Many participants spoke to the additional responsibilities staff had to take on. However, these responsibilities were outside of their usual scope of work. Providers continually found ways to reach patients, even if it meant having to work more. They spoke of their health staff as determined and creative, leading to further initiatives that support patients. One physician, participant 43, who started at the clinic just before the pandemic, described how this required teamwork and innovation. They raved about the health staff saying,

"We have a proactive team here who wants to make sure that everybody is good, that they will go above and beyond to make it work. So, the team here will try to drop off the medications. They came up with a new strategy during the whole pandemic, medication switch and things like that, but I'll say they've been on their A-game. The team here has been on their A-game. We couldn't stop them."

Despite this additional work, providers, and especially social workers, found ways to assist patients facing hardship. Those interviewed recognized the importance of a holistic approach to care. When patients required more support, whether it be financial, nutritional, or more, health center staff stepped up. Health centers in the Southern region not only provided medical services, but supplementary services. One contact investigator practicing directly saw the impact:

"We issue food packages, child stipend, when available, income generating. For example, yesterday there's a farm in (Parish) who does layer chickens, so they sell eggs. So, when they're trying to get rid of the older chickens, they call us and we can go and take any amount that we are capable of taking and we distribute them to our patients. We [do] this, do this in an effort to assist with food security. And it's also some form of income generation because you know when the chickens lay, they're able to sell the eggs to supply or to provide for themselves and their families… We have stuff like that. Apart from the regular care that they come to the clinic and get."

In rare circumstances, when all options for assistance were exhausted, some staff even described directly assisting patients. While there are many resources in place to help with social support, if there was an urgent need, healthcare workers stepped in. In one

such instance, interviewee 61- a psychosocial team member working in the Southern region talked about the lengths that were taken to help.

"…We have been in a position where clients needed aid, where she never had the resources, she was pregnant, about to have the baby, didn't have the resources. And so, we offered help from our own pocket just to ensure that the dresses were bought, the pans were bought and so forth…If the needs of the client is so important or we know need is definitely there, we do extend ourselves".

Chapter 5: Discussion and Public Health Implications

5.1 Discussion

This research study is the first of its kind to analyze the sexual and reproductive services offered by the Jamaican health system during the COVID-19 pandemic. Through a cross-sectional mixed-methods study guided by the Framework for Family Planning and Reproductive Health (Judice & Snyder, 2012), these results offer unique insight into the challenges and achievements met by the SRH workforce. While the impact of COVID-19 on global SRH healthcare is still being understood, this study discusses one such national case in the Caribbean, a middle-income country with a relatively robust health system.

Despite reports of prior existing concerns across the health sector and within all departments of health centers, the HIV model of care was highlighted as facilitative of high quality care. These health centers offered a range of SRH services including testing and treatment and family planning, along with various psychosocial services to all patients, especially those living with HIV or at risk of contracting HIV. The health centers have always been attuned to the needs of the patients and special considerations have existed even before the COVID-19 pandemic. Examples of this included evening clinics, certain home health services, and the psychosocial support already in existence (JMOH, n.d.) All health professionals emphasized that the service integration or holistic HIV model was useful when supporting SRH services offered under this model. This model follows the National Integrated Strategic Plan for Sexual and Reproductive Health and HIV (NISP, 2013), a national plan to integrate aspects of SRH (JMOH, n.d.). Since it's implementation, there have been many aspects of SRH improved, such as-

contraceptive access, the testing and treatment of STIs, and referrals for specialized care (NFPB, 2015).

The utilization of service integration models of SRH has strong support in the literature. Many countries have implemented similar HIV and SRH integrated systems with success. For example, in South Africa- a nation with a high proportion of people living with HIV- an integrated model was introduced in one study and found to be effective for expanding linkage to care when providers were trained and engaged with their community's needs (Milford et al., 2018). Additionally, in Uganda research to identify predictor variables for integrated HIV/SRH services found it necessary and feasible. This study indicates clinics utilizing this model are especially critical for rural locations and for younger age groups, where women may not be frequently exposed to care and therefore require a range of services at one visit (Rutaremwa & Kabagenyi, 2016). Despite challenges that may exist even with an integrated care model, in areas with high HIV rates, they serve as crucial touch-points of care. However, further research needs to be done on COVID-19 pandemic response protocols in the integrated model, including in Jamaica's health system.

The COVID-19 pandemic response undermined family planning care delivery in some situations and created new challenges despite the existing robust healthcare system. When examining this issue from the policy environment, health centers had a shift in delivery to infection control. Because of the mandates and curfews, clinics had to then make adjustments to clinic hours or cancel appointments altogether. This was similar to what was found in the global literature. In a systematic review of multinational COVID-19 impacts on SRH, mobility restrictions, like curfews, posed a significant barrier to

accessing contraceptive methods (VanBenschoten et al., 2022). Particularly during the early phase of the pandemic, LMIC's reported SRH services that were reduced or shut down entirely (Banke-Thomas and Yaya, 2021). In line with the mandates, healthcare workers in Jamaica reported a focus on controlling the spread of COVID-19 by making the necessary adjustments which included reducing or postponing non-essential services. A systematic review by Mukherjee and colleagues (2021) reported similar pandemic responses across the globe, with decreases in SRH services due to shifting priorities. These disruptions resulted in reported reductions to contraceptive access and SRH-related prescriptions for example, medication abortion pills (Mukherjee, 2021).

Participants in the study reported disruptions to human and financial resources otherwise necessary for clinic functioning due to COVID-19. The requirement of PPE and need for social distancing also created a demand for materials like masks, gloves, hand sanitizer, as well as outdoor space. When examining both the service delivery and service utilization environments, most of the global research on the COVID impact on SRH focuses on service level disruptions, such as with contraception or routine pap smears (WHO, 2021; Banke-Thomas & Yaya, 2021).

Further, the need to shift to COVID-19 care also placed a strain on healthcare staffing and their scope of work, which necessitated novel solutions from providers, sometimes with little guidance. In one such study, Ho and colleagues (2022) discovered the task-shifting of providers limited the adaptations that could be implemented. While clinics in Jamaica could implement services like telehealth and outreach, increased staff responsibilities were still a reported issue. As a result of the COVID-19 response efforts, LMICs across the world reported strain with existing medical resources.

To maintain level of SRH care already existing within the HIV care continuum, clinics adapted swiftly and efficiently to the increased social barriers. This is exhibited through the expansion of home-health services, community outreach, and telemedicine care. It appears as though healthcare providers were quickly able to make adjustments based on the imminent needs. COVID-19 research has found other LMICs, like Jordan and Thailand, utilizing these strategies to reach vulnerable groups, like adolescents and those living with HIV (Meherali et al., 2021; Hung et al., 2022). In Jamaica, these adaptations were once only used for patients living with HIV, but clinics found these services beneficial for those who are immunocompromised, elderly, or even stabilized patients that don't require close monitoring. Based on the framework, the service delivery environment was rapidly improved and could therefore reinstate service utilization where available.

Providers also described that they observed community barriers were the most challenging for clinics to overcome during COVID, and these barriers sometimes disrupted patient service utilization. There is a small group of studies that suggest similar social barriers developed elsewhere, similar to the findings in Jamaica. A cross-sectional survey conducted among Ugandan youth found limitations in transportation and cost of healthcare services as significant barriers to accessing contraceptives (Mambo et al., 2022). Although this thesis analyzed the public Jamaican health system where cost of services was not as frequent of an issue, the cost of transportation was frequently cited by providers as something they thought would impacts their patients' access to clinic services. Overall, few studies examine the multitude of COVID-19 related social and community barriers that disrupt service demand for clinics that provide SRH care,

especially when making service-delivery pivots. Therefore, additional research is needed to understand the level of service burden both providers and patients face when pivoting to new models of care during pandemic response.

Ultimately, these findings prove the resilience of health systems, and particularly, of health staff in delivering SRH services during COVID-19 at Jamaican health centers. All participants interviewed reported the lengths taken to provide their patients with quality care. While mandates such as lockdowns, curfews, and social distancing were cited as negatively impacting SRH, all interviewees described how to overcome these. Health staff in these clinics have always applied the holistic approach to medicine in their communities. When patients were faced with increasing unemployment and food insecurity, many prioritized social support resources for them. Health staff, especially midwives and social workers, took it upon themselves to connect their patients with services outside of the SRH scope, in order to improve overall population health. Across the globe, evidence of these efforts have also been documented, with individual midwives described as heroic for continuing to deliver excellent care during the pandemic (Marie Stopes International, 2020). Despite these new challenges and the unknown territory providers now entered, many went above and beyond the call of duty. This personal dedication to their community facilitated all aspects of care and kept individuals connected to clinic services.

5.2 Strengths and Limitations

The study exhibits several strengths with methodology and practice. The choice to focus on provider perspective of pandemic impact on SRH allows for insight not

frequently explored by COVID-19 research. Additionally, the types of health professionals initially chosen also provided thick data on challenges and adaptations to care. Midwives, nurses, and contact investigators had excellent experiential summaries to share that were specific to the types of SRH services analyzed. The ability to collect data from varying types of sites was also a strength. The range of participants from each site, which included differing clinic types (2-4 and B and C) contributed to the rich information collected.

There are, however, several limitations that appeared and in reflection of the project. A limitation to this study is the missing data from one region (Western region), and the limited data from another region (Southeastern region). These findings are not generalizable to all Jamaican health clinics or the system as a whole. Additionally, after initial data collection at two sites, other professions were identified as insightful for interviewing (i.e. psychologists). Because of staff shortages and missed collection sites, these professionals were difficult to attain and therefore frequently excluded. Additionally, a limitation was the lack of privacy typically found in the settings for data collection as well as time constraints. For these reasons, participants may not have felt comfortable sharing more information or were pressed for time. Lastly, there was a concern for participant fatigue. Particularly for those who took part in both the interview and survey, the team found challenges with participant engagement when collecting data at the end of clinic day. Finally, the focus of the SRH services in this project did not include abortion services and prenatal or antenatal care and should be included in future work.

5.3 Future Research and Public Health Implications

As further research of the impact of COVID-19 on sexual and reproductive health services unfolds, there is a need to continue evaluating the impact in Jamaica. This is a unique study in that both surveys and in-depth interviews are used to capture details national reports may only summarize. However, because of the limited focus of this study, including other aspects of SRH is recommended. Future research to expand on services like abortion provision and access, prenatal and antenatal care, as well as HIV testing and treatment serves can provide a more holistic view of SRH care in Jamaica. This thesis highlights the continued need for strengthening community outreach and SRH education, even as post-pandemic transition continues. Additionally, expanding social services outside of SRH is needed in order to maintain linkage to care.

Similarly, this project was intended to understand provider perspectives of barriers and facilitators but can benefit from expanding to that of client perspectives, with disaggregation by subpopulation. By doing so, there will be a better understanding of what services the community felt was needed and what was actually accessible. It is also importance to gain knowledge on what patients felt were added social barriers during the pandemic. Keeping these in mind will benefit future health system protocol in the face of emergencies. It is also of interest to look at the impact of COVID-19 on subpopulations that may be more vulnerable to disruptions of SRH healthcare. This can include elderly, adolescents, and more. This would result in a more holistic understanding of the impacts from the pandemic are evaluated.

This study used data from primarily two regions and from select types of health sites. Future data collection should include additional regions, like the Western and

Southeastern, to appropriately capture the Jamaican geography and health delivery landscape. This study contributed to understanding of types of services offered at health centers. It was clear that different health centers were impacted by regional differences. Those health centers located closer to provision stations, more easily accessed contraceptives regularly, while those located in more rural areas reported more difficulty. This is just one example of how location impacts health differences among regions and should serve as a reminder to consider region-specific challenges, rather than just national data.

In addition, further research would benefit from including larger sites such as hospitals. Hospitals were impacted by COVID-19 protocols and provide specific emergent SRH services, including miscarriage management (JMOH, n.d.). Because these sites provide more immediate care, there is still a gap in the understanding of emergency SRH needs during the pandemic. Within this setting there is also the need to include physicians and midwives who practice these emergency services. By incorporating hospital-level research, care at every level is incorporated in the research.

Finally, taken together this research contributes to the planning of future of pandemic response within health systems, but this monitoring must continue. Health professionals briefly spoke to the lessons learned from COVID-19, however, as countries now move into a space of "the new normal", a widespread understanding of the impacts is required. Studies evaluating the continued facilitators and barriers can guide future emergency response. This period is a time for reflection and decision on standardized care, which research can capture. Within the implementation science perspective and based on The Conceptual Framework in Reproductive Health Programs, there is then a

need to bridge this research-based evidence and the delivery of health services to the community (Judice & Snyder, 2021). As the Jamaican health system transitions out of emergency response, continuing to evaluate the many social, cultural, economic, political, and legal factors will better guide national and regional

6. Conclusion

This research project evaluated the facilitators and barriers to SRH care as a result of the COVID-19 pandemic. The mixed-methods results found that despite the various clinic and social-level challenges introduced by pandemic policies, clinics maintained services to the best of their ability. SRH providers and staff spoke to the increased needs of their community members, ranging from financial and social support to health education. The shift to infection control within the clinic setting additionally challenged the operation of SRH services by shifting responsibilities and resources. However, these health sites continued to reach clientele by taking advantage of telemedicine, home-health services, and community outreach. By having an already existing strong integrated model of care for HIV and SRH services, the health system adapted quickly and utilized these varying approaches for patient care. Healthcare providers also exhibited dedication to their roles, often expanding services required by the community. Altogether, Jamaican health centers and their staff proved to be resilient in the face of the COVID-19 pandemic.

The results of this study begin to unpack the complexities of pandemic-related care, specifically SRH services in Jamaica. There is a need to continue this research as the health system evolves from crisis response to managing COVID-19 on an endemic level. Although the findings signal to similar challenges experienced by other country's health systems, there is room to explore both additional provider type and patient point of view. By doing so, future research can uncover any additional challenges and subsequent adaptations made to continue providing care.

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Appendix A

SC1. What is your title or position at this clinic? Select one response.	◯ Physician ◯ Pharmacist ◯ HIV Clinic or Nurse Manager ◯ Public Health Nurse ◯ Midwife ◯ HIV Treatment and Care Support ◯ Other
Please specify:	_____
SC2. What is the highest level of education you have completed? Select one response.	◯ Primary School ◯ High School ◯ Associate's Degree ◯ Some College ◯ Bachelor's Degree (Tertiary) ◯ Master's Degree ◯ Professional Degree (for example: MD, DDS) ◯ Doctorate Degree ◯ Other
Please specify:	_____

Section 1: Demographic Information

We will now begin with the formal survey with demographic information. I want to assure you that your identity will be anonymous and all responses are confidential. Any information you provide will not be shared outside the research team.

DI1. What is your current age? Record response.	_____ ((years))
DI2. What is your gender? Select one response.	◯ Male ◯ Female ◯ Other ◯ Prefer Not To Say
Please specify:	_____
DI3. How many years have you worked in your field? Record response.	_____ ((years))
DI4. What date did you start working at this health center? Record response.	_____ (Try to get a month and year, if they do not remember the day, put the 1st of the month.)
DI5. Total time spent working in clinic: This is automatically calculated, no action needed.	_____ ((years))

CM9a. What were the contraceptive methods offered by this centre before the pandemic (December 2019-February 2020)? Select all that apply.	☐ Male Condoms ☐ Female Condoms ☐ Oral Contraceptives ☐ Injectables ☐ Implants ☐ IUDs ☐ Emergency Contraception ☐ Other
Please Specify:	_____
CM10a. What were the contraceptive methods offered by this centre at a peak of the pandemic, between April-June 2020? Select all that apply.	☐ Male Condoms ☐ Female Condoms ☐ Oral Contraceptives ☐ Injectables ☐ Implants ☐ IUDs ☐ Emergency Contraception ☐ Other
Please Specify:	_____
SS7. Since the beginning of the pandemic (March 2020), how has staff time spent on SRH service delivery changed? Read List - Select one response.	◯ Staff spend less time on SRH services ◯ Staff spend more time on SRH services ◯ Staff spend same amount of time on SRH services ◯ Staff spend no time on SRH services ◯ Other ◯ Don't know
Please specify:	_____
SS8. We are also looking to understand the availability of SRH services before the pandemic, between December 2019-February 2020, and during a peak of the pandemic, from April-June 2020. To do this, you may likely need to refer to patient records from before and during this peak of the pandemic. Would you have knowledge or access to data for these periods of times? Select one response.	◯ Yes ◯ No
SS9a. What SRH services did this centre offer before the pandemic, between December 2019-February 2020? Provide participant with paper copy - Select all that apply.	☐ Injection Administration ☐ IUD insertion ☐ IUD removal ☐ Implant insertion ☐ Implant removal ☐ Pap smear ☐ SRH Counselling ☐ Sex Education/Menstrual Counselling ☐ STI Counselling ☐ STI Testing and Treatment ☐ Laboratory Testing ☐ Pre- or Ante-natal Care ☐ Post-Natal/Postpartum Care ☐ Miscarriage Management ☐ Other ☐ Don't know
Please specify:	_____

SS9b. What SRH services did this centre offer at a peak of the pandemic, between April-June 2020? Provide participant with paper copy - Select all that apply.	☐ Injection Administration ☐ IUD insertion ☐ IUD removal ☐ Implant insertion ☐ Implant removal ☐ Pap smear ☐ SRH Counselling ☐ Sex Education/Menstrual Counselling ☐ STI Counselling ☐ STI Testing and Treatment ☐ Laboratory Testing ☐ Pre- or Ante-natal Care ☐ Post-Natal/Postpartum Care ☐ Miscarriage Management ☐ Other ☐ Don't know
Please specify:	_____
SS10. Since the beginning of the pandemic (March 2020), how has the availability of SRH services changed? Read list - Select one response.	○ Significantly More Availability ○ More Availability ○ Less Availability ○ Significantly Less Availability ○ No Change in Availability ○ Don't know

The following questions ask about the impact of various COVID-19 related regulations on SRH service delivery. Using a scale from 1-4, with 1 having the least impact and 4 having the most significant impact, how did the following COVID measures impact SRH services. If there is no impact, this is also an option. (Read list - Select a response)

	1 = Little Impact	2	3	4 = Significant Impact	No Impact	Don't know
SS11. How much impact did social distancing have on service delivery? (Repeat scale)	○	○	○	○	○	○
SS12. How much impact did the use of PPE (gloves, face masks) have on service delivery?	○	○	○	○	○	○
SS13. How much impact did COVID lockdowns/curfew have on service delivery?	○	○	○	○	○	○
SS14. How much impact did COVID restrictions on gatherings have on service delivery?	○	○	○	○	○	○
SS15. How much impact did COVID travel restrictions have on service delivery?	○	○	○	○	○	○

For the last section of the survey, I would now like to ask you some questions about the health centre's general operations.

CI1a. What is the name of this health centre? Select one response from drop down.

- ◯ Port Antonio
- ◯ Port Maria
- ◯ Lucea
- ◯ Type V
- ◯ Savanna la Mar
- ◯ Duncans
- ◯ St. Ann's Bay
- ◯ Mandeville
- ◯ Black River
- ◯ May Pen
- ◯ Comprehensive Health Centre
- ◯ Kingston Public Hospital
- ◯ Morant Bay
- ◯ St. Jago
- ◯ CHARES
- ◯ JASL
- ◯ Other

Please Specify: _____

CI1b. What type of facility is this health facility? Select one response from drop down.

- ◯ Type 1
- ◯ Type 2
- ◯ Type 3
- ◯ Type 4
- ◯ Type 5
- ◯ Type C
- ◯ Type B
- ◯ Other
- ◯ Don't know

CI3. How has the centre's workforce changed since the beginning of the pandemic (March 2020)? Read list - Select one response.

- ◯ Decrease in workforce
- ◯ Increase in workforce
- ◯ No change in workforce
- ◯ Other
- ◯ Don't know

Please specify: _____

Appendix B

COVID-19 and its effects on Sexual and Reproductive Health in Jamaica: In-depth Interview Guide

Hello! My name is _____. I am a research assistant at Emory University. This interview is being conducted to understand the impact the pandemic has had on health centers that provide sexual and reproductive health services in Jamaica. We are conducting this research under Emory's Global Health Institute as an independent study. We are especially interested in hearing about the experiences of health personnel. The questions I would like to ask you relate to changes you may have seen during the COVID pandemic, challenges that arose, and adaptations that were made to continue providing community care. We will be asking you about two time periods, the time before physical distancing policies were implemented in Jamaica, which was March 2020, and after. Everything we talk about today will only be used for this research project and will not be shared with anyone else outside the research team. There are no right or wrong answers as this interview asks about your personal experience.

This interview will take approximately 60 minutes. With your permission, we would like to record the interview so we can be sure we have thoroughly captured your responses. All identifying information will be removed from the interview notes, transcripts, or survey materials. We guarantee you that all of the interviewing data will remain confidential and secure throughout the entire project.

Do you have any questions before we begin?

[*Answer any questions they may have and then begin]*

Background Information/Demographics

[To be filled prior to start of interview but after consenting]

Record ID:

Role in Clinic:

Clinician Name:

Highest level of education:

Starting date/month/year in this Clinic:

Years working in your profession:

Do you consent to recording? *[Start recording]* We are now recording. For the record, do you agree to participate in this research study? Are you okay with being recorded? Remember to speak clearly for the best audio capture results.

1. Opening Questions

First, I'd like to start with a few questions about your work and role here at the clinic as well as overall clinic services.

1. Can you tell me a little bit about your role in the clinic?

2. Can you tell me about the types of patients that your center serves?

Probes: demographic information (age, gender, ethnicity), patients' needs

Interview Framing Questions

3. Can you tell me about the sexual and reproductive health services your clinic provides?

Probe for unmentioned- family planning services, STI services*, miscarriage management, prenatal care, antenatal care, post-abortion care service, screening and referral for DV**

4. Can you tell me about the HIV care services your clinic provides?

2. Service Delivery Prior to COVID-19

Now, I'd like to ask you about services that your clinic provided prior to COVID-related physical distancing and lockdowns, before March 2020, if you can think back to that time.

5. Can you please describe how your clinic provided the services you mentioned previously before March 2020?

Probes: services available, range of options available, frequency of family planning or HIV care specific appointments, how was that experience for you

6. How did your clinic manage gender-based violence care and domestic violence screening for patients before March 2020?

Probes: resources, intake questions, implementation, screening and care

Thank you, now we'd like to specifically learn a little bit more about services and commodities prior to March 2020.

7. Can you describe any issues/challenges in your clinic's service delivery prior to March 2020?

Probes: appointment availability, product availability, meeting patient's needs, patient challenges to care, workforce issues. Probe specific to SRH and HIV

8. Can you describe any challenges to getting commodities needed for patient care for sexual and reproductive health patients prior to March 2020?

Probes: product availability, product cost

3. Service Delivery after COVID onset

Now, I'd like to discuss what your center did to adapt to COVID-19.

9. What safety protocols did your center institute/implement in response to COVID-19?

Probes: How did that impact patients accessing care? Switch to telehealth services, masking at clinics, limiting services

10. In terms of pandemic response, how did your organizational structure change?

Probes: staffing, job responsibilities, services provided, precautions, risk mitigation strategy, resources allocated

Thank you, I'd like to transition to asking how service delivery has changed since the onset of COVID-19.

11. How has your job changed since March 2020?

Probes: appointment type, day-to-day, priorities

12. How has your service delivery of sexual and reproductive health services changed since the pandemic onset?

Probe: What are some common challenges that have occurred since the pandemic that the centre has experienced when providing sexual and reproductive health services?

13. How has your service delivery of HIV/AIDS care services changed since the pandemic onset?

14. What were the positive improvements or innovations in your care delivery because of COVID-19, if any?

Probes: Example of care innovation, Ask about Family Planning, STI, Other SRH, HIV care, and DV screening.

I would like to transition to ask you about your impressions of the impact of COVID-19 on the patients you serve.

15. In what ways, if any, has COVID-19 changed how patients feel about their care?

Probes: Trust in clinic services? Ability to come to clinic? Desire to come to clinic?

16. How have the needs of the population as it relates to family planning been impacted since March 2020?

Probes: less/more contraception sought, availability of product, general demand for contraception, miscarriage management, abortion services

17. How have patients' needs with HIV services and care changed since the start of the Pandemic?

Probes: challenges to care, increase in incidence, prolonging care, more severe symptomology

18. How have patients' needs with STI services and care been impacted since the start of the Pandemic?

Probes: challenges to care, increase in incidence, prolonging care, more severe symptomology

19. How have patients' needs for help with domestic violence and domestic violence screening been impacted since March 2020?

Probes: Types of patients, increases in substance use, change in case load, referring them to services, screening, and needs

Thank you, we only have a few more questions.

20. Overall, have sexual and reproductive health services returned to normal procedures?

If difficulty answering- For example, what they were like prior to March 2020?

21. What are the current gaps in the needs in the center?

Probes: services, patient satisfaction, resources, what role did COVID play?

4. Closing Questions

22. What do you think needs to change to improve the current healthcare system?

23. How do you think health systems could better prepare for outbreaks like this in the future?

24. Is there anything further you would like to discuss?

That's the end of our interview! Your knowledge and experiences are extremely important to us, and we appreciate you taking the time to speak with us.