Healthcare workers' experiences of providing services for adolescent girls and young women living with HIV during the COVID-19 pandemic

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Abstract

Adolescent girls and young women (AGYW) are a particularly vulnerable population requiring various health services. The COVID-19 pandemic has exacerbated mental and physical health challenges for this group. Moreover, challenges for healthcare workers and systems worsened in the context of the pandemic. Overburdened healthcare workers and systems may lead to exacerbated health outcomes for AGYW. The overall aim of this study was to explore how healthcare workers subjectively experienced providing health services to AGYW living with HIV during the COVID-19 pandemic. This study formed part of a larger project called HEY BABY (Helping Empower Youth Brought up in Adversity and their Babies and Young Children). Visit: https://www.heybaby.org.za/. A qualitative, phenomenological design was employed. Semi-structured, face-to-face interviews were conducted with 21 healthcare workers from various primary healthcare clinics and community health centres in East London. Interviews conducted in isiXhosa were translated into English. NVIVO was used to conduct a thematic analysis of the data, and 19 transcripts were included in the final analysis. Findings revealed that AGYW had difficulties with health services and health education during COVID-19, healthcare workers perceived AGYW in different ways, there were various successful strategies employed to assist AGYW, and healthcare workers had differing views on the effects of COVID-19 on resources and services. Overall, this study is important because the findings can help understand how to develop interventions and prevention strategies for healthcare workers, and how to inform recommendations for managing health services more effectively. Findings could help in improving health services.

Keywords: HIV, adolescent girls and young women living with HIV, healthcare workers, COVID-19

Introduction

Despite efforts to eliminate HIV (Human Immunodeficiency Virus), the disease remains a global problem (Psaros et al., 2018). Adolescent girls and young women (AGYW) between the age of 10 and 24 years and young mothers are particularly at risk of HIV infection (Cousins, 2020). This group makes up about a quarter of all new HIV infections in South Africa (Psaros et al., 2018). AGYW living with HIV are an especially vulnerable population, and require a range of physical and mental health services (Psaros et al., 2018). The COVID-19 pandemic has exacerbated health challenges and has made accessing health services more challenging for AGYW living with HIV (Cousins, 2020).

The pandemic has also exacerbated physical and mental health challenges for healthcare workers and health systems (Brand et al., 2017; Ito et al., 2014; Shah et al., 2021). Additionally, HIV services and access to these services has been negatively impacted (Dorward et al., 2021; Shah et al., 2021). Logically it can be deduced that if the healthcare workers and systems involved in caring for AGYW living with HIV are more overworked and overburdened as a result of the pandemic, health outcomes for AGYW living with HIV may get worse.

AGYW and Young Mothers Living with HIV

Young women are one of the most at-risk groups for HIV in the world. Risk factors for HIV for this group include (but are not limited to) sexual violence, gender inequality, poor mental health, having multiple sexual partners, having an older sexual partner, and substance abuse (Psaros et al., 2018; Toska et al., 2020). In sub-Saharan Africa adolescent pregnancy rates are the highest in the world, and pregnancy rates coincide with high rates of HIV in young women (Toska et al., 2020). There is a set of services young women in this region need (Cluver et al., 2018). Access to sexual and reproductive health services is crucial for all young people, but it is particularly important for AGYW, as this group have distinct challenges and needs such as the need to freely access family planning services (Toska et al., 2020).

Moreover, AGYW living with HIV typically have lower rates of access to healthcare services, such as ART (antiretroviral therapy) and HIV testing and counselling services in sub-Saharan Africa (Fatti et al., 2014; Toska et al., 2020). This has a negative impact on health outcomes for these women and their children (Fatti et al., 2014).

AGYW Living with HIV and the COVID-19 Pandemic

AGYW living with HIV were already vulnerable before the COVID-19 pandemic, and now they face a range of new issues (Govender et al., 2020; Okumu et al., 2021). Social

control regulations as a result of COVID-19 confined people to their homes which may have inhibited young women from seeking in-person health support (Govender et al., 2020; Joska et al., 2020).

HIV and COVID-19 are stigmatised conditions, and stigmatisation can prevent health-seeking behaviours, which could worsen health problems such as viral suppression of HIV (Govender et al., 2020). These particular issues continue to be prevalent today, two years after the beginning of the COVID-19 pandemic (van Staden et al., 2022).

In addition, accessing health care services is challenging during the pandemic for AGYW living with HIV, due to the shutdown of services to prevent the spread of COVID-19 (Cousins, 2020). Global supply of contraceptives has been disrupted, and this could result in more sexually transmitted infections (STIs) such as HIV among AGYW (Cousins, 2020). Other disruptions include limited access to family planning services, including counselling, and limited access to maternal and child health services (Cousins, 2020; Kelly et al., 2021). Limited access to sufficient support and healthcare for AGYW can lead to a greater risk of factors such as unplanned pregnancy and mother-to-child HIV transmission (van Staden et al., 2022). AGYW living with HIV faced barriers to many physical and mental health services before the pandemic, and in the context of the pandemic these barriers are more pronounced.

Healthcare Workers' Experiences Before and During COVID-19

Healthcare workers face many physical and mental health challenges, such as depression, sleep difficulties, and burnout (Brand et al., 2017; Ito et al., 2014). In general, healthcare workers (particularly nurses and workers in frontline roles) are at a higher risk of developing physical and mental health symptoms compared to other professionals (Brand et al., 2017; Ito et al., 2014). Prior to COVID-19, studies conducted in sub-Saharan Africa and South Africa have found that healthcare workers had higher levels of burnout compared to international healthcare workers (Dubale et al., 2019; Stassen et al., 2013). During the COVID-19 pandemic, health challenges are more common for healthcare workers, including those in sub-Saharan Africa (Memirie et al., 2022; Robertson et al., 2020). Other difficulties such as healthcare workers not feeling adequately supported psychologically, physically, or by employers during the COVID-19 pandemic are now relevant (Dawood et al., 2022). Thus, healthcare workers face new problems in addition to other problems that have worsened.

Healthcare workers have been confronted with novel challenges due to their role in the COVID-19 response and in providing essential services (Kelly et al., 2021). A lack of training and resources, such as personal protective equipment (PPE), is a common problem

experienced by healthcare workers (Memirie et al., 2022). Shortages of PPE place healthcare workers and their patients at higher risk of catching and transmitting COVID-19, and increase general anxiety due to fear of contracting the virus (Memirie et al., 2022). They also result in healthcare workers being ill-equipped to care for patients (Lockhart et al., 2020).

Healthcare Workers, HIV Services, and Caring for AGYW Living with HIV During the Pandemic

The COVID-19 pandemic has impacted access to and provision of HIV services. Limited staff due to COVID-19 infections and healthcare workers' fears of contracting the virus mean AGYW may not receive sufficient care (Nachega et al., 2021). The pandemic has also resulted in an insufficient supply of resources such as ART drugs, which may lead to a subsequent increase in HIV resistance (Dorward et al., 2021; Nachega et al., 2021). Additionally, COVID-19 has resulted in limited access to psychological and educational support for AGYW living with HIV (van Staden et al., 2022).

Evidence from numerous health facilities in sub-Saharan Africa shows a decrease in HIV testing by 41% between April and September 2020, compared to the same five months in 2019 (The Global Fund, 2021). These changes have drastic impacts on HIV positive patients, and they may even result in HIV-related deaths (Govender et al., 2020).

Healthcare workers are particularly overburdened in the Eastern Cape province of South Africa, which is where this study took place (Treatment Action Campaign, 2018). There is a gap in research that explores the experiences of providing services for AGYW living with HIV during the COVID-19 pandemic from a healthcare worker perspective in the South African context. It is important to explore the perspective of healthcare workers: they form a vital part of the public sector health system, and understanding their perspectives may help in addressing health issues and developing interventions to support them.

This study focuses on the provision of services to AGYW living with HIV, because this group is evidently the most vulnerable group living with HIV in South Africa (Psaros et al., 2018). This group also has complex needs which are often not met. The healthcare workers involved in service provision for AGYW living with HIV have first-hand experience of working in health services, and their knowledge may aid in understanding how to adocate for more effective health system responses to assist AGYW living with HIV. This is important in the context of HIV (which remains a significant global problem) and COVID-19 (which is a pandemic that continues to change over time).

Aims and Objectives

Aim

The overall aim of this research was to explore healthcare workers' subjective experiences of providing services for AGYW living with HIV during the COVID-19 pandemic. It was hoped this research would provide insight into challenges and barriers experienced by healthcare workers, as well as strategies used to overcome these barriers. The study also aimed to focus on how AGYW living with HIV experienced HIV service provision from the perspective of healthcare workers.

Main Research Question:

How do healthcare workers describe their experiences of providing services for AGYW living with HIV during the COVID-19 pandemic?

Sub-Questions

- What challenges do healthcare workers experience in providing services to AGYW living with HIV?
- How has the COVID-19 pandemic affected healthcare workers and their work in HIV services?
- What strategies do healthcare workers use to overcome the challenges they experience?
- How might gaining an understanding of healthcare workers' experiences, and experiences of AGYW help inform interventions for these groups?

Theoretical Framework

This research was informed by the interpretivist paradigm which posits that humans cannot be researched in the same ways as physical phenomena (Alharahsheh & Pius, 2020). Social contexts and practices are important and understanding the meanings that are created from human interactions assists in understanding the social world (Alharahsheh & Pius, 2020).The goal of the paradigm is to gain a rich understanding of human lived experiences, and society and the individual are viewed as inseparable (Alharahsheh & Pius, 2020; Creswell, 2013). In this study, healthcare workers and AGYW living with HIV co-exist in a society in East London, in the Eastern Cape province, and they are situated in the context of COVID-19. The ways meanings are created in the interactions between the researchers and healthcare workers in this study have assisted in gaining a rich understanding of the circumstances and needs of these two groups.

Method

Research Design

A qualitative research design was employed for this study. Qualitative research focuses on gaining data on subjective experiences rather than data that is quantifiable (Creswell, 2013). This design allows for information on the lived experiences of healthcare workers to be collected and analysed (Kelly et al., 2021).

Phenomenology was used for this study, as this approach relies on a particular phenomenon for the focus of the study (Creswell, 2013). In this case, the phenomenon of healthcare workers' experiences with service provision for AGYW living with HIV during the COVID-19 pandemic was explored. Participants could narrate their stories based on their experiences, and an understanding of individual experiences and collective shared experiences in relation to the phenomenon was gained (Moyo et al., 2022). This design coincides with the interpretivist research paradigm, as gaining a deep understanding of lived human experiences and creating meaning from human interactions are the goals of both of these approaches (Creswell, 2013). This research design aimed to provide a concise description of the general experience of all healthcare workers (Creswell, 2013).

Participants and Recruitment

This research study forms part of a larger research study called HEY BABY (Helping Empower Youth Brought up in Adversity and their Babies and Young children), which aims to assess resilience-promoting pathways for adolescent parents living in adversity, including young parents living with HIV in the Eastern Cape (Toska et al., 2020). Healthcare workers who were previously interviewed for a study in the HEY BABY project were recruited again, but only six healthcare workers from the original sample met the inclusion criteria, and thus more participants were recruited (Kelly et al., 2021). Purposive sampling was used to recruit participants based on their experiences of the research topic, along with snowball sampling to recruit additional healthcare workers (Mphigalale, 2021).

The inclusion criteria for participants were (i) they were in-service healthcare workers (either professional nurses, focal nurses, or acting operational managers) who provide services (such as Adolescent Youth Friendly Services and HIV testing services) to adolescents (males and females), and (ii) they work in health facilities in the Buffalo City Health Sub-District or King William's Town in East London. The recommended sample size for qualitative, phenomenological research studies is usually 6-20 participants (Creswell, 2013). For this study 21 participants were interviewed (17 females and 4 males). 18 participants worked in Primary Health Clinics, and 3 worked in Community Health Centres.

Most of these facilities were based in townships or rural areas, and only 2 facilities were in urban areas. One interview was excluded because the participant did not fit the inclusion criteria. Additionally, the transcription company assigned two different serial numbers to the same transcript, and thus one of these transcripts was removed. Notwithstanding these practical issues, data saturation was reached. The HEYBABY researchers conducting interviews collectively decided that similar responses were coming up in every interview. Thus, a decision was made that a sample size of 19 participants was sufficient for the study (Creswell, 2013).

Data Collection

For data collection semi-structured, face-to-face interviews were used. This technique provides a richer understanding of thoughts and feelings compared to set responses, because participants describe their own points of view (Kelly, 2006). Non-threatening, open-ended questions were asked throughout the interview process to establish rapport and provide participants with a chance to talk without feeling limited. Probing questions, and follow-up questions could be asked impromptu rather than having to adhere to a strict interview schedule, as is the case with structured interviews (Kelly, 2006). For these reasons, the semi-structured technique was appropriate for this study.

Semi-structured interviews involve developing an interview guide, or list of key topics that is written up in advance (Kelly, 2006). This guide aided in exploring participant's experiences (see Appendix A). The interview guide was developed by us (the authors), and the HEY BABY team. Questions in the interview guide focused on topics such as healthcare workers' views on how AGYW living with HIV have experienced service provision during the COVID-19 pandemic. Questions also focused on challenges and barriers for healthcare workers, and the strategies they may have used to overcome these barriers.

Procedure

We piloted the interviews with 4 participants, and the interview guide was revised after this as needed. After piloting, two of the HEY BABY field team members completed the rest of the interviews, and we met with them weekly for a debriefing session to discuss their experiences with the interviews.

Interviews were conducted in English and isiXhosa, and took place in a private, quiet room (to ensure the environment did not drown out recordings) at the health facilities where the healthcare workers worked (usually the healthcare worker's office) (Kelly, 2006). The nurse manager agreed that these interviews could take place during work hours. Two interviewers were present for the interview: one who took the lead, and another who

observed. This was beneficial as the observer could rephrase or translate questions, or probe to get additional information if this was necessary. After getting consent for the recording, and the presence of two interviewers in the room, the interviews commenced and were recorded with an audio recorder (Kelly, 2006).

During the process, thoughts that arose were written down, and process notes were taken. Interviews were between 30 minutes and 1 hour long. Participants were asked if they would like to add anything more before the end of the interview, then the recorder was turned off and they were thanked for their time. Participants were reimbursed for their time in the form of snack packs.

After conducting interviews, researchers went through a debriefing process, and completed reflection forms (see Appendix B) for a self-check in to talk about any interesting data that was revealed, and to ensure they did not experience any anxiety/distress during the process. Afterwards, interviews were translated into English by a few bilingual HEY BABY team members and one of us. Interviews were then transcribed using the Express Scribe software. The transcripts completed by us and HEY BABY team members all went through quality control checks, and the transcription company used (Lains Transcriptions Services) also had quality control checks in place.

Data Analysis

A thematic analysis of the data was conducted, using NVivo, a computer-assisted qualitative data analysis software which enables researchers to systematically analyse qualitative data by grouping extracts from transcriptions under a relevant code or theme (Hilal & Alabri, 2013). Thematic analysis involves examining data to identify common themes, such as patterns of meaning that constantly appear (Braun & Clarke, 2006). This aligns with phenomenology, which aims to discover what experiences participants have in common (Creswell, 2013). This approach is also accessible for researchers conducting qualitative research for the first time (such as ourselves) (Braun & Clarke, 2006). It is also flexible, meaning inductive or deductive research can take place. This research topic is under-researched, therefore, an inductive approach was used. Data were coded without adhering to a coding frame established before analysis (Braun & Clarke, 2006).

This study was guided by Braun and Clarke's (2006) framework. Initially, we divided the transcripts in half, but after technical difficulties we started from the beginning and coded all transcripts together. The first step in this framework was becoming familiar with the data, which involved repeated readings of the transcripts. Next, codes were generated. We coded all our data, rather than only identifying aspects of the data we perceived as relevant to the

research questions. This approach gave us a thorough understanding of the data before generating themes. Then, searching for themes occurred, and first we translated codes into categories. Codes that did not pertain to our research questions or did not have enough data were discarded. Codes that were similar were merged. Categories were grouped together to form themes. The fourth step was reviewing and refining themes. Similar themes were merged, and irrelevant themes were discarded. Eventually, four main themes remained. Then, we defined and named our themes. Lastly, after the themes were proposed, the report was written up (Braun & Clarke, 2006).

We coded the information and communicated constantly with each other to confirm the codes and themes. The data was stored as a password protected document in a password protected computer. An audit trail was kept as a record of any decisions made. Two senior researchers in the HEY BABY team supported us throughout this stage.

Ethical Considerations

The HEY BABY team have submitted a notification of this data collection to the University of Cape Town (UCT) Ethics and Oxford Ethics committees. The broader HEY BABY study (under which this study falls) has ethical approval through these Ethics committees (UCT HREC - 226/2017; Oxford IDREC - R48876/RE007) (see Appendix C).

Possible Risks

Participants and their employers were informed that there would be no effect on their employment whether they participate in this study or not. This is a minimal risk study; it involved talking to healthcare workers about their work. However, we were mindful of the fact that the study may evoke distress. Participants were informed that they could talk to a counselor should they need psychosocial support, as the HEY BABY project has a referral system in place with Masithethe (a local service provider). It was the interviewer's role to assess the seriousness of psychological distress and respond appropriately (Arifin, 2018). However, no participants needed counselling services.

In order to ensure interviewers were conducted to the best of the interviewers' abilities, tactics such as slowing down the pace of the interview, or initiating a break for participants were employed if they were needed (Wassenaar, 2006). However, no participants appeared in need of a break.

Informed Consent

Participants were informed their participation was voluntary, that they could withdraw from the study at any point without penalties, and that they could refuse to answer any question (Mumford, 2018). Before the interviews took place, participants were given an

informed consent form to sign (see Appendix D), which explained the study's purpose, the research process, risks/benefits, and issues of confidentiality (Mumford, 2018). Consent was also obtained for the presence of more than one interviewer in the room. The consent form was translated into isiXhosa. The researcher conducting the interview verbally confirmed that participants understood the research process and its implications. Participants were also given time to ask questions before the data collection took place.

Confidentiality

Findings were reported in a way that ensures that the identities of the participants are confidential. Participants were informed that they were in control of how much they wish to share, and that the healthcare facility they are associated with will not be identified. Participants were given a serial number (e.g. A003) when referred to in transcripts. This ensured participants could not be identified by name in the research report (Kaiser, 2009). The transcription company also signed a confidentiality agreement.

Reflexivity

Themes and meanings of the data do not arise directly from the data, but from the researcher's subjective understandings of the data (Walsh, 2003). The findings that are analysed reflect the researcher's personal interpretation of those findings, and researcher's reflexivity is thus important (Walsh, 2003).

Power imbalances between the researcher and participants exist despite attempts to counter them, and are often exacerbated by differing social positionings (Scholz et al., 2021). This research was conducted by various researchers, with different social positionings. Some of these are: white female, English speaking; black male, Xhosa and English speaking; and black female, Xhosa and English speaking. These positionings may have negatively impacted the research as many healthcare workers being interviewed did not have the same social position as interviewers (many of them Xhosa and English speaking black females). There may have been a lack of shared understanding between the researcher and participant, which may have affected the research process (such as the interview relationship), as it may have acted as a barrier to connection and understanding between the parties.

Additionally, a few of the researchers (including us) are young adults. Most of the healthcare workers were older adults with years of experience. This may have inhibited the research process, as if participants and interviewers are very different in terms of age, they may not communicate as easily or share similar generational ideas (Underwood et al, 2010).

Researchers were mindful of the fact that even if they could not directly relate to participants, they were open and willing to learn about them. We kept journals to document reflection notes and analyse how certain interpretations were made (Young, 2016)

Results

The four themes that emerged are: AGYW's difficulties with health services and health education during COVID-19, healthcare workers' perceptions of AGYW, successful strategies employed to assist AGYW, and healthcare workers' views on the effects of COVID-19 on resources and services. Themes and sub-themes are outlined in Table 1 (below), and subsequently discussed in more detail.

Table 1

Themes and sub-themes

1.) AGYW's Difficulties with Health Services and Health Education During COVID-19
1.1) Changed Routine for Clinics and AGYW
1.2) Receiving Continuous Health Education and Support
1.3) Accessing Health Services
2.) Healthcare Workers' Perceptions of AGYW
2.1) AGYW's Positive and Negative Attitudes
2.2) Patience and Impatience
3.) Successful Strategies Employed to Assist AGYW
3.1) Appointment Books and Two Months' Supply of Medication
3.2) Teamwork Among Colleagues
3.3) Connecting and Communicating with AGYW
3.4) Support from NGOs
4.) Healthcare Workers' Views on the Effects of COVID-19 on Resources and Services
4.1) Lack of Infrastructure and Equipment
4.2) Shortage of Staff Negatively Impacting Services
4.3) Lack of Mental Health Services
4.4) Differing Views on Changes in Services (HIV Services, Family Planning, and Antenatal Care)

AGYW and Difficulties with Health Services and Health Education During COVID-19

According to healthcare workers, AGYW experienced many difficulties as a result of COVID-19, but the main difficulties involved health services and education.

Changed Routine for Clinics and AGYW

During COVID-19, the routines at healthcare facilities changed, particularly because COVID-19 patients needed care more urgently than other patients. Clinics would set up new routines to accommodate COVID-19 patients, and this often drew attention away from patients with other ailments. This often meant AGYW would leave the clinic without being attended to, as they would get tired of waiting to be helped.

It's just that when they come for headache, we would focus on someone who is struggling to breathe they end up saying I come back another day for my headache because now it seems we are taking care of the new emergency (nurse A031).

Alternatively, AGYW would only come to the clinics for important issues, such as receiving a blood test to check their viral loads. This helped them avoid going to the clinic frequently, and risk being exposed to COVID-19-infected patients. "*Then they just come back for check-ups in 3 months' time or when they came to give blood samples" (nurse A038).* The COVID-19 pandemic led to stock-outs and negatively affected AGYW as they often could not get the medication they required. The importance of a continuous medication supply during the pandemic was emphasised. "*…the supply should always be readily available… I wish that everything would be readily available when it comes to the treatment for client" (nurse A046).*

Receiving Continuous Health Education and Support

Many healthcare workers stressed that AGYW needed health education in-person, as using the internet is not sufficient for this education. According to healthcare workers, receiving correct and informative knowledge about HIV-related services was not being focused on enough during COVID-19. This support and guidance is important for behaviour change, and needs to happen continuously so that the messages are consolidated and the behaviour change is initiated.

I don't believe that if we talk today, tomorrow you correct what you are doing, it's gonna take time to adjust and move away from the behaviour that you had previously, so it's not a once-off thing. So it needs to be continuous (nurse A030).

So to know the things that they do outside, it doesn't mean that I judge them- it means that they need more information. I even tell them: even if you go to Google you have done

nothing because you will not get that much information than you would get if you have come to me a lot, you understand (nurse A036).

Accessing Health Services

AGYW had difficulties accessing health services during the COVID-19 pandemic, which undoubtedly affects effective service provision for them. These difficulties included changes in routine transport arrangements and longer queues at clinics.

Mmm... They were challenged because transport was scarce, for example, some of them are used to using a car that transports school children, there's no car now, they are used to using a car of a person who goes to work. There's no one going to work now. So it was very challenging to them to come get their treatment (nurse A047).

So people would end up going back without getting help from the clinic, you understand, the other child would tell you that they need to go write [exams], but you wouldn't be able to because you can't. Because other patients also need to be assisted and they would end up going to write [exams] without receiving help, you understand (nurse A035).

Actually they were afraid…one of the things, COVID was made to be like something that hits more those who have chronic illnesses. They were so afraid. Eh, uhm a person had that thing that I am HIV positive, so it is going to kill me you see and it's not about HIV alone, everyone with chronic illnesses had many fears. That is why people did not come well because it was as if one would close themselves in the corner she is in to make sure you are safe (nurse A034).

This healthcare worker is explaining that patients with existing illnesses such as HIV feared coming to the clinic due to the risk of catching COVID-19 at the clinic. In this case, fear of COVID-19 negatively affects AGYW because they might not get the medical attention they need if they fear coming to the clinic.

Healthcare Workers' Perceptions of AGYW

Another prominent finding was healthcare workers' personal views on AGYW. Some of these perceptions were positive, and some were negative.

AGYWs' Positive and Negative Attitudes

A fairly common view was that adolescent girls were perceived as having a negative attitude. "*It's different with girls, it's different. Especially your 13 year olds, 14, before 18 it's very different. 'Cause you find now that they're on their hormonal stages, so when they come here, they come with a bit of attitude, like I don't care" (nurse A030).*

"*In the clinic they [adolescent girls] swear because they got irritated and complain that they are not getting the attention they are entitled to" (nurse A037).*

In the first of these extracts, adolescents are described as having an attitude of not caring. In the second case, adolescent girls are described as having an attitude of entitlement.

In contrast to the above perceptions, healthcare workers also perceived AGYW as having a positive attitude. Healthcare workers described AGYW as open which made communication with AGYW about effective health services easier.

If you ask whatever, no matter what it is she will give it to you as it is only. They are nice like that, they are open, yes they are open. If she undermines you, she will undermine you here in this room and say[inaudible]yes[laugh]that level of theirs (nurse A033).

Patience and Impatience

An extremely common finding was that healthcare workers described AGYW as impatient, or not wanting to wait for a long time at clinics. "*I would ask, because you did come on this date but you did not gat (Interviewer: "get") assistance what happened? And they say, no sister I got tired of waiting and decided to come tomorrow"(nurse A031).*

But the majority of them end up being grumpy, right, even on the waiting area a person would end up wanting to jump others in the line, you see, because now they are impatient to wait, you see. And I wouldn't be able to allow them to jump others who are in front in the line because it will become my problem, you see, and a person will attack me there (nurse A046).

The healthcare worker in the second extract explains how it might be detrimental for her if AGYW do not wait in place in the line. Long queues are a common problem in healthcare clinics (Treatment Action Campaign, 2018). Healthcare workers already have to deal with the stress of attending to large numbers of patients, and their stress is exacerbated by AGYW being impatient.

AGYW were also described as patient by some healthcare workers, which contradicts the findings mentioned above.

We had a, a limited number that is needed inside like saying not more than 50 inside. So they would stay and wait there [door noise], they would not leave though. They made sure that they stay, even if they would be there till 4… They were patient with everything and stay there (nurse A038).

Successful Strategies Employed to Assist AGYW

Many successful strategies employed by healthcare workers and non-healthcare workers aided in providing more effective service provision for AGYW.

Appointment Books and Two Months' Supply of Medication

While healthcare workers often perceived AGYW as impatient, they also wanted to make service provision easier for them. Healthcare workers utilised effective strategies to reduce queues at clinics and ensure the provision of medication.

So what I do is, by the time they arrive I'm already done packing their packets, their files are out because the most difficult thing for young people and coming to the clinic is that they spend a long time at the clinic. So that's why they don't like the clinic. So the easy thing is that when you have that appointment book, you know they are coming on Tuesday, what you do is that when they come their files are out. If they have treatment their treatment is out so that the work will be easy (nurse A047).

This healthcare worker is explaining her strategy of using an appointment book to remind her who is coming to the clinic on certain days, which led to shorter waiting times at the clinic, and ensured AGYW got their treatment upon arriving at the clinic.

Healthcare workers also described the benefits of providing AGYW with a two months' supply of medication to reduce clinic queues and prevent adolescents from having to come to the clinic often.

Like we wouldn't give them same dates and we would know that at a particular time we would have so many people or maybe there at the pharmacy they would give them medication for 2 months so that they don't come every month to avoid that flock of the patients inside the clinic. So we wouldn't have check-ups every month (nurse A038).

Teamwork among Colleagues

Another general effective strategy that helped with effective service provision was the importance of working collaboratively with everyone in the clinics.

It's teamwork because we help each other in the clinic so I think it's teambuilding is number one. Even if I am not available in the clinic the adolescents will be assisted and even if we only have one nurse as I have told you there are two of us, the adolescents will be cared for so they have never came to the clinic and went back without being without getting their services (nurse A031).

We support each other a lot here because what is happening is, even if I am not around - maybe I would be on leave or sick - they don't say this program is a responsibility of so and so, you see. Because if I am not around, we support each other, you see. You know that so and so will be able to assist and do things, yes. Even if I go to other trainings, you see, I will come back and report to them so that we can be able to support each other. It's not one's problem, you get that (nurse A043).

These healthcare workers are both describing how all healthcare workers assisted with tasks in the clinic. This meant that if one healthcare worker was unavailable, another worker could step in and assist or attend to AGYW. This strategy ensured that patients were provided with the services they came to the clinic for, and ensured that tasks around the clinic would be completed.

Connecting and Communicating with AGYW

Many healthcare workers stressed the importance of putting themselves in the shoes of AGYW, adapting their language, and providing their personal contact numbers to facilitate communication. These strategies allow AGYW to feel comfortable and supported.

If she's young you have to be humble and put yourself into her age and use their language because after all, you treat a person by… if I meet with older person I am not going to talk a language of young persons to older person, so to the young one you must have be in the same level you see for us to understand each other, include little jokes in between in order for us not being too serious, because once you are serious they are going to be tense and then they are not going to give you the information (nurse A033).

This healthcare worker describes the importance of being at the same level as AGYW when communicating with them, and she also states the importance of not being too serious so that AGYW can be at ease.

You needed to be friendly. What is important is to be friendly and not judge them because as elders we are judgemental, if we can stop being judgemental and remember that you were also a teenager before, you see. They will be free and talk, you see, they want people like that if you notice them (nurse A035).

Here, the healthcare worker is stressing the importance of not judging AGYW, and showing them understanding. Both of the above healthcare workers stress that communicating with AGYW appropriately will enable them to talk freely and reveal important information.

Some healthcare workers provided their personal contact numbers to aid relationship building with AGYW, which could encourage them to come to the clinic for services.

"Mmm, because we build a relationship with them. We even give them our cell numbers because we want that thing [a good relationship] because to them we are like parents" (nurse A045).

Some of them had my number before I changed it [laughs], they would call me that they are coming [to the clinic] at a certain time"(nurse A042).

Here, AGYW having a healthcare workers' phone number could facilitate service provision as healthcare workers can then prepare effectively for the patients who say they are coming that day.

Support from Non-Governmental Organisations (NGOs)

Lastly, external support provided from NGOs assisted healthcare workers with preventing clinic queues and allowing AGYW to come to the clinic less often. NGOS also implemented effective strategies to help healthcare workers with tasks such as tracing missing patients, and providing counselling.

Also those who are already on treatment, then there is [NGOA], those who are viral suppressed we refer them to Clicks and other chemists…the nearest chemist so that they don't… to avoid the time to wait a long time here in the clinic and also to minimise stigma for others and so that it's easy for a patient to get their medication even on weekends. It saves time (nurse A035).

Okay, we have partners that we are working with, NGO's like [name inaudible] for example. Like they help us to trace these kids when a child is no longer coming to the clinic and also the, those from [name inaudible] they provide counselling to these kids… To encourage them to, to stay in line and not do things that are out of line (nurse A046).

Healthcare Workers' Views on the Effects of COVID-19 on Resources and Services

Healthcare workers described how COVID-19 negatively affected AGYW, and also how it affected them and the services they provided.

Lack of Infrastructure and Equipment

During the COVID-19 pandemic, clinics became busier than before, and thus the pandemic worsened the problem of poor infrastructure/space. Also, PPE was desperately needed during COVID-19, and often there were shortages or insufficient provision to healthcare workers (Nachega et al., 2021).

To be honest, I don't want to lie, there's none as I have told you that this clinic is busy and you would get that we don't have space, we have to maybe if... We are all here, the other should use the office and so on, so I mean it is only space that makes us not properly render the services (nurse A037).

"Here in chronics we used only masks, we don't have those… so if we were provided by those things [other PPE], maybe our services will be better" (nurse A003).

In these transcripts, the healthcare workers are expressing that sufficient working equipment, infrastructure (more office space), and PPE could assist in more effective rendering of health services.

Shortage of Staff Negatively Impacting Services

Shortage of staff was an extremely prevalent issue among healthcare clinics during the COVID-19 pandemic.

We had high rate of HIV defaulters because they were unable to get the medication and people ended up not taking the treatment because when they come to the clinic they don't get it due to shortage of staff, you see (nurse A035).

Here, the fact that shortage of staff led to inability to get treatment is described.

Uhm it was not nice, shame. I don't want to lie, because we ended up being overloaded with work. Even with the staff there would be one or two… then we would be short staffed, you see (nurse A046).

Here, the healthcare worker is describing how a shortage of staff would lead to the remaining healthcare workers being overloaded with work. This would negatively impact service provision as less staff would be available to attend to patients, and longer queues may form.

Lack of Mental Health Services

There is a desperate need for improved mental health services and social support services for healthcare workers.

Yes, if we can have someone who can come here in the facility, can assist us. The person like a psychologist, who... we once have a psychologist. But during the COVID, she stop coming here (nurse A003).

This excerpt shows that the COVID-19 pandemic affected the availability of psychologists in clinics, and that this mental health support is needed.

"That is why I am saying that even now people need counselling… mentally we are not right"(nurse A036). This healthcare worker is expressing that healthcare workers themselves need counselling, because many of them are mentally struggling.

Even for me to come to work… it was not, not free, you understand. When you see the death numbers of people, it was not nice to me. It's just, I'm facing a lion and I can't, I can't get away from it. You, you see the place that I'm faced with a lion, then I can't get away from it because sometimes I think that I should not go to work, but I think that there are people who need my help there, you understand (nurse A036).

This quote captures the sense of COVID-19 being life threatening. In this case, fear of COVID-19 is negatively affecting the healthcare worker's mental state.

Differing Views on Changes in Services

HIV Services.

Many different views were expressed regarding how HIV services had changed as a result of COVID-19. In terms of changes observed in HIV testing, most healthcare workers expressed that they thought HIV testing rates decreased, and only a couple expressed they thought these rates had increased.

Mmm, well testing was a few because it was sick people. There were not many people coming in. There would only be people who came for testing COVID or when the person says he/she has flu. So not many came in and then the testing rate… the testing rate was very low - especially for adolescents (nurse A040).

At that time they were scarce to a point that our stats were very low in terms of HIV testing and treatment initiation because some were not here and some were in houses and they were not coming to the clinic. So we were not doing really well (nurse A042).

In these extracts, it can be seen that healthcare workers observed that HIV testing rates decreased during the COVID-19 pandemic, possibly because people were not living close to the clinic during COVID-19, so they stopped coming in. Also, AGYW were not coming into the clinic unless they were sick with flu symptoms.

However, other healthcare workers felt there had been no changes in HIV testing, which stands in contrast to the findings mentioned above.*"Mmm-mmm, no" (nurse A039).*

Healthcare workers were asked what challenges they faced in rendering HIV services to AGYW. *"On the adolescents, no [noise]. No, there is nothing I remember right now" (nurse A035).*

Difficulties with AGYW and HIV treatment during the pandemic was also an important finding. The COVID-19 pandemic inhibited AGYW from coming in for check-ups every two weeks, so it was difficult to see if HIV medication was working.

I think that some of the patients that are diagnosed with HIV need intensive care, especially during the first months of treatment. So some of them, because of the load in the clinic that required us to accommodate everyone, we were not able to... Like when we start you on treatment, we need you to come back every 2 weeks until we see that there is nothing happening to you. But at the COVID period we were not able to (nurse A042).

Additionally, there were many AGYW defaulting on HIV treatment during the COVID-19 pandemic.

There are defaulters, especially ones from during [person opens door]. Mmm, there is a lot of defaulters in the pandemic period. To a point we were taking them out 2 weeks back and we saw that…there is a lot of defaulters (nurse A040).

Family Planning.

There were differing views on the changes in family planning services during the COVID-19 pandemic, with some feeling that family planning was more in demand. "*Yes, they were coming more often when it comes to family planning, they were coming and it would be full here, they were coming" (nurse A035).* Others felt family planning was less in demand.

Mmmm…[long pause] it [the demand for family planning services] decreased because of waiting time as I have said because when someone has booked, he/she would end up not reaching the nurse (nurse A031).

Here, family planning is described as not in demand because of the unavailability of healthcare workers (which led to adolescents not wanting to wait, and thus they would leave).

Lastly, the view that were no challenges in family planning service provision was expressed. "*No, there was no challenge… since family planning is on fast-track, so we didn't experience anything out of the ordinary, you see. Things like high pregnancy [noise] no, no, I didn't have that" (nurse A035).*

Antenatal Care.

In terms of antenatal care, the changes noted among healthcare workers were minimal, as most reported that patients needing antenatal care would still come during COVID-19. However, one healthcare worker noted that sometimes patients wait longer before coming for a visit. *"No, I haven't noticed anything because I see others queueing in the ANC side"(nurse A038).*

But they only problem that they've been highlighting is that they, they take time to come in and start their ANC visits. Some will come after three months so, wait longer than they should've come. That's the only problem but they do come. But they take a lot of time at home (nurse A030).

Discussion

This study offers important insights on the experiences of healthcare workers, and the experiences of AGYW affected by HIV (as informed by the perspectives of healthcare workers).

An important finding that emerged was that AGYW were experiencing difficulties with changed routines in clinics, and changes in their own routines as a result of COVID-19.

Attention was drawn away from routine healthcare during the pandemic, as COVID-19 patients become a priority. This in turn drove AGYW away from clinics, as they would get tired of waiting to be helped. AGYW often only came into the clinic for important check-ups such as blood tests.

The pandemic also led to stock-outs and AGYW often could not get medication they required. This is in line with research that states that the COVID-19 pandemic has disrupted access to health services and supply of medications (Cousins, 2020). This has implications for service delivery: services become delayed and patients often have to wait until specific medications become available (Cousins, 2020). Delays might further discourage patients from coming to clinics (particularly if there are extra expenses such as transport money involved). If patients do not receive the treatment they require, this undoubtedly is detrimental for health outcomes (van Staden et al., 2022). A recommendation is to prescribe a two months' supply of medication, which is a strategy participants in this study employed.

Another challenge experienced was a lack of continuous health education and support for AGYW. This could be due to the fact that AGYW do not want to come to the clinic frequently enough to receive adequate health education to effect behaviour change. However, it could also be due to healthcare workers having to deal with other responsibilities (an influx of COVID-19 patients) during the COVID-19 pandemic, which could inhibit their ability to effectively provide continuous support for AGYW. Having to care for patients in life-threatening scenarios draws attention away from routine care.

Research conducted in sub-Saharan Africa has found that areas with more HIV knowledge do not show evidence of greater changes in behaviour (Oster, 2012). But, sufficient health knowledge has been shown to facilitate behaviour change in young people (Kurth et al., 2011). Knowledge alone does not necessarily lead to behaviour change, but improved health education and advice may facilitate improved health services. Healthcare workers stressed the importance of continuous health education and support, and policy makers can use this knowledge to inform effective interventions for AGYW affected by HIV.

Limited access to healthcare services due to issues such as transport changes or long queues, and fear of coming to the clinic were prominent difficulties that emerged. It is possible that AGYW avoided coming to the clinic due to stigma associated with HIV care, as stigmatisation reduces the chances of a person seeking healthcare (Govender et al., 2020). Interventions for AGYW can target HIV stigma reduction, which could assist in reducing fear of coming to clinics and promote health-seeking behaviours (Skeen et al., 2017).

Strategies to reduce clinic queues should be encouraged, and programs aimed at addressing transport issues should be developed.

Healthcare workers' varying perceptions of AGYW was interesting. Adolescent girls were described as having a negative attitude, such as an *"I don't care" (nurse A030)* attitude or acting entitled. Other healthcare workers described AGYW as open and honest. It is clear from the varied findings in perceptions of AGYW's attitudes that subjective feelings differed widely among healthcare workers.

A common perception was that AGYW were impatient, as they were described as not wanting to wait in clinic queues to be attended to. Overburdened health systems and long queues at clinics is a widespread problem in South Africa (Dorward et al., 2021). It is thus understandable that AGYW would be impatient waiting in these long queues. However, AGYW would also often act on their impatience (for example, they would try jump ahead of others in the queue), which would cause healthcare workers to feel stressed as they would have to deal with the repercussions of this. It is thus likely that AGYW are impatient, and that clinics queues are extremely long, and there are thus problems with clinics and AGYWs' negative attitudes. This could mean that reducing clinic queues could lead to a reduction in impatience in AGYW (as perceived by healthcare workers), and in turn, a reduction in related stress for healthcare workers. Once again, strategies to reduce clinic queues, such as fast-tracking, should be implemented (Daniels et al., 2017).

On the contrary, many AGYW were described as patient, and this could be due to a variety of reasons (maybe certain individuals are more patient, or maybe other clinics have shorter queues).

Healthcare workers described effective strategies to help adolescents. Strategies such as efficient appointment systems and providing AGYW with a two months' supply of medication assisted in reducing clinic queues and allowing AGYW to come to the clinic less often. These strategies also ensured effective medication provision. These strategies are not new, and other healthcare workers in clinics from other countries have used similar approaches (Mardiah & Basri, 2013; Venables et al., 2016). Healthcare workers actively tried to improve health systems and reduce the experience of waiting in queues for AGYW (which could help reduce their feelings of impatience).

Another general successful strategy was healthcare workers working collaboratively as a team. This allowed for the effective completion of tasks around the clinic, and allowed for effective service provision for patients. Due to the apparent success of this strategy, clinic managers could actively try to implement or encourage this strategy in clinics. For example,

team-building activities and teamwork skills training can be provided for nurses to encourage and enhance teamwork (Kalisch et al., 2007).

Many healthcare workers tried to put themselves in the shoes of AGYW, and adapt their language use to accommodate them. This is a positive finding, and shows that many healthcare workers are already utilising helpful strategies. Healthcare workers stressed the importance of AGYW feeling comfortable enough to communicate freely and reveal information. This strategy has implications for effective health service provision. Social support influences have been shown to positively influence seeking help (Phillipson et al., 2009). Effective understanding and language adaptation may facilitate effective communication, and AGYW may feel supported. This strategy may aid in delivering more effective/appropriate health services for AGYW, and may encourage AGYW to seek help.

The strategy of healthcare workers sharing their personal contact numbers with their young patients assisted with communication and support. This adaptive response is in line with the previous HEY BABY study focusing on healthcare workers (Kelly et al., 2021). This illustrates that healthcare workers continue to use this strategy that has been in place since the start of the COVID-19 pandemic. However, this strategy is not always beneficial; this study showed that sometimes it is misused by young people and becomes a burden for healthcare workers.

External support such as assistance from NGOs for medication provision, tracing missing patients, and providing counselling services also assisted healthcare workers. The positive benefits of NGOs is something that was not reviewed, but NGOs providing support for clinics is not a new strategy. NGOs often provide assistance to improve access to services and assist clinics in addressing limitations in service delivery (Arifeen et al., 2013). The implications of this are that health systems and clinic managers should continue to encourage drawing on assistance from NGOs.

Healthcare workers expressed their views on the negative effects of the COVID-19 pandemic. One common finding was a lack of infrastructure and equipment, such as office space and PPE. This is in line with findings stating that the pandemic has exacerbated the problem of healthcare facilities being under-resourced (and thus ill-equipped to provide effective healthcare) (Kelly et al., 20202; Memirie et al., 2022). Healthcare workers stated that if they had the proper equipment and infrastructure, their services could potentially be improved. This is important because it shows that inefficient service provision may be due to insufficient resources.

In terms of shortage of staff and the negative consequences of this for service provision, main findings revealed were the resulting treatment access issues, and that remaining healthcare workers were overloaded with tasks. This is in line with the previous HEYBABY healthcare worker study, and other literature, which has posited that healthcare workers faced additional strain as a result of staff shortages during the COVID-19 pandemic (Kelly et al., 2021; Nachega et al., 2021). If healthcare workers feel overloaded, this may negatively impact the quality of work they can produce or provide. This finding also further points to the importance of psychosocial support for healthcare workers, as feeling overburdened with work undoubtedly leads to challenges related to mental health.

The finding about a lack of mental health and social support services aligns with previous studies that have emphasised the issue of a lack of psychosocial support for healthcare workers during the COVID-19 pandemic (Kelly et al., 2021; Robertson et al., 2020). As discussed previously, the COVID-19 pandemic has exacerbated mental health issues for healthcare workers, suggesting that healthcare workers are suffering mentally more now than they were before the pandemic (Shah et al., 2021). Additionally, fear of COVID-19 is negatively affecting healthcare workers' mental well-being. Given these worsened mental health issues, and the evident lack of psychosocial support, mental health services are now especially vital and in demand for healthcare workers. Sufficient mental health services could assist healthcare workers in dealing with their mental struggles and fears.

A range of different views on changes in services during COVID-19 were found. In terms of HIV testing rates, many healthcare workers reported these decreased. This is consistent with literature reviewed (The Global Fund, 2021). The COVID-19 pandemic drove people away from routine HIV care. Other healthcare workers have expressed there were no changes in the number of AGYW coming in for HIV testing and counselling services. The fact that there were no challenges in providing HIV services in general to AGYW during the COVID-19 pandemic was also found.

Challenges associated with adolescents and HIV treatment were common. The pandemic inhibited people from coming in for routine check-ups, so assessing the efficacy of HIV medication for AGYW was difficult. Many healthcare workers dealt with AGYW defaulting on HIV medication during the pandemic. Novel COVID-19-related challenges affected adherence to treatment, as AGYW moving away and fearing coming to the clinic inhibits them from coming to get treatment at clinics. A few healthcare workers expressing limited challenges in providing HIV testing and counselling services during the pandemic stands in contrast to literature, as well as other findings mentioned here (Nachega et al.,

2021). It is possible the reason for lack of challenges is due to the fact that associated facilities had fast-tracking systems which may have facilitated how routine services were managed in these clinics. However, this is suggestive and it remains unclear why certain healthcare workers reported these limited challenges.

The demand for family planning was contested. Some described it as being in high demand, and others described fewer AGYW coming in for family planning services due to healthcare workers being unavailable to have consultations (so once again, the pandemic drove people away from routine healthcare services). This is supported by literature that states that there were limits in access to family planning services during the pandemic (Cousins, 2020).

Changes in antenatal care services were not commonly reported, although some patients waited longer before coming in for visits, according to healthcare workers. This could potentially be due to fear of COVID-19 and not wanting to come to the clinic.

Conclusion and Recommendations for Future Research

The overall objective of this study was to explore how healthcare workers subjectively experienced providing services for AGYW living with HIV during the COVID-19 pandemic. This research study assisted with gaining insight into challenges and barriers experienced by healthcare workers, as well as insight into how AGYW experienced health services (from the perspective of healthcare workers). Information on effective strategies employed to aid service provision for AGYW was gained. It is recommended that these strategies should be encouraged and implemented in clinics.

In terms of limitations, this study took place in a certain region in the Eastern Cape. Thus, the participants may have not been representative of all healthcare workers in South Africa. However, this study was qualitative, meaning the aim was not to generalise findings to other populations. Additionally, healthcare workers from rural, urban, and township settings in the Eastern Cape were interviewed, and this diversity in setting is a strength. The Eastern Cape province in particular struggles with healthcare services, which strengthens the need for data from this province (Treatment Action Campaign, 2018). Healthcare workers were asked about their experiences of dealing with AGYW but the latter group were not interviewed. This research may have yielded more nuanced data if AGYW were interviewed too, and compared against healthcare worker perspectives. Lastly, interviews conducted in isiXhosa were translated into English. Therefore, certain phrases may have lost their original meaning in translation and English terms may not represent original concepts sufficiently.

However, the HEYBABY team members checked translations with each other, and Lains Transcriptions Services followed a quality check procedure.

In order to address this study's limitations, future research could focus on other healthcare workers from other facilities, in order to determine if the findings in this study are corroborated by other findings from other populations. Lastly, future research could focus on the experiences of both healthcare workers and AGYW, in order to gain a deeper understanding of the subjective experiences of both of these vulnerable groups.

In terms of assistance for healthcare workers, organisations and policy makers can address the lack of infrastructure and equipment issue among healthcare workers. Sufficient resources may aid more effective service provision. The need for effective mental health services is clear, and this is another area that future research or interventions can focus on improving.

The differing views expressed among healthcare workers on AGYW and on changes in services due to COVID-19 speak to the complexity of the findings. The possible explanation for these varied perceptions remains unclear. Future research should further explore healthcare workers' views on AGYW and how healthcare services have changed in light of the COVID-19 pandemic. In addition, research can focus on actually documenting these changes. These studies will be useful for potentially providing clarity on the topic, and will contribute to this under-researched area.

Despite these limitations, this study was significant because understanding healthcare workers' experiences of providing health and HIV services for AGYW during the COVID-19 pandemic can help in addressing challenges experienced by healthcare workers, so that interventions and prevention strategies can be implemented. This research aimed to inform recommendations on managing health services and HIV services more effectively. It is possible that findings may help in improving sexual and reproductive health and other services, and the circumstances for the healthcare workers that work in these services.

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Appendix A: Interview Guide

HEY BABY Healthcare Worker Study: Interview Guide

I am going to switch on the recording device and we can get started with the interview. I have also put my phone on silent so we don't get interrupted.

Ndizakulayita irecording device sizokwazi ukuqalisa nge interview. Iphone yam ndiyibeke kusilent ukwenzela singaphazamiseki.

Introductory questions

Like we mentioned in the information sheet, this study focuses on providing healthcare services during the COVID-19 pandemic to adolescents and young people, including young mothers and young people living with HIV. So the questions we are going to ask will focus on this topic. When we talk about adolescents and young people, we are referring to young people between the ages of 10-24 years.

Njengoba besitshilo kwi information sheet, istudy esi sijonge ekunikezeleni nge nkonzo ngexesha le covid 19 kwi adolescents nabantu abatsha, nomama abasebancinci nolutsha oluphila nentsholongwane ka gawulayo (HIV). Xa sithetha nge adolescents nabantu abatsha sithetha ngabantu abaneminyaka eyi 10-24.

First, we'd like to hear a little bit about you and your healthcare facility.

Okokuqala singathanda ukuva kancinci ngawe neHealth care facility yakho (Ikliniki osebenza kuyo).

1. What kinds of services do you provide at your healthcare facility?

   Zeziphi iinkonzo enizinikezayo kwi healthcare facility (Kliniki) yakho?

   Tell me about your specific role in providing these services?

   Ndixelele ngendima oyidlalayo okunikezeni ezi services?

2.
   - Follow up: How long have you been in your current position?
   - Unexesha elingakanani usebenza kulendawo ukuyo ngoku?
   - Follow up: Are you involved in delivering services via MomConnect?
   - Ingaba u-involved ekunikeleni nge services ku kuMomConnect?/Uyamsebenzisa uMomConnect xa unikezela iservices?

     Ndixelele ngendima oyidlalayo okunikezeni ezi services?

3. What about when it comes to providing ~~these~~ services to adolescent girls and young women at your facility – can you tell me a bit about that?
    - Follow up: Is it different/the same as providing services to other people; for example, adolescent boys and young men?

Kubanjani xa kufuneka unikezele iinkonzo kumantombazana azi adolescents (amantonbazana) nakumanina asematsha (amantombi) Kwifacility/kliniki yakho - Ndixelele kancinci ngaleyo?

- **Umbuzo olandelelaylo: Ukhona umahluko /kuyafana nokunikeza iinkonzo kwabanye abantu, umzekelo, adolescent boys (amakhwenkwe) kumadoda amatsha (abafana)?**

4. **For HCWs from first study:** Thinking back to the last time we interviewed you near the beginning of the COVID-19 pandemic (around October 2020), how has your experience of providing services changed since then?

For HCWs from first study: Xa ucinga emva kwixesha elidlulileyo ngoku besiku interviewer kusaqala iCovid 19 pandemic (around October 2020) ingaba lunjani utshintsho olwenzekileyo ekunikezeleni ngenkonzo ukusukela ngoko?

HIV and SRH service provision during the COVID-19 pandemic

Now I'd like to ask some questions focused on HIV and sexual and reproductive health services for adolescents and young people (including adolescent girls and young women) during the COVID-19 pandemic. We realise that the pandemic has changed over time – we have gone through different lockdown levels, different waves. We are interested in *your* experience of delivering services throughout these changes.

Ngoku ndingathanda ukubuza imibuzo emayelana ne HIV ne sexual and reproductive health services kwi adolescents nabantu abasebatsha (kunye ne adolescent girls (amantombazana) namanina asematsha (amantombi) kwelixesha le covid 19 pandemic. Sifumene ukuba ipandemic le iye yatshintsha-tshintsha ngokokuhamba kwexesha- siye sabakwi levels ezohlukeneyo zelockdown ne waves ezohlukeneyo. Sinomdla wokuva amava akho ekunikezeni iinkonzo kolutshintsho oluninzi belusenzeka.

5. Please think about your experiences providing HIV services to adolescents - including adolescent girls and young women - during the COVID-19 pandemic - Can you tell me about a particular experience that comes to mind?
    - Follow up: What kinds of challenges did you experience in providing HIV services to adolescents/adolescent girls and young women? Can you give me an example of your most significant challenge?
    - Follow up: What strategies did you use in dealing with these challenges?
    - Follow up: What worked well for you in delivering HIV services to adolescents?

- Follow up: What kinds of support (if any) did you get in delivering HIV services to adolescents/adolescent girls and young women?
    - For example – support from your facility, from your colleagues, the government?
- Follow up: What do you think needs to change so that you feel better supported in delivering HIV services to adolescents?
- Follow up: What was your experience working with your colleagues/co-workers in delivering HIV services to adolescents?
    - Probe: What worked well/what didn't work well?

Sicela ucinge ngamava akho ekunikezeni iiHIV services nesexual reproductive health kwi adolescents-(oku kuquka ii-adolescent girls (amantombazana) namanina asematsha (iintombi))- kwelixesha le covid 19 pandemic? Ungandixelela umzekelo ofikayo engqondweni yakho weExperiance oye wanayo.

- **Follow up: Zeziphi iingxaki oye wajongana nazo ekunikezeni iiHIV services kwi adolescents / -adolescent girls (amantombazana) namanina asematsha (iintombi)? Ungandinikeza umzekelo weyona ngxaki obujongene nayo?**
- **Follow up: Zeziphi iindlela okanye amacebo owasebenzisileyo ukujongana nezingxaki?**
- **Follow up: Yhintoni esebenze kakuhle ekunikezeni nge HIV services kwi adolescents?**
- **Follow up: Yeyiphi inkxaso(Ukuba ikhona) oye wayifumana ekunikezeni ngeenkonzo kwi -adolescent girls (amantombazana) namanina asematsha (iintombi)? Umzekele: inkxaso esuka kwifacility/kliniki yakho,okanye esuka kubantu osebenza nabo, nokurhulumente.**
- **Follow up: Yintoni ocinga ukuba funeke itshintshile ukuze ukwazi ukuba uzive usupported ekunikezeni iinkonzo kwi adolescents.**
- **Follow up: Bekunjani ukusebenza nabantu ophangela nabo ekunikezeni iiHIV services kwi adolescents (Probe: Yhintoni ibinisebenzela kakuhle futhi iyintoni ebinganisebenzeli kakuhle)**

6. Can you tell me about a new or different strategy that you used so that adolescents and young people were able to *carry on accessing* HIV services during the pandemic, especially when COVID cases were high or we were in a hard lockdown?

Ungandixelela ngendlela entsha okanye eyohlukileyo othe wayisebenzisa ukuze iadolescents nabantu abatsha baqhubeke befumana iiHIV services ngexesha le pandemic, ikakhulu ngoku iCovid cases bezise phezulu okanye besikwi lockdown enzima?

- Follow up: Was this a strategy that you used personally, or that was used across your facility?
- Follow up: Ibiyindlela ubuyisebenzisa lena wena ngokwakho, okanye yinto ibikade isetyenziswa kwifacility (kliniki) yakho?
- Follow up: How did this new strategy impact your work?
- **Follow up: Lendlela intsha ibe negalelo elinjani kumsebenzi wakho?**
- Follow up: How do you think this new strategy might have benefitted adolescents/adolescent girls and young women?
- **Follow up: Ingaba ucinga le ndlela entsha ibeyinzuzo kwi adolescents/ - adolescent girls (amantombazana) namanina asematsha (iintombi)**

7. Can you tell me about any services that you noticed were MORE in demand during the COVID-19 pandemic, specifically for adolescents?

Ungandixelela ngeenkonzo ongabe uqaphele ukuba beziyimfuno kakhulu ngexesha le covid 19 pandemic, ingakumbi kwi adolescents?

8. And what about any services that were LESS in demand for adolescents?

- Follow up: Tell me about any changes you noticed with adolescent girls and young women who came for HIV testing and counselling services?
- Follow up: Tell me about any changes you noticed with adolescent girls and young women who came for family planning or contraception services?
- Follow up: Tell me about any changes you noticed with adolescent girls and young women who came for ARTs?
    - Probe: How did you respond if adolescents defaulted on their ARTs?
- Follow up **(if HCW provides maternal services specifically):** Tell me about any changes you noticed with young mothers who came for antenatal or postnatal services, including services for their babies and children?

Futhi zeziphi iinkonzo ebezingeyo mfuneko kakhulu kwi adolescents?

- Follow up: Ndixelele ngotshintsho olubonileyo kwi adolescents namantombazana amancinci ebebesiza for HIV testing and counselling services?
- Follow up: Ndixelele nangaluphi ngotshintsho olubonileyo kwi adolescents namantombazana amancinci ebebezo cwangcisa okanye besebenzisa iinkonzo zokucwangcisa?
  Follow up: Ndixelele malunga ngo utshintsho olubonileyo kwiadolescent girls kunye nomama abaselula abazayo for ARTs?
  Probe: Uye wenze njani ukuba iadolescents ziyadefaulter kwipilisi zabo/ARTs?

- Follow up (if HCW provides maternal services specifically): Ndixelele loluphi na utshintsho ongabe ulubonile komama abasebancinci ebebesiza for iiantenatal okanye iipostnatal services, kunye neenkonzo zabantwana babo?

9. **For HCWs who are involved in MomConnect:** We want to understand what supports young mothers to attend services and not miss appointments, and one of the things we have heard of is MomConnect, but we are not sure how this works for young mothers. What is your experience with MomConnect and young mothers?
    - Follow up: What is your experience of registering young mothers on MomConnect, compared to older mothers?
    - Follow up: Do you think young mothers are able to access the services via MomConnect, and do they use these services?
    - Follow up: What do you think young mothers think about the content of the messages from MomConnect?
    - For HCWs who are involved in MomConnect: Sifuna ukuqonda ingaba yintoni inxaso edingwa ngoomama abaselula uku attend'a iiservices nokungaphosi appointments, kwaye enye yezinto esakhe seva ngayo nguMomConnect, kodwa asiqinisekanga ukuba usebenza njani komama abaselula. Athini amava akho kuMomConnect nakomama abaselula?
    - Follow up: Athini amava akho okuregisterisha omama abaselula kuMomConnect, xau comparisha nomama abadala.
    - Follow up: Ucinga ukuba omama abaselula bayakwazi ukuzifumana ezinkonzo kuMomConnect, kwaye bayazisebenzisa ezinkonzo?
    - Follow up: Ucinga ukuba bacinga ntoni omama abaselula ngecontent (information/details) ekwimiyalezo esuka kuMomConnect?

In the shoes of adolescents

I'd now like for you to put yourself in the shoes of adolescents and young people (including those living with HIV) during the COVID-19 pandemic – try to picture what this time might have been like for them.

Ndingathanda ukuba uzifake ezinyaweni ze-adolescents nabantu abatsha (Ufake kwanabo baphila neHIV) ngexesha leCovid -19 pandemic- khauzame ukubanombono ingaba mhlawumbi bekunjani ngeloxesha kubo

10. What do you think has been *their* experience of healthcare services during the COVID-19 pandemic?

Ucinga ukuba bekunjani *kubo* ukufumana iinkonzo ze mpilo ngexesha le COVID-19 pandemic?

- Follow up: What challenges do you think they might have experienced in accessing services?
- **Follow up: Zeziphi ichallenges ocinga ukuba baye badibana nazo ekufumaneni iinkonzo zempilo?**
- Follow up: How do you think they might have dealt with these challenges? **Follow up: Ucinga ukuba baye bamelana njani nezi challenges?**

11. What support do you think adolescents need to be able to *carry on* accessing healthcare services during the pandemic, especially when COVID cases might be high again, or we are in a hard lockdown?

Ucinga ukuba abantu abatsha badinga inkxaso enjani ukuze bakwazi ukuqhubeka befumana iinkonzo zempilo ngexesha le pandemic, iskakhulu xa amanani eCOVID enokuphinda abephezulu, okanye sibekwi hard lockdown.

12. If you could change or improve one thing about health services for adolescents/adolescent girls and young women, what would it be?

Ukuba ungakwazi ukutshintsha okanye uphucule into enye ngenkonzo zezempilo for adolescents /adolescent girls kunye nomama abaselula, ingaba yintoni?

Closing questions

13. Thank you so much for your time and for being willing to talk to us about your experiences. We found it really insightful, and we are excited to have your experience be part of our work. If we have any follow up questions, would it be ok to contact you?

Siyabulela ngexesha lakho nangokuthi ukwazi uthetha nathi malunga namava lakho. Sifumanise iyinto insightful nyani, kwaye sinomndla ukubanalo ulwazi lwakho layinxalenye yomsebenzi wethu. Ukuba sinazo iifollow up questions, ingaba kulungile ukuqhakamshelana nawe?

14. As part of our HEY BABY research project, we are always looking for ways to share our findings with other stakeholders, including healthcare workers and health facilities. Would you or your facility be interested in hearing more about our project if we host an event?

Siyinxalenye kaHey Baby research project , Ngalolonke ixesha sikhangela indlela zokwabelana ngefindings zethu kunye nezinye istakeholders, including ihealthcare workers kunye nehealth facilities. Ungaba ukuba ifacility yakho inganomdla wokuva more nge project yethu ukuba singane event?

15. We are also thinking about hosting group discussions in the future with healthcare workers, and adolescents and young people. Would you be interested in taking part in a discussion like this?

Sikwacinga ngokubanee group discussions in the future kunye nehealthcare workers, kwane adolescents nabantu abatsha. Unganomndla ekuthatheni inxaxheba kwii discussions eziloluhlobo?

Sisaqala ukusebenzisa le interview guide. Sinomdla wokwazi ukuba unayo na ifeedback for thina: umzekelo , nayiphi imibuzo ibingavakali okanye engabuzwa ngenye indlela/ngokwahlukileyo?

16. We are still going to conduct more interviews, and we were wondering if you know of any healthcare workers who provide services to adolescents, who you think might be interested in participating in this study?

- **If they respond YES:** Would you be able to provide us with their name and contact number? When we contact them, is it ok if we mention you referred us?

Sisezakuqhubeka sisenza more interviews, kwaye besicinga if zikhona na ezinye ihealthcare workers ozaziyo ezinikeza ngeenkonzo kwi adolescents, nabanina omncingayo mhlawumbi ongabanomndla wokuparticipater kwesistudy?

- **Ukuba Bayavuma: Unganakho ukusinika amagama abo kunye necontact number? Xa sibafowunela, ingaba kulungile xasisithi sithunyelwe nguwe?**

17. As you will have seen, there were two of us doing this interview together. We wanted to find out: how was this experience for you?

- **Follow up: What did you like about it/what didn't you like about it?**
- **Follow up: Did it work well for you/did it not work well for you?**

Njengoko ubonile ukuba besisenza le interview kunye sibabini, sinqwenela ukwazi, uzive njani malunga nalo nto?

- **Yintoni oye wayithanda ngalo nto/ yintoni ongayithandanga ngayo?**
- **Ingaba isebenze kakuhle kuwe le nto/ayisebenzanga kakuhle kuwe le nto?**

18. Do you have any questions or comments for us before we end the interview?

Ingaba ikhona imibuzo onayo okanye iicomments for thina phambi kokuba sigqibe leinterview?

19. As a thank you for participating in this interview, we have a snack pack gift for you, and also some information on our HEY BABY project and healthcare worker study. It includes our contact information in case you have any follow up questions.

Ukukubulela ngokuthatha inxaxheba kule interview, sinesipho esisisnack pack for wena, kunye nenkcazelo ngoHey Baby project kunye nehealthcareworker study. Kukhona ne contact information yethu xakuthe kwenzeka ukuba ubene mibuzo onayo.

Thank you. I’m going to switch off the recorder and we can close the interview.

Enkosi. Ndizakucima irecorder kwaye singavala interview.

Appendix B: Reflection Form and Quality Control Template

QUALITATIVE INTERVIEW REFLECTION FORM: HCW 2022 Study

- Please complete this self-reflection form as soon as possible after the interview (ideally within one hour after the interview).
- This form provides you with an opportunity to reflect on the process, content and your overall experience of the interview. This is important for a few reasons:
    - It enables us to see whether any questions/probes need to be changed or adapted;
    - It helps us identify any areas that might need follow up clarification, or even another interview;
    - It gives you an opportunity to reflect on and process anything difficult or challenging that may have come up during the interview;
    - It alerts us to possible referrals; and
    - It is a starting point for getting to know what our data is telling us
- We will use these self-reflection forms for discussion points during our group debriefing meetings.
- Once you have opened this document:
    - Download it and create a NEW copy;
    - Label it as follows: YYYMMDD_Serial Number_Reflection Form_RA Initials (e.g. 220616_A001_Reflection Form_JK)
    - Save it on OneDrive/HCF in the Reflection Forms Folder
        - HEY BABY Data Collection --> HEY BABY Fieldteam 2020 --> Qualitative HCW 01 --> HCW Study 2022 --> 1. Data Collection --> 5. Reflection Forms

Date completed	*DD/MM/YYYY*
Name of person completing form	*NAME SURNAME*
Interviewer	*NAME SURNAME*
Observer	*NAME SURNAME*
Participant serial number	*e.g. A001*
Participant position in health facility	*e.g. nurse in ARV unit*
Type of healthcare services participant delivers	*e.g. HIV services*
Place conducted	*e.g. HEY BABY office*
Duration of interview	*e.g. 1 hour, 10 mins*

Please provide a brief summary of the interview conducted.

- What was the setting of the interview like?
- How did the participant respond to you?

Your reflections:

Please write down your reflections on the process of the interview.

- How did the process of consent go?
- How was the flow of the interview?
- What questions were difficult? What questions went well?
- Are there any questions we should change or ask differently?
- Were the probes helpful? Were there any probes you did not use?
- Did anything come up in the interview that you wished you had followed up on?

Your reflections:

What was your experience of interviewing as a pair? How did the participant respond to this?

Your reflections:

Please write down your reflections on the content of the interview?

- Do you have any thoughts about the interview or the participant that surprised you or stood out? (Please write down any interesting quotes that stood out – use your own words if you need to)
- How did participants respond to your questions?
- What did the participant think about the questions? Were there any they did not understand?
- Did the participant ask you any questions?
- For piloting: Were there any suggested changes to the interview guide?

Your reflections:

Take a moment to check in: Please write down your reflections on how you felt during the interview?

- What is your general feeling/impression of the interview?

• Was there anything difficult or challenging that came up that you want to write down/discuss?
Your reflections:
Was there anything that the participant shared that made you think they might need referral to counselling? • Please describe what happened.
Your reflections:
Any additional comments you would like to make?
Your reflections:

Quality control questions

- This section needs to be completed by the RA who conducted the interview.
- It should then be checked by a field management team member who should listen to (parts of) the recording, and also review the reflection form answers above.
- Where there are any follow up questions, the field management team member must discuss with the RA, and where necessary, bring the question/s to the study lead.

Was the interview done to the best of your ability? (Yes/No. Please include an explanation for your answer)

Were there any parts of the interview that you could have done better? (Yes/No. Please include an explanation for your answer)

Was the Informed Consent done well and understood by the participant, after which the participant was given a choice between a Yes or No to take part in the study? (Yes/No. Please include an explanation for your answer)

Are there any confusing questions, where you found the participant getting confused by the question, or even the RA hesitating or showing some kind of confusion or difficulty in explaining the question well to the participant? (Yes/No. Please include an explanation for your answer)

Is the RA owning the interview guide such that she is able to present it in an understandable way (XhEnglish) or just reading interview guide as it is in English? (Yes/No. Please include an explanation for your answer)

Was the interview completed – all questions to the end? (Yes/No. Please include an explanation for your answer)

Appendix C: Ethics Approval Forms

12th May 2022

Human Research Ethics Committee
E52-24 Old Main Building, Groote Schuur Hospital
Faculty of Health Sciences

226/2017: HEY BABY (Helping Empower Youth Brought up in Adversity with their Babies and Young Children)

Notification: Co-developing intervention packages for pregnant or parenting learners and further interviews with healthcare providers

Dear Ethics Committee,

Co-developing intervention packages for pregnant or parenting learners

The research team will continue the use of participatory, art-based methodology as outlined in protocol v10. In this year's activities, Teen Advisory Group (TAG) adolescent research advisors will be engaged in brief, iterative, participatory and youth-friendly design activities focused on developing an ideal or 'dream' intervention package for pregnant or parenting learners. These design activities are centred around the experiences of young mothers and aim to elicit their perspectives, needs, desires, and values in order for the HEY BABY team to advise the Department of Basic Education on the optimal implementation of its new policy on the prevention and management of learner pregnancy. These activities will continue to follow ethical guidelines that have been approved in previous submissions.

Semi-structured interviews will be conducted (either remotely via telephone or in-person following approved face-to-face protocols) with adolescent mothers (estimated n=2-6) to explore the proposed methodology for design activities and to receive their recommendations for engaging with other young mothers.

In-person participatory research workshops will be conducted with TAG participants based in the Eastern Cape and Western Cape (estimated n=30 in two workshops) utilising creative materials and arts-based methods to interpret and unpack recent scientific evidence, and then apply this knowledge and discussion to prioritise and map ideal and supportive interventions. Methodologies applied in similar research (reviewed and approved by HREC) will be adjusted for COVID-19 considerations and improved using feedback from the semi-structured interviews with adolescent advisors. These activities are supported by an existing grant (UKRI GCRF Grant Ref: ES/S008101/1, PI: Cluver).

Further interviews with healthcare providers

In addition to the continuation of participatory research activities, the research team will also conduct further interviews with healthcare providers, as outlined in the protocol v10. The data from the first round of interviews conducted in 2020 with 13 healthcare providers were analysed and published in a chapter in the South African Health Review which can be found here: https://www.hst.org.za/publications/South%20African%20Health%20Reviews/Chapter6_SAHR21_04022022_OD.pdf with a second manuscript under revise and resubmit with the Psychology, Health and Medicine Journal.

The findings from the first round of interviews in 2020 provided excellent insight into the experiences of healthcare providers during the first wave of the COVID-19 pandemic; including the challenges and barriers healthcare providers faced, and the strategies they used to overcome these challenges. In this second round of interviews the research team aims to explore – from the perspective of healthcare providers - how social and health-care related factors shaped the provision of HIV care during the COVID-19 pandemic (especially medication collection, viral load testing and retention in care) for young women living with HIV, including young mothers. As the COVID-19 pandemic evolves and continues to create challenges for healthcare service delivery – including HIV service delivery - it is important to consider the perspective of healthcare providers and how best they can be supported.

In-person semi-structured interviews will be conducted with n=12 to 15 healthcare providers based in hospitals, clinics and community health centres in the HEY BABY study catchment area in the Buffalo City Health Sub-District, in the Eastern Cape. The research team have identified n=6 healthcare providers from the first round of interviews who specifically provide services to young people, including young people living with HIV. We aim to interview these same healthcare providers, and additionally recruit more healthcare providers in the area through the network of relationships we have already established in the study catchment area.

These interviews will focus on healthcare providers experiences of HIV service provision during the COVID-19 pandemic to young women living with HIV, including young mothers. Particular attention will be paid to any challenges or barriers they may have encountered to providing services, as well as strategies they may have used to overcome barriers. In addition, we will consider how healthcare providers may have been supported in their provision of services during the pandemic, experiences of HIV and SRH services integration for young women affected by HIV and young mothers. This research is supported by two additional grants: an NIH supplement (Grant no. 1K43TW011434-01) and the National Research Foundation (Grant no. 138070) (PI Toska).

Interviews and all research activities will continue to adhere to the ethical guidelines approved in previous submissions, including COVID-19 protocols.

Addition of researchers
We would also like to add new co-investigators to the study including a new postdoctoral research fellow (Dr Hlokoma Mangqalaza) and three Doctoral Researchers (Ms Jenny Chen, Ms Chelsea Coakley, and Ms Angelique Thomas). Their details can be found in the CUREC2 form using tracked changes under section B.

Please do not hesitate to get in touch should you require any further information.

Best wishes,

Professor of Child and Family Social Work
Dept of Social Policy and Intervention, University of Oxford
Division of Child and Adolescent Psychiatry
Department of Psychiatry and Mental Health J-Block, Groote Schuur Hospital Observatory, Cape Town SA: +27 (0) 82 650 5815 UK: +44 (0) 1865 280336 lucie.cluver@spi.ox.ac.uk

A/Prof Elona Toska, D.Phil, MSc,
Associate Lecturer
Department of Sociology, University of Cape Town
Email: elona.toska@uct.ac.za

Department of Social Policy and Intervention
University of Oxford

12th May 2022

Notification: Co-developing intervention packages for pregnant or parenting learners and further interviews with healthcare providers, as well as new investigators

Dear Ethics Committee,

We are writing with a notification related to the HEY BABY (Helping Empower Youth Brought up in Adversity with their Babies and Young children) research project **(Ref No: R48876/RE001; R48876/RE002; R48876/RE003; R48876/RE007)**

Co-developing intervention packages for pregnant or parenting learners
The research team will continue the use of participatory, art-based methodology as outlined in protocol v10. In this year's activities, Teen Advisory Group (TAG) adolescent research advisors will be engaged in brief, iterative, participatory and youth-friendly design activities focused on developing an ideal or 'dream' intervention package for pregnant or parenting learners. These design activities are centred around the experiences of young mothers and aim to elicit their perspectives, needs, desires, and values in order for the HEY BABY team to advise the Department of Basic Education on the optimal implementation of its new policy on the prevention and management of learner pregnancy. These activities will continue to follow ethical guidelines that have been approved in previous submissions.

Semi-structured interviews will be conducted (either remotely via telephone or in-person following approved face-to-face protocols) with adolescent mothers (estimated n=2-6) to explore the proposed methodology for design activities and to receive their recommendations for engaging with other young mothers.

In-person participatory research workshops will be conducted with TAG participants based in the Eastern Cape and Western Cape (estimated n=30 in two workshops) utilising creative materials and arts-based methods to interpret and unpack recent scientific evidence, and then apply this knowledge and discussion to prioritise and map ideal and supportive interventions. Methodologies applied in similar research (reviewed and approved by IDREC) will be adjusted for COVID-19 considerations and improved using feedback from the semi-structured interviews with adolescent advisors. These activities are supported by an existing grant (UKRI GCRF Grant Ref: ES/S008101/1, PI: Cluver).

Further interviews with healthcare providers
In addition to the continuation of participatory research activities, the research team will also conduct further interviews with healthcare providers, as outlined in protocol v10. The data from the first round of interviews conducted in 2020 with 13 healthcare providers were analysed and published in a chapter in the South African Health Review which can be found here: https://www.hst.org.za/publications/South%20African%20Health%20Reviews/Chapter6_SAHR21_04022022_OD.pdf with a second manuscript under revise and resubmit with the Psychology, Health and Medicine Journal.

The findings from the first round of interviews in 2020 provided excellent insight into the experiences of healthcare providers during the first wave of the COVID-19 pandemic; including the challenges and barriers healthcare providers faced, and the strategies they used to overcome these challenges. In this second round of interviews the research team aims to explore – from the perspective of healthcare providers - how social and health-care related factors shaped the provision of HIV care during the COVID-19 pandemic (especially medication collection, viral load testing and retention in care) for young women living with HIV, including young mothers. As the COVID-19 pandemic evolves and continues to create challenges for healthcare service delivery – including HIV service delivery - it is important to consider the perspective of healthcare providers and how best they can be supported.

In-person semi-structured interviews will be conducted with n=12 to 15 healthcare providers based in hospitals, clinics and community health centres in the HEY BABY study catchment area in the Buffalo City Health Sub-District, in the Eastern Cape. The research team have identified n=6 healthcare providers from the first round of interviews who specifically provide services to young people, including young people living with HIV. We aim to interview these same healthcare providers, and additionally recruit more healthcare providers in the area through the network of relationships we have already established in the study catchment area.

These interviews will focus on healthcare providers experiences of HIV service provision during the COVID-19 pandemic to young women living with HIV, including young mothers. Particular attention will be paid to any challenges or barriers they may have encountered to providing services, as well as strategies they may have used to overcome barriers. In addition, we will consider how healthcare providers may have been supported in their provision of services during the pandemic, experiences of HIV and SRH services integration for young women affected by HIV and young mothers. This research is supported by two additional grants: an NIH supplement (Grant no. 1K43TW011434-01) and the National Research Foundation (Grant no. 138070) (PI Toska).

Interviews and all research activities will continue to adhere to the ethical guidelines approved in previous submissions, including COVID-19 protocols.

New Co-Investigators

We would also like to add new investigators to the study including a new postdoctoral researcher (Dr Hlokoma Mangqalaza) and three doctoral researchers (Ms Jenny Chen, Ms Chelsea Coakley, and Ms Angelique Thomas). Please find the attached fhs007, CVs, protocol v10 with added staff members on pg37, and updated Appendix 3C outlining the HEY BABY research team.

Please do not hesitate to get in touch should you require any further information.

Best wishes,

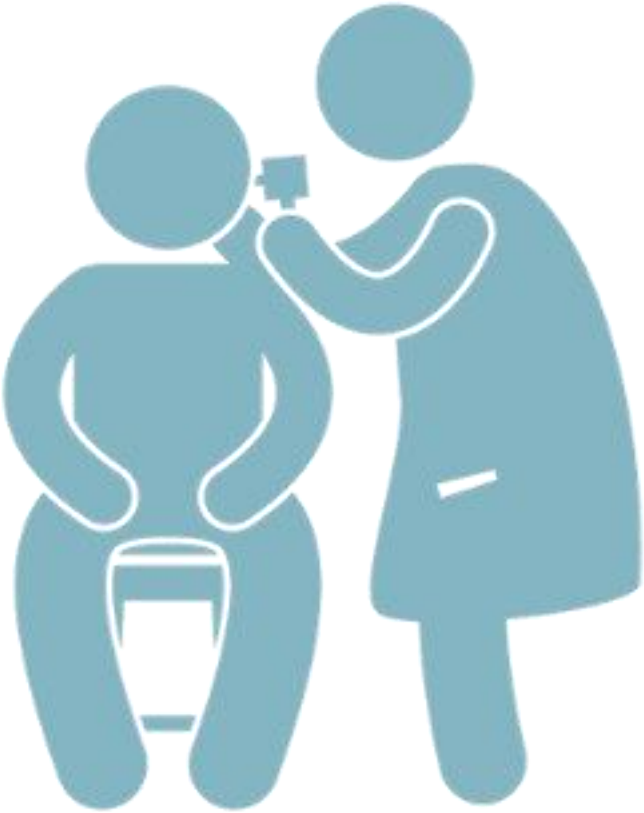
Professor of Child and Family Social Work
Dept of Social Policy and Intervention,
University of Oxford

Division of Child and Adolescent Psychiatry
Department of Psychiatry and Mental Health J-Block, Groote Schuur Hospital Observatory, Cape Town SA: +27 (0) 82 650 5815 UK: +44 (0) 1865 280336 lucie.cluver@spi.ox.ac.uk

A/Prof Elona Toska, D.Phil, MSc,
Associate Lecturer
Department of Sociology, University of Cape Town
Email: elona.toska@uct.ac.za

Appendix D: Consent Form and Information Sheet

hey baby



Hi there!

CONSENT AND INFORMATION FORM

We are part of a research team from the Universities of Oxford and Cape Town and are looking to learn about healthcare workers experiences of providing services during the COVID-19 pandemic to adolescents and young people, including young mothers and young people living with HIV. This study is part of the HEY BABY research project which aims to assess resilience-promoting pathways for adolescent parent families living in adversity, including young parents living in resource-constrained, HIV-affected communities.

Siyinxalenye yeresearch team esuka kwii University zaseOxford naseCape Town, sinomodla wokufunda malunga namava eHealthcare workers okunikezela ngeenkonzo ngelixesha leCovid - 19 pandemic kwi adolescents nakubantu abatsha, kwanabazali abaselula nabantu abatsha abaphila neHIV. Esistudy yinxalenye yophando nzulu luka

kaHey Baby project ngokwenjongo zokuqwalasela iresilience promoting pathways kumantombazana aselula kwifamilies living in adversity, kwakunye nabazali abaselula abaphila kwi resource-constrained, HIV- echaphazela icommunities.

YOUR STORY IS IMPORTANT TO US

We conduct research to help improve services, especially health services, and the results of this study will be used to help the government, and health and welfare organisations, to make better policies and programmes for young people, their families, and healthcare workers.

We would love to hear your story and invite you to take part in our research study. Before you decide to participate, it is important for you to understand what our research is about and what your participation in the study would involve.

Please take your time to read the following information sheet carefully. If there is anything that is not clear or if you would like more information, please ask us. You will be given a copy of this information sheet to keep. Please remember participating in this study is voluntary, and there are no right or wrong answers – we are interested in your views, thoughts and experiences.

Senza uphando nzulu ukunceda ekuphuhliseni iinkonzo , ngakumbi kwinkonzo zezempilo, kwaneziphumo zesistudy zizokusentyenziswa ekuncedeni urhulumente, kwanezempilo kwanewelfare organizations, ukwenza iipolicies ezingcono neeprogrammes for abantu abaselula, iifamalies zabo, kwanehealthcare workers.

Singathanda ukuva ibali lakho ngokuthi sikumeme uthathe inxaxheba kwistudy sethu sophando. Phambi kokuba uthathe esisigqibo sokuthatha inxaxheba, kubalulekile wazi ukuba oluphando lwethu lumalunga nantoni and iyintoni inxaxheba ozakuyithatha kwesisitudy.

Nceda uthathe xhesha lakho ufundisise kakuhle ezinkcazelo zilandelayo. Ukuba ikhona nayiphina into engacaciyo kakuhle okanye ungathanda ukufumana inkcazelo eyongezelelweyo, nceda usibuze.

Uzakunikezwa ikopi yephepha elinenkcazelo uyigcine and nceda ukhumbule ukuthatha inxaxheba kuvoluntary. Nceda ukhumbule ukuthatha inxaxheba kwesistudy kuvoluntary,kwaye akukho zimpendulo ziright okanye eziwrong sinomndla kwiviews,nengcinga kunye namava akho.

Information Sheet

	Participating in this study involves signing a consent form and then talking to someone from our research team who will ask you questions about your experiences providing healthcare services during the COVID-19 pandemic to adolescents and young people, including young mothers and young people living with HIV. Participation is completely voluntary. You are also participating in your personal capacity and not on behalf of your health facility where you work. If you decide to stop the interview this will not have any negative impact on you or your work. **Ukuthatha inxaxheba kwesistudy kubandakanya ukusigner iconsent form kwanokuthetha nomntu osuka kwiteam yethu yeresearch uzakubuza imibuzo malunga nolwazi lwakho lokunikeza ngenkonzo zehealthcare ngexesha leCovid – 19 pandemic kwi adolescent kunye nakubantu abatsha kwanomama abaselula kunye nabantu abatsha abaphila neHIV.** **Ukuthatha inxaxheba kucompletely voluntary. Uthatha inxaxheba (Uzaube uthethela wena) ngokunokwakho hayi ngokwehealth facility osebenza kuyo. Ukuba unesigqibo sokuyeka interview lonto ayizuba namiphumela mibi kuwe okanye emsebenzini wakho.**
	Once we analyse the data, we will be sharing our findings with governments and organizations in South Africa and other countries to help improve healthcare services and support. **Kanye ogqiba kwethuXa sithe sa analyse(a) idata, sizakwabelana ngeefindings zethu kunye noorhulumente kwane organisations apha eSouth Africa kwanamanye amazwe ukunceda ekuphuhliseni inkonzo zehealthcare kwanenkxaso ezingayifumana.**

	This interview should take about an hour. We can pause and take breaks if we need to. **Le interview izakuthatha malunga neHour. Singakwazi ukuma sithathe breaks ukuba siyafuna.**
	We will audio record the interview in order to ensure that we have correctly recorded your answers. After that, we will transcribe (write up) your interview. We won't use your real name or the name of your healthcare facility when we do the transcription. We may use an outside company to help us with the transcription and they will sign a confidentiality agreement and we will share as little as possible with them. **Sizakuyi recorder le interview ukuqinisekisa into yokuba sinempendulo zakho ezicorretly recorded. Emveni kwalonto, sizokutrascriber (write up) i-interview yakho. Asizusebenzisa igama lakho lokwenyani okanye igama lehealthcare facility(Kliniki) xa sisenza itranscription. Mhlawumbi singasebenzisa icompany yangaphandle isincende ngetrascription kwaye bazosigner iconfedentiality agreement kwaye sizokwabelana nokuncinci kunye nabo.**
	After the interview, we would like to stay in touch in case we want to interview you again. We will use phone numbers and will let you know in advance before seeing you again. **Emveni kweinterview, Singathanda ukuhlala sinxibelela ukwenzela sifune ukukwenza interview kwakhona. Sizakusebenzisa phone numbers kwaye sizokwazisa kwangethuba phambi kokuba sikubone kwakhona.**

CONFIDENTIALITY & DATA PROTECTION

All of your personal information will be kept entirely confidential. It will only be used by our Research team to keep in touch with you and as long as is required to conduct our research.

Zonke inkcazelo zakho ezipersonal sizakuzigcina ziyimfihlo. Zizakusetyenziswa kuphela yiResearch team yethu ukunxulumana nawe as long as kusafuneka ukuba senze iresearch yethu.

The information you give to us will be used by our research team based in the UK and South Africa and sometimes in other countries. No one else will have access to your personal data. All information you give us about you will be pseudo-anonymised. This means that any people or identifiable places (for example, your healthcare facility) that you talk about will be given a pseudonym (made up name), and you will be assigned a unique serial number. You will not be able to be identified from the data we may share with other researchers or publish. Anonymised datasets will be shared for non-profit use following United Kingdom and South African data guidelines.

Inkcazelo oyinikeze thina izakusetyenziswa yiresearch team eseUK nase South Africa kwaye ngamanye amaxesha nakwamanye amazwe. Akhomntu ongomnye oneaccess kwidata yakho. Yonke inkcazelo emalunga nawe othe wasinika yona kuzakuzanywa ukuba ingakuvezi komnye umntu ukuba ungubani (pseudo-anonymised). Lento ithethukuthi nawuphina umntu okanye identifiable places (umzekelo , healthcare facility) lena uthetha ngayo izakunikwa ipseudonym (made up name) , kwaye uzakubizwa ngeserial number eyahlukileyo. Awuzokwazi ukwaziwa from the data we may share kunye nezinye researchers okanye siyi-publish-e. Anonymised datasets will be shared for non-profit use following United Kingdom kwane South African data guidelines.

Protecting your privacy is also very important to us. Any information collected about you is done using

	PIN/password protected devices and paper information/consent sheets are locked securely in our offices. This information also gets saved on secure, password protected and encrypted databases. **Ukukhusela iprivacy yakho kubalulekile kakhulu kuthi. Nayiphi inkcazelo esithi siyiqokelele emalunga nawe yenziwa kusetyenziswa iidevices ezikhuselwe ngePin/password kwane nkcukacha ezisephepheni/ Consent sheet ziseluvalelweni olukhuselekileyo kwi office zethu. Ezinkcazelo zigcinwe ngepassword ekhuselekileyo, kunye encrypted databases.** There are limited risks associated with your data. Risks include computer failure or file loss. We have strong back-up and security systems to make sure these risks are kept at a minimum. **Bumbalwa ubungozi obungqamene nedata yakho. Ubungozi bubandakanya ukumoshakala kwecomputer okanye ukulahleka kwefile. Sine strong back-up kunye neesecurity systems ukuqinisekisa obungozi bugciwna bubuncinci kakhulu.** The University of Oxford and Cape Town are responsible for ensuring the safe and proper use of any personal information you provide, solely for research purposes. Sometimes our researchers may move institutions, and in those cases all the data collected may be shared with that institution, but only in order to allow the specified purposes and goals of the research to be achieved. **IUniversity yase Oxford neyase Kapa zinoxanduva ekuqinisekiseni ngokhuseleko kwakunye nokusetyenziswa ngokufanelekileyo kwenkcazelo ezingawe othe wasinika zona, zisetyenziselwa ngokwenjongo zophando. Ngamanye amaxesha abaphandi bethu mhlawumbi bangayosebenza kwezinye indawo, kwaye kwicases ezinjalo yonke data esiyiqokeleleyo mhlawumbi kungabelwana ngayo nalondawo, kodwa ukwenzela ukuba sifezekise iinjongo zophando zibeyimpumelelo.**

	The information will not be kept longer than necessary, and we will destroy the records of your personal information after this period. **Inkcazelo azizogcinwa ngaphezu kokuba kunyanzelekile , sizokuzidestroyer irecords zenkcazelo zakho emva kwelixesha.**
	You are free to stop the interview at any time without giving any reason. **Ukhululekile ukuyeka i-interview nangaliphi ixesha ngaphandle kokunikeza isizathu.**
	You have the right to request access to your personal information at any time. You can also contact the research team at any point to say that you want your answers about certain questions to be removed, or if you want to withdraw from the study which we will do straight away. You can do this by sending a 'Please Call Me' to the Project Managers (*081 010 9682/ 083 373 5215*). You can remove answers any point before the data is anonymised or published, but you won't be able to be identified from any publications. **Unalo ilungelo lokufuna kwinkcukacha zakho naninina. Ungakwazi ukuqhakamshelana neteam yophando naninina utsho ukuba ufuna ezinye zempendulo zakho zisuswe, okanye ukuba ufuna ukuphuma kwesistudy sauyenza ngoko nangoko, ungayenza lonto ngokuthi uthumele 'Please Call Me' kwiProject Manager (081 010 9682/ 083 373 5215). Ungazisusa naninina impedulo zakho phambi kokuba idata ipublishwe Kodwa igama lakho alizubonakala kwipublications zethu.**

	You can also use this number for any complaints or concerns you may have. If concerns/ complaints haven't been resolved within 10 days, you can contact ethics@socsci.ox.ac.uk or hrec-enquiries@uct.ac.za using the reference details listed below: **University of Oxford HEY BABY R48876/RE001** **University of Cape Town HEY BABY HREC 226/2017** **Eastern Cape Department of Health HEY BABY and Mzantsi Wakho 29/08/2013** **Ungakwazi ukusebenzisa nalena inumber for naziphi izikhalazo okanye izinto ofuna ukuziqonda. Ukuba iiconcerns/izikhalazo zakho azisombululekanga kwintsuku ezilishumi, ungaqhagamshelana ne ethics@socsci.ox.ac.uk or hrec-enquiries@uct.ac.za Sebenzisa ireference details ezidwelise ngezantsi:** **University of Oxford HEY BABY R48876/RE001** **University of Cape Town HEY BABY HREC 226/2017** **Eastern Cape Department of Health HEY BABY and Mzantsi Wakho 29/08/2013**

	During or after our interview if you become upset or experience any distress, you have an option of connecting with a counsellor at Masithethe Counselling Services, if you so wish. In addition, here are contact details of other support services: • National HIV and TB Healthcare Workers Hotline: 0800 212 506 (or send a Please Call Me to 071 840 1572) • Healthcare worker care network: 0800 21 21 21 or SMS 43001; https://www.healthcareworkerscarenetwork.org.za/ Your case may also get discussed with the project's Principal Investigators, Professor Lucie Cluver, who can be contacted at lucie.cluver@spi.ox.ac.uk, or A/Prof Elona Toska, Elona.Toska@uct.ac.za or +27818629611. **Ngexesha okanye emva kwe-interview yethu ukuba uye wakhathazeka okanye wazifumana unoxinzelelo, unayo option yokudibana necounsellor yase Masithethe Counselling Services,ukuba uyafuna.** **Ukongeza, nazi icontact details zezinye indawo zenkxaso:** • National HIV and TB Healthcare Workers Hotline: 0800 212 506 (or send a Please Call Me to 071 840 1572) • Healthcare worker care network: 0800 21 21 21 or SMS 43001; https://www.healthcareworkerscarenetwork.org.za/ **Icase yakho mhlawumbi ingaxoxwa nayiproject's** Principal Investigators, Professor Lucie Cluver, who can be contacted at lucie.cluver@spi.ox.ac.uk, or A/Prof Elona Toska, Elona.Toska@uct.ac.za or +27818629611. We will give you a thank you snack pack at the end of the interview. **Sizakubulela ngokunika isnack pack ekupheleni kweinterview.**

Consent Form

In the next section we will be asking for your consent.

This study and the following consent have been approved by the following institutions: University of Oxford, University of Cape Town on behalf of the South African Department of Health, and the South African Department of Basic Education.

Esistudy kwakunye neconsent elandelayo ziapproviwe zezindawo zilandelayo: University of Oxford, University of Cape Town on behalf of the South African Department of Health, ne South African Department of Basic Education.

By ticking 'Yes' you are consenting to:

	YES	NO
I have read and I understand the information sheet (dated July 2022, version 3) for this study and have had a chance to ask questions. **Ndiyifundile kwaye ndayiqonda inkcazelo yeliphepha (date June 2022, version 1) for esistudy kwaye ndanalo ithuba lokubuza imibuzo.**		
I understand that I have chosen to take part in this study and that I am free to stop at any time, without giving any reason. I also understand that I am participating in this study in my personal capacity and not on behalf of the healthcare facility where I work. **Ndiyayiqonda ukuba ndikhethiwe ukuthatha inxaxheba kwesistudy kwaye ndikhululekile ukuyeka nangaliphi na ixesha, ngaphandleni kokunika nasiphi isizathu. Ndiyayiqonda ukuba ndithatha inxaxheba kwesistudy ngokwe personal capacity yam hayi ngokwe health facility (Kliniki) endisebenza kuyo.**		
I am aware of who will have access to my information and that it may be shared with other researchers and governments. And if researchers were to move to other institutions, data will also be transferred to that institution in order to fulfil the goals of this research. I understand that the research team may use outside services such as transcription services. **Ndiyayazi ngubani oneaccess kwinkcazelo zam kwaye kungabelwana ngazo kwezinye ndawo zophando kunye norhulumente. Kwaye ukuba abaphandi baya kwenye indawo, idata nayo izothunyelwa kulondawo ukwenzela kufezekiswe igoals zoluphando. Ndiyayiqonda intoyokuba iteam yoluphando mhlawumbi ingasebenzisa iinkonzo zangaphandle ezifana nenkonzo zetransrciption.**		
I understand how personal data will be collected, used, and protected. **Ndiyaqonda ngokhuseleko lokuqokelelwa nokusetyenziswa kwedata,**		
I understand and agree that the interview will be audio recorded. **Ndayiqonda kwaye ndiyavumelana nokurecordwa kwe interview.**		

I understand how to contact the research team to raise a concern or make a complaint, and if I want to remove answers or withdraw from the study. I understand that I can withdraw answers before the study anonymises the data or publish the data, from which I cannot be identified. **Ndiyayazi ndingaqhagamshelana njani neteam yoluphando ukuvakalisa iconcerns okanye ukwenza izikhalazo, kwaye ukuba ndifuna ukususa impendulo okanye ukuphuma kwesistudy. Ndyayiqonda intoyokuba ndingazikhupha impendulo phambi kokuba istudy sipublishe idata, apho ndingenokwazi ukubonakala khona.**		
I agree to take part in this study. **Ndiyavuma ukuthatha inxaxheba kwesistudy.**		
I agree to being contacted in the future for follow-up or when there are new research projects **Ndiyavuma ukufowunelwa in the future for follow-up okanye xa kukho uphando olutsha.**		

[Text Wrapping Break]

Please fill in your details below

Participant Name _____

Participant Signature _____

[Text Wrapping Break]

Would you like to take part in the study: ☐ Yes ☐ No

RA Name _____

RA Signature _____

Date of consenting _____