PREVENTION OPTIONS FOR
WOMEN EVALUATION
RESEARCH
KEY INFORMANT INTERVIEWS
QUALITATIVE REPORT

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# LIST OF ABBREVIATIONS

|  |  |
| --- | --- |
| ARV | Antiretroviral drugs |
| ART | Antiretroviral therapy |
| CFIR | Consolidated Framework for Implementation Research |
| DoH | Department of Health (South Africa) |
| DTHF | Desmond Tutu HIV Foundation |
| EBI | Evidence-based intervention |
| FP | Family planning |
| HCP | Healthcare provider |
| HCT | HIV testing and counseling |
| HIV | Human immunodeficiency virus |
| KEMRI | Kenya Medical Research Institute |
| KI | Key informant |
| KII | Key informant interview |
| MOH | Ministry of health |
| NIMART | Nurse Initiation and Management of ART |
| POWER | Prevention Options for Women Evaluation Research |
| PrEP | Pre-exposure Prophylaxis |
| SRH | Sexual and reproductive health |
| STI | Sexually transmitted infection |
| UW | University of Washington |
| WRHI | Wits Reproductive Health and HIV Institute |

# EXECUTIVE SUMMARY

In both Kenya and South Africa, adolescent girls and young women (AGYW) are disproportionately affected by HIV and have been identified as a priority population for the delivery of pre-exposure prophylaxis (PrEP). Although PrEP has been delivered to AGYW via multiple clinical trials and demonstration projects in Kenya and South Africa, few projects have taken an implementation science approach to generate evidence about how to integrate this evidence-based intervention into routine practice. The overall goal of the POWER study was to characterize PrEP uptake and persistence among AGYW and identify cost-effective and scalable delivery models that suit the needs of this key population. For this latter objective, the POWER study sought to assess the PrEP delivery models developed, implemented, and adapted at POWER sites, including their advantages and disadvantages for providers and AGYW, implementation determinants, and potential scalability.

In this qualitative study, we conducted in-depth interviews with key informants in Kisumu, Kenya and Johannesburg and Cape Town, South Africa. This research was guided by theory-based frameworks for identifying implementation barriers, evaluating implementation and process outcomes, and assessing suitability for scale-up. We conducted 36 interviews from October 2019 through January 2020, as some sites were completing study enrollment and preparing to transition PrEP delivery to local site staff. Participants included healthcare providers, managers, and implementation support staff at POWER sites, as well as individuals experienced in PrEP implementation in other research/demonstration projects and/or in non-research, routine delivery settings. Participants were primarily female (67%, 24/36), current or former POWER staff (72%, 26/36), and held primary roles as healthcare providers (67%, 24/36).

Overall, participants identified several components common across the different delivery models that they felt enhanced the acceptability and accessibility of PrEP care to AGYW, including long opening hours, integration or co-location of PrEP with other sexual and reproductive healthcare services, client fast-tracking, and delivery of PrEP by adolescent- and youth-friendly (AYF) providers in AYF environments. Model components that increased the feasibility of PrEP delivery included task-shifting, technical expertise support, and availability of routine monitoring data on PrEP uptake and persistence. Participants described numerous strategies that they felt were effective for reaching AGYW, assisting their decision-making, and supporting their adherence and persistence of PrEP, including AYF promotional videos, specific counseling messages, and adherence clubs. With respect to scaling up PrEP delivery for AGYW through mobile delivery models or a greater number and diversity of clinics, most participants anticipated that the biggest challenges would be securing provider buy-in and the human and financial resources required to implement some of the model components.

# INTRODUCTION

In both Kenya and South Africa, adolescent girls and young women (AGYW) have been identified as a priority population for HIV epidemic control. In both countries, AGYW are disproportionately affected by HIV. For example, in Kenya, HIV incidence among AGYW aged 15 to 24 is twice that of their male counterparts: 2.6% among AGYW versus 1.3% among adolescent boys and young men;1 in South Africa, it is five times greater: 2.5% among AGYW and 0.5% among their male counterparts.2 Research suggests that this discrepancy in HIV incidence may be driven by a number of behavioral, biological, and structural factors that put AGYW at higher risk of HIV acquisition, such as early sexual debut, biological susceptibility to HIV infection, and low secondary school attendance.2 In both countries, AGYW have been identified as a priority population for the delivery of pre-exposure prophylaxis (PrEP). Because PrEP does not require male partner cooperation, it is a promising HIV prevention option for AGYW.

Much of the evidence generated from PrEP delivery projects in Kenya and South Africa has centered on client outcomes (e.g., adherence, seroconversion) and their correlates.3–5 Few studies have focused on implementation strategies (the processes that facilitate uptake of PrEP into routine use by practitioners),6 implementation determinants (contextual factors affecting implementation), or implementation outcomes, such as feasibility and acceptability. In short, there is a major gap in our knowledge about *how* to get PrEP to AGYW who need and desire it in a way that consistently maximizes this intervention’s HIV prevention potential.

To help address this gap, the Prevention Options for Women Evaluation Research (POWER) Study—a prospective, open-label PrEP implementation study—was undertaken starting in 2017. The overall objective of the POWER study is to characterize PrEP uptake and persistence among AGYW and identify cost-effective and scalable delivery models that suit the needs of this key population. This qualitative study was undertaken to collect key informant perspectives on the PrEP delivery models developed, implemented, and adapted at POWER sites, including their advantages and disadvantages for providers and AGYW, implementation determinants, and potential scalability.

Data gathered from this research will be used to inform recommendations and lessons learned about developing and implementing models of PrEP service delivery to young women. Findings may also be triangulated with other POWER data—including quantitative data on client outcomes, cost, and cost-effectiveness, and qualitative data from in-depth interviews with POWER clients—to obtain a comprehensive picture of the delivery models’ impact and scalability.

# METHODS

This research was conducted in partnership with the following organizations in South Africa and Kenya:

* Desmond Tutu HIV Foundation (DTHF), located at the Institute of Infectious Disease and Molecular Medicine at the University of Cape Town in Cape Town, South Africa. DTHF is under the leadership of Dr. Linda-Gail Bekker.
* Wits Reproductive Health and HIV Institute (Wits RHI) at the University of the Witwatersrand in Johannesburg, South Africa. Dr. Sinead Delany-Moretlwe is the Director of Research at Wits RHI.
* The Kenya Medical Research Institute (KEMRI), located in Kisumu, Kenya. Dr. Elizabeth Bukusi is Chief Research Officer at KEMRI.

## Approach

We conducted key informant interviews (KIIs) with healthcare providers and managers involved in delivering PrEP services through the delivery models developed in POWER, as well as individuals who helped implement these models. Many well-established implementation science (IS) frameworks have been proven useful for gathering information about how evidence-based interventions are implemented. We drew on several of these frameworks (**Table 1**) and preliminary research to identify constructs relevant to PrEP delivery to AGYW. We developed a semi-structured interview guide to understand how each PrEP delivery model was implemented and adapted at each POWER site and how feasible, acceptable, and scalable the models were, according to key informants.

|  |
| --- |
| **Table 1**. Implementation Science frameworks used  |
| **Framework** | **Description** | **How used in this study** |
| Outcomes for Implementation Research (Proctor et al. 2011)7 | Proposes a taxonomy of eight implementation outcomes (“the effects of deliberate and purposive actions to implement new treatments, practices, and services”)7(p.65): acceptability, adoption, appropriateness, feasibility, fidelity, implementation cost, penetration, and sustainability. | Informed design of interview guide, which included questions to capture provider acceptability of PrEP, feasibility of PrEP integration into each service delivery setting, and extent to which providers adopted PrEP delivery practices. |
| Consolidated Framework for Implementation Research(Damschroder et al. 2009)8 | Includes 39 constructs hypothesized to predict, moderate, or drive implementation outcomes. These constructs are often treated as determinants that act as barriers or facilitators to influence implementation outcomes. | Informed design of interview guide, which probed about barriers encountered and facilitators leveraged during PrEP implementation.Guided interpretation and contextualization of findings during analysis.  |
| Scalability Considerations(Milat et al. 2013)9 | Presents six major factors that may increase the likelihood for interventions to be scaled up successfully: effectiveness, reach, and adoption; workforce, technical and organizational resources required; cost considerations; intervention delivery; contextual factors; and appropriate evaluation approaches | Informed design of interview guide, which presented participants with a scaling up scenario and asked for their thoughts on how PrEP might best be scaled to other delivery settings.  |
| A Guide to Scaling Up Population Health Interventions(Milat et al. 2016)10 | A step-by-step guide for scaling up, defined as “the ability of a health intervention shown to be efficacious on a small scale and/or under controlled conditions to be expanded under real-world conditions to reach a greater proportion of the eligible population while retaining effectiveness.”10(p.2) | Informed design of interview guide (specifically, the questions around scaling up PrEP delivery to AGYW). |

## Data Collection and Analysis

### Participant Selection and Recruitment

Our sampling frame for the KIIs included HCPs, management, and implementation support staff at the three main POWER sites, regardless of whether they worked directly for the POWER study or were primarily employed by the study facility. Our sampling frame also included individuals who were not directly familiar with POWER implementation, but who had experience in PrEP implementation in research/demonstration projects and/or in real-world, routine delivery contexts (i.e., with no research components). Individuals in this last group were recruited to provide a broad view of the landscape of PrEP delivery to young women in one or more of the three geographic locations in which POWER operated.

Staff at each POWER site developed a short-list of potential participants, which was then reviewed by the UW research team. Final selections were made in collaboration with site and UW research teams. To increase participant comfort sharing their perspectives, interviews were conducted by a research assistant (RA) who was external to the primary study staff team and had no prior working relationship with participants. First, the study coordinator contacted eligible individuals, briefly described the purpose of the study, and informed them that they would be contacted by a research assistant (RA) to see if they would like to participate in a confidential in-depth interview. Thereafter, the RA contacted each individual by email or phone, and interviews were scheduled at a time and location convenient to the participant.

### Data Collection

Data were collected across the three sites from October 2019 through January 2020. Interviews were conducted by two UW researchers experienced in qualitative methods and who led the development of the semi-structured interview guide. The interview guide (**Appendix B**) solicited information on the participant’s role in PrEP implementation; their knowledge and beliefs about PrEP and PrEP delivery to AGYW both prior to the POWER study and at the time of interview; perceived advantages and disadvantages of the POWER PrEP delivery model(s); strategies used to increase uptake, adherence, and persistence among PrEP clients and their perceived effectiveness; and anticipated challenges, recommendations, and considerations for scaling up the PrEP delivery model to additional healthcare settings. Specifically, to obtain participant perspectives on the scalability of PrEP, we asked them to imagine that the ministry of health (MOH) in their country wanted to begin delivering PrEP to AGYW at twenty other clinics of the same kind as their POWER site (e.g., mobile clinic, primary healthcare clinic, family planning clinic). We then asked them to identify the services they felt should comprise the minimal package for delivering PrEP to AGYW and comment on the scalability of this package, as well as the kinds of settings, providers, and delivery strategies that they felt would facilitate or hinder successful scale-up of PrEP.

All participants provided informed consent for the interview. All interviews lasted approximately 60-90 minutes, were conducted one-on-one, in English, and in a private room or via private telephone call. All interviews were audio recorded with participant consent and transcribed verbatim. To ensure data quality, the RAs who conducted the interviews listened to all recordings in their entirety and checked them against the transcript, making corrections as needed.

### Coding and Analysis

Transcripts were imported into ATLAS.ti (ATLAS.ti 8 Scientific Software Development GmbH, Berlin, 2019) for coding and analysis. Interview transcripts were analyzed using conventional content analysis.11 After reading through all transcripts, two experienced qualitative researchers developed a coding scheme in consultation with other POWER staff. The coding scheme included both inductive codes that emerged from the data and deductive codes drawn from several implementation science frameworks (**Table 1**). One researcher coded the transcripts, and a second researcher reviewed coded transcripts. Disagreements in coding were resolved through discussion and consensus.

## Ethical considerations

The protocol, informed consent forms, and interview guide were approved by ethics committees at all three research sites and the UW IRB as the prime institution. An informed consent process was conducted with each participant. Additional protections were implemented to ensure confidentiality given the participants and their unique roles and experiences in POWER. Access to all data were limited to a small number of personnel at the UW who had no supervisory or employment-related relationships with participants. Primary data were not shared with POWER principal investigators, study managers, or study coordinators at the three sites. Transcription was conducted by external service providers with the interviewers responsible for reviewing and ensuring transcript quality. Coding and analysis were conducted only by these same two researchers under the supervision of a qualitative research lead.

# RESULTS

## Participant Characteristics

A total of 36 key informants (KIs) were interviewed across the three sites (**Table 2**). Participants were primarily female (67%, 24/36), current or former POWER staff (72%, 26/36), and held primary roles as healthcare providers delivering PrEP services at one of the three main POWER sites (67%, 24/36). Of the 24 healthcare providers interviewed, one-third were HIV counseling and testing (HCT) counsellors (33%, 8/24), and about half were clinicians (48%, 11/24). The remaining healthcare providers (21%, 5/24) included cadres delivering PrEP education, follow-up/retention support, or psychosocial support services. One-third of the overall study sample (33%, 12/36) included POWER study managers/coordinators, clinic management staff, and other key informants with experience implementing PrEP in research/demonstration projects and/or in real-world, routine delivery contexts (i.e., with no research components).

Table 2: Characteristics of key informants [ N (%) or median (IQR) ]

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **DTHF** | **Wits RHI** | **KEMRI** |  | **All Sites** |
| **N participants interviewed** | 11 | 10 | 15 |  | 36 |
| **Age** | 32 (27-43) | 40 (36-43) | 30 (29-42) |  | 33 (29-42) |
| **Female**1  | 7 (64%) | 8 (80%) | 9 (60%) |  | 24 (67%) |
| **POWER-affiliated**2 | 10 (91%) | 6 (60%) | 10 (67%) |  | 26 (72%) |
| **Primary occupational role**3 |  |  |  |  |  |
| *Healthcare provider* | **8 (73%)** | **6 (60%)** | **10 (67%)** |  | **24 (67%)** |
|  | HCT Counsellor | 3 (37.5%) | 2 (33%) | 3 (30%) |  | 8 (33%) |
|  | Clinician4 | 3 (37.5%)  | 2 (33%) | 6 (60%) |  | 11 (46%) |
|  | Other | 2 (25%) | 2 (33%) | 1 (10%) |  | 5 (21%) |
| *Other key informant* | **3 (27%)** | **4 (40%)** | **5 (33%)** |  | **12 (33%)** |
| 1 Sex was asked as an open-ended question, but all participants responded either “male” or “female.”2 Participant was considered POWER-affiliated if s/he currently or formerly worked for the POWER study. 3 Based on participants primary role vis-à-vis PrEP and POWER. For example, a participant who is a doctor by profession but whose primary role in POWER is as a study coordinator, is counted as “other key informant.”4 Clinicians include nurses and doctors/medical officers. |

## POWER Delivery Models

### Kenya

#### KMET

The Kenya Medical Education Trust (KMET) Corkran Health Center is a private, NGO-supported clinic located on the outskirts of the Obunga informal settlement in the city of Kisumu. Prior to the POWER study, KMET did not offer PrEP services. During the POWER study, PrEP delivery was carried out in KMET’s youth-friendly family planning (FP) clinic, a separate area from KMET’s adult clinic. Most clients were identified from the clinic’s existing FP clients or internal referrals by KMET providers (e.g., KMET peer educators and HCT counselors); however, some clients were also identified through outreach activities. HIV counseling and testing (HCT) was performed by both POWER and KMET HCT counselors. Combined counseling on PrEP, FP, and STIs was conducted primarily by a POWER nurse either in the same room in which HIV testing occurred or in an adjacent exam room. KMET pharmacy providers dispensed PrEP at the clinic’s main pharmacy, one level below the FP clinic. When clients were due for creatinine and/or STI testing, urine and blood samples were collected at KMET’s lab, which was located in an adjacent building and received periodic support from a POWER lab technician. Samples were subsequently processed at a laboratory in Mombasa.

#### JOOTRH

The Jaramogi Oginga Odinga Teaching and Referral Hospital (JOOTRH) is a public regional referral hospital serving 10 counties in the Western province of Kenya. POWER implemented PrEP delivery to AGYW in the hospital’s family planning clinic located within its Maternal and Child Health (MCH) department. Clients were primarily recruited within the MCH/FP department (e.g., clients waiting to receive ANC services were approached by POWER staff in waiting bay areas) or through community outreach activities. POWER clients received HCT services from JOOTRH HCT counselors in the department’s HCT room. Combined counseling on PrEP, FP, and STIs was provided by a POWER nurse in the “POWER room”, a private room within the MCH/FP department that was used exclusively by POWER staff. POWER nurses dispensed PrEP within the POWER room. Urine and blood samples for STI and creatinine tests were collected within the MCH/FP department’s lab, which—like KMET—received periodic support from a POWER lab technician. STI samples were processed at a laboratory in Mombasa.

### South Africa

#### Ward 21

Located in the Hillbrow Community Health Centre in central Johannesburg, Ward 21 is a DoH clinic that, at the time the POWER study was initiated, was receiving support from the Wits Reproductive Health and HIV Institute (Wits RHI) to establish adolescent- and youth-friendly primary healthcare services. Wits RHI also supported Ward 21 staff with PEPFAR funding to carry out research activities. This clinic was selected as a POWER site with the aim of demonstrating PrEP service delivery within the context of a public sector primary healthcare clinic. Most Ward 21 POWER clients were identified from the clinic’s existing clientele, who learned about PrEP from educational materials in the waiting area, peer educators, and other clinic staff—all of whom were trained in PrEP delivery but only some of whom carried out research-related activities (e.g., creatinine testing) that were beyond the scope of their DOH staff roles. At Ward 21, HCT was performed by POWER HCT counselors in an HCT area. Then, in a separate room, a POWER nurse counseled clients on PrEP, FP, and STIs, addressing other health-related issues as needed (e.g., referring clients in need of psychosocial care to Ward 21’s psychologist). In this same room, the POWER nurse also drew blood for creatinine testing (when indicated) and dispensed PrEP.

In January 2019, Ward 21 began delivering PrEP to AGYW at Jeppe Municipal primary healthcare clinic in Jeppestown, located in Region F of the [City of Johannesburg Metropolitan Municipality](https://en.wikipedia.org/wiki/City_of_Johannesburg_Metropolitan_Municipality)—a working-class suburb of Johannesburg. The low-income neighbourhood of Jeppestown is characterized by derelict and overcrowded accommodation with informally occupied buildings by a large proportion of migrant communities. HIV prevalence in the area is high. The Jeppestown clinic services a population close to previously single-sex hostels and informal settlements and sees a high volume of adolescent clients. This clinic was selected because it was one of six clinics that had received training in the delivery of adolescent- and youth-friendly services as part of the PEPFAR-funded Adolescent Innovations Program. A high proportion of clinical staff were NiMART (nurse-initiated management of antiretroviral therapy), which at the time was a pre-requisite for PrEP delivery in the public sector. The Department of Health (DoH) approved the prioritisation of this clinic as a PrEP implementation site and regarded the POWER project as an opportunity to expand PrEP for AGYW within the district. The goal was to demonstrate that PrEP could be successfully introduced and scaled up within a busy public sector clinic that provided services to all age groups. Notably, during this process the PEPFAR implementing partners changed, and Wits RHI handed over PEPFAR activities of testing and linkage to HIV treatment to a different implementing partner, ANOVA. However, Wits RHI continued to support PrEP delivery at the site until mid-2020 before handing over fully to ANOVA. Because of space constraints at the clinic, the team operated from a gazebo and van outside the clinic. Towards the end of the project, a hybrid model of mobile and fixed service delivery was adopted at the Jeppestown clinic.

#### Tutu Teen Truck

The Tutu Teen Truck is one of three mobile clinics run by the Desmond Tutu HIV Foundation (DTHF)—a nonprofit research center of the University of Cape Town. It delivers free HCT services, TB testing, and family planning to adolescents in Cape Town communities with high HIV and TB burdens. The truck often parks near schools, shopping centers, and adolescent hang-out spots. In general, clients either arrived at the truck having already heard about PrEP from a peer or they learned about PrEP from the POWER staff stationed outside the truck. Those interested in learning more received additional PrEP counseling inside the truck from a POWER HCT counselor who also performed HIV testing. Lastly, PrEP counseling was briefly reinforced by a POWER nurse who dispensed the PrEP medication. Creatinine and hepatitis B testing were outsourced to a private company that picked up the samples and processed them off-site. STI testing was initially conducted on the truck using a GeneXpert machine, but due to technical and security issues, the clinic began outsourcing STI testing to the same private company.

In November 2019, DTHF began delivering PrEP to AGYW at a DoH primary healthcare clinic in the Weltevreden neighborhood of Cape Town. The rationale for partnering with this clinic was to provide clients with an option to access PrEP when they are unable to reach the truck or vice versa. Starting in February 2019, PrEP clients were given the option to pick up PrEP refills at the Tutu Teen Truck’s PrEP adherence club, which met once a month on Saturdays. And in August of 2019, PrEP clients could also sign up to get PrEP refills delivered directly to them by a private courier service.

## Recommended PrEP Package

### HIV Testing

All participants reported that laboratory-based HIV testing was an essential component of the PrEP package. Most believed scaling-up HIV testing with PrEP services would be easy, as many facilities already perform HIV testing as part of routine care. A couple of participants said that, in addition, clinics could consider offering HIV self-testing to lower the burden of work on PrEP providers and the duration of clinic visits.

*“[HIV] self-testing could be done while the client is waiting. The thing you’re trying to avoid is them going into this [HCT] room, getting the [HIV test] results, and coming out and joining into this other queue to now see the clinician [for PrEP] … If the [HIV self test] results are two lines [i.e., positive] or it can’t be interpreted … then the [HCT] counselor might just focus on those people and the rest can continue with the clinician. This could save time and avoid people feeling like they’ve been here forever.” (WRHI 06)*

### Family Planning

Most participants reported that PrEP should be delivered alongside family planning (FP) services because FP services are frequently accessed by AGYW who are sexually active and, thus, potential candidates for PrEP.

*“[Delivering PrEP with family planning is advantageous] because the chance that the person is engaged in sexual relations [is high] and family planning is about unprotected sex. This is somebody planning not to have protected sex … So it is very convenient [to offer PrEP with FP].” (KEMRI 05)*

Some participants also noted that PrEP counseling dovetails with FP counseling in that, in the former, providers inform clients that PrEP does not prevent pregnancy, and in the latter, FP providers inform clients that non-barrier FP methods do not protect against HIV. As such, these participants felt that integrating PrEP and FP counseling is a way to discuss the limitations of both services and how their combined use can help protect against both HIV and pregnancy.

*“We need to link reproductive health services for women, and this involves incorporating PrEP into the family planning. Most women, they’re at risk and maybe they don't know, or they have low self-perception of risk. So what happens when you talk to the client and you tell them that, ‘There’s family planning. You can use this method to prevent pregnancy. On top of that, you can also use PrEP so that you don't get HIV.’” (KEMRI 03)*

Other participants noted that a potential benefit of delivering PrEP with FP services is that the latter require clients to return to the clinic at fairly regularly intervals. As such, if PrEP could be tacked onto these FP appointments, it would not necessitate additional clinic visits.

*“We can give them PrEP and give them family planning at the same time and ensure that their return visit—or when they come to get [PrEP] refills—[that] the dates coincide so that they don’t have to come for PrEP and then another time come for family planning services.” (KEMRI 17)*

Some participants acknowledged, however, that aligning clients’ PrEP and FP schedules is not always possible, due to restrictions on how much PrEP can be dispensed in a given visit.

*“Some of them on contraceptives so their [return] date is two months or three months from there … [But] they can only have one bottle [of PrEP at the initiation visit] … So they might rock up [i.e., show up] after two months ‘because it is my date now’ … and that is where you’d miss the one month [of PrEP use] in between.” (DTHF 10)*

Some participants, therefore, stressed that efforts to scale up PrEP with FP services should provide clients with enough PrEP to last them until their next FP appointment; otherwise, clients may be less inclined to come back just for PrEP.

### STI Counseling, Testing, and Treatment

Participants also noted that, during PrEP initiation counseling, it is important for PrEP providers to inform clients that PrEP does not protect against STIs. In the POWER study, in addition to receiving this information, clients underwent laboratory-based testing for chlamydia, gonorrhea, and hepatitis B virus at enrollment, with the former two repeated approximately every six months thereafter. Clients testing positive for any of the aforementioned STIs were notified of their results and offered treatment free of charge, as per Kenya and South Africa guidelines. Often citing the high prevalence of STIs among POWER enrollees, most key informants stated that STI testing, and treatment—especially for chlamydia and gonorrhea—should be included in the minimal package of services for PrEP delivery to AGYW.

*“[STI prevalence among AGYW] is too much. I think over 50% [of our POWER clients tested positive for an STI] … If we hadn’t done the test, we wouldn’t have ever known because they weren’t showing any symptoms. So they need it.” (DTHF 04)*

These participants felt that the availability of STI testing and treatment was a strong “draw” for AGYW to enroll in the POWER study.

*“What has been really good in getting young women in and getting them interested [in PrEP] has been the STI testing piece. Young people want to know, ‘Do I have an STI?’ … So having a definitive [STI] test available has been a huge drawcard. People are interested in the [STI] test.” (WRHI 10)*

*“They do come back for their [STI] treatment. And if they come back for that treatment, it means they come back for the [PrEP] follow up as well, so it’s a win.” (DTHF 08)*

Nearly all participants emphasized that STI testing should be laboratory-based, rather than managed syndromically, because clients who test positive often lack symptoms. Multiple PrEP studies have found that 90% of African AGYW with curable STIs are asymptomatic.12 Excluding laboratory-based STI testing from the minimal package of PrEP services was, therefore, viewed as a missed opportunity to diagnose STIs that could go on to cause additional health problems if left untreated.

 *“STI [testing] I would definitely consider [scaling up with PrEP], and I think POWER has shown us that we do need to be concerned [about STIs]. And I think the World Health Organization has been concerned a lot [about STIs]. For so long we have neglected the other STIs as we focus on HIV. But there is a resurgence of STI infections … and they themselves increase the risk of HIV acquisition. Some of them do have dire consequences, especially for young women … So STI testing, I think, will be important [to scale up] because we know syndromic management really doesn’t pick [up] very much. It over- or under-treats [STIs] all the time. It’s literally unreliable as a good measure of treating. Women are sometimes asymptomatic, so waiting for people to see symptoms—to feel uncomfortable, recognize [symptoms], come in to complain about them—the water will have long gone under the bridge.” (KEMRI 13)*

*“There’s no such thing as syndromic [management of STIs]. It’s nonsense. It needs to be diagnostic [laboratory-based STI testin*g] *… [And if we could] really make everything point-of-care testing, that would be great because then it means less follow-up you need to do with people. [It’s better] if you can get their STI test [results] and treat [in the same visit], knowing that it’s not so easy to get that same person back [to the mobile clinic] in a short amount of time [because] you won’t be in the same place tomorrow.” (DTHF 02)*

However, a major anticipated challenge to scaling up a PrEP package that includes laboratory-based STI testing is cost. Acknowledging that syndromic management of STIs is the norm in most government-run health facilities in Kenya and South Africa, many participants expressed doubts as to whether ministries of health would be willing to scale up laboratory-based testing with PrEP.

*“The cost of the [STI] diagnostics, unfortunately, [is a challenge]. In this country [South Africa], we already have a very good GeneXpert footprint … but the diagnostics are not fully deployable yet because of the cost [of the cartridges] and because of the investment of getting the platform established … It’s very expensive for low- and middle-income countries at the moment. ” (DTHF 01)*

Some participants additionally expressed the belief that, if laboratory-based STI testing were not covered by the government, most AGYW would be unable to afford or unwilling to pay out of pocket for it.

*“Will they [clients] dig deep in their pockets for [laboratory-based] STI management? Because if you go [to a private clinic] for [laboratory-based] STI management, it is not free. You have to pay … [STI] consultation is approximately 600 [Kenyan] schillings [~USD $5.60] and testing is around 200 [~USD $1.90]. They might not be in a position to afford that.” (KEMRI 09)*

Citing the low prevalence of hepatitis B infection among POWER enrollees, a few participants felt as though hepatitis B testing could be eliminated or performed only on an as-needed basis to save on costs.

### Creatinine Testing

During the POWER study, clients underwent creatinine testing at enrollment and after every six months of consistent PrEP use. Although most key informants acknowledged that creatinine testing is an effective way to monitor kidney function, some felt as though the minimal package of PrEP services should either exclude creatinine testing altogether or reduce its frequency (e.g., to once per year or on an as-needed basis) because they considered renal complications quite rare within the AGYW population.

*“The creatinine [testing] I won’t be as worried about [scaling up with PrEP] because I think the drugs we are using for PrEP right now are used specifically for that age profile that we are looking at, which is a relatively healthy population. If we were dealing with much older individuals, I would be much more concerned about kidney functioning. But these [clients] … are generally healthy young women, and for that matter the kidney functioning wouldn’t be my greatest concern.” (KEMRI 13)*

*“I don’t think [creatinine testing] is necessary. There isn’t a big change [in creatinine clearance] throughout PrEP use … Out of all the people we have that are still taking PrEP, there isn’t anybody we’ve had to stop [due to kidney functioning issues].” (WRHI 05)*

Pointing to recent widespread national stockouts of the chemical reagent used in creatinine testing, several participants from the Kenya POWER sites expressed concern that, if the MOH were to require creatinine testing to initiate PrEP, clients would have to pay for it out of pocket. According to these participants, this cost would lead many clients to stop PrEP altogether. A couple of participants noted that, if creatinine testing is scaled up as part of a PrEP delivery package, then ministries of health ought to consider using a urine-based—rather than a blood-based—creatinine test, as it is cheaper and would not require a blood draw that, according to participants, made many AGYW decide against enrolling in POWER.

### Psychosocial Services

A handful of participants felt that PrEP providers should, at a minimum, screen for psychosocial problems and have the ability to refer clients for psychosocial care. These participants explained that AGYW who might benefit from PrEP—especially those living in informal settlements near the POWER sites in Kenya and South Africa—often face numerous problems that take priority over HIV prevention.

*“A lot of them [AGYW] don’t want to leave their relationship for many reasons, like ‘I don’t have another place to stay. I don’t have a job.’ … There were a lot of social issues also in the communities that we serve. It is a low socio-economic environment that we were in … There are a lot of other things going on [in clients’ lives] … When [the psychologist] started [working at DTHF] … it gave us a little bit of relief because we could then refer people to her.” (DTHF 10)*

*“I think that psychosocial mental health [services] are vitally important … If I think about the level of psychological issues that the PrEP patients had versus those who were not on PrEP, they were significantly more severe than those not on PrEP. And that in itself sometimes causes problems with [clients’ adherence and persistence on] the medication … There was a lot of risky behavior that they would share [with me] … I would kind of persuade them to go back onto PrEP, to see the benefits of it, [and how] adding HIV to their already growing list of problems would not be great … And sometimes they would agree to it, and sometimes they wouldn’t … But, yeah, I don’t think any PrEP program should implement without [a link to psychosocial services].” (WRHI 01)*

Some participants emphasized that having a psychologist within their referral network potentially benefitted not only the client by connecting them with needed services but also PrEP providers by serving as a potential “lifeline” in case difficult topics—such as intimate partner violence—arise during PrEP counseling sessions.

*“I think the fear often from a healthcare provider is opening up something they don’t have the skills to contain. You know, I’m much less nervous probing on some difficult conversations if I know that, if something happens, I have a social worker or a psychologist that I can call on to help manage the patient … Sometimes someone brings up something that implies suicidal ideation. You’re often like, ‘I don’t wanna open that up. I can’t manage that.’ … But [knowing that I can refer the client, if needed] allows for a deeper conversation … [Psychosocial services are] integral to PrEP in that … a lot of young people who are choosing PrEP have otherwise chaotic lives. And so, in order to help them adhere and all of that, they need extra support.” (WRHI 10)*

*“Generally, on the [Tutu Teen] truck, we felt that we could do with a trained counsellor or psychologist. It wasn’t always easy for us [as PrEP providers] to deal with issues like rape or clients just finding out that their partner is [HIV] positive because we were limited in time … So you couldn’t get stuck with a patient for an hour and a half because she is now emotional and wants to talk. So what we sometimes did was refer clients to the school psychologist. But it would’ve been nice to have that person on board [the Tutu Teen Truck].” (DTHF 10)*

However, some of these participants noted that governments may find it difficult to scale up psychosocial services alongside PrEP simply because of the general shortage of psychosocial care providers.

*“[Including psychosocial services in the PrEP package] may be the hardest because it’s quite out of the clinic’s capabilities. They can’t make themselves get a psychologist. And we know that the access to psychologists and social workers [in South Africa]—the number of citizens to psychologists is ridiculous: thousands to one. I think having [psychosocial] services available is important. But I think it’s a hard one to scale.” (WRHI 10)*

Out of similar concerns for clients’ psychosocial well-being, a handful of participants advocated for the minimal package to include a screen for gender-based violence. These participants emphasized that gender-based violence—particularly intimate partner violence—was fairly common among AGYW and tends to negatively impact PrEP uptake, adherence, and persistence.

*“I was shocked by the pervasiveness of intimate partner violence [among AGYW] … [Sometimes the partner uses] subtle methods, like verbal abuse and economic intimidation, like threatening not to give you money, or not to pay for this, or not to feed you if you’re on PrEP.” (KEMRI 13)*

## Delivery Location Considerations

Most participants felt as though PrEP could be successfully scaled to other FP clinics and/or other primary healthcare clinics so long as these locations were accessible and acceptable to AGYW.

### Accessibility

Most participants acknowledged that accessing PrEP at clinics can be difficult for AGYW due to the time and money it takes to travel to the clinic.

*“Most of these ladies, they talk about the [transportation] fare being the challenge … Some of them have an amount of money that they want to last them for the day. But if they take this out to come to the hospital [for PrEP], they say it will interfere with their budget.” (KERMI 03)*

*“For example, if you're going to talk to a community in Alexandra, at least link them up to a facility that is in Alexandra. Because I think it's going to make more impact. So if you want to talk about, ‘No, you have to go now to Hillbrow [to get PrEP],’ people are like, ‘But where do I get transportation [fare]?’ I think it works if people have access to facilities which are close by and they don't have to, you know, spend a lot of time or money to get there because those are barriers.” (WRHI 06)*

In light of these challenges, many participants advocated for PrEP to be scaled to a variety of settings to make accessing PrEP easier for AGYW. Notably, participants included non-clinical settings within their suggestions, as well as delivery modalities that did not involve any healthcare provider, such as vending machines.

*“[We need to figure out] how to create more [delivery] platforms for young women … It’s [about increasing] the availability [of PrEP] where they actually live. For example, on campus. What’s the use of having a clinic on campus if I still have to go outside to seek services? Why can’t I just access it [PrEP] on campus?” (WRHI 06)*

*“There should be more spaces to get it [PrEP] … My view is just shift more of this out of the clinics … Have your [adherence] clubs, your courier service, those ATM banks [vending machines] that give the drug. And just really make it so much easier to get … Young women are like, ‘Why can’t the community health worker just bring this [PrEP] so I can pick it up somewhere?’ … That’s where they’re at and what they’re asking. I think we need to take away as many barriers as possible. ” (DTHF 02)*

A second commonly cited access-related barrier was that clinics are often closed during the hours that AGYW are most available.

*“A clinic might be open throughout the seven days [of the week] … [but] the times that the clinic is fully functional are actually less than [what is] put on paper. Clinics often close very early. Friday is almost a half-day. Already they’re packing up … It doesn’t go down well with young people who may want to come to the facility after school or after work. It’s hard for them to get help.” (WRHI 04)*

Not surprisingly, many participants identified extended opening hours as critical to delivering PrEP to AGYW both within the context of the POWER study and in scale-up.

*“Initially, we were just working during weekdays. Then we reached a point [where] we realized there are some clients who were requesting to come over the weekend. So we shifted. We are very flexible.” (KEMRI 08)*

*“Most clinics, after 2pm, if they’re full, they don’t take any more [clients]. But the kids, they knock off [leave school] at maybe quarter past three. We [in the Tutu Teen Truck] are still there waiting for them. We don’t close up until we get our clients. So it’s more convenient for them.” (DTHF 08)*

*“If we weren’t there and they [clients] wanted PrEP, [it would be great if] they could go to a 24-hour facility. Or say a mobile clinic goes and parks somewhere from 16:30pm until 8 or 9 o’clock for young people to come. It would be so much better.” (DTHF 11)*

Many participants across the POWER sites emphasized that, on the whole, the mobile clinic model maximizes AGYW’s access to PrEP care by bringing PrEP services directly to them and, in turn, reducing access barriers like transportation fare and travel time.

*“One of the advantages is that we, they don’t have to come to us. We come to them … Most [AGYW] don’t have money in their hands or in their pockets to move around. So it’s best if they just have a walking distance to acquire services, instead of having money as a barrier to reach something.” (DTHF 03)*

However, participants noted that the mobile clinic model is not completely immune to access-related barriers. Access can become an issue when the client misses the truck and/or when the truck cannot make its routine stops due to security issues, inclement weather, or breakdowns.

*“Because we are mobile, if they cannot find us immediately when they need us, then they will have to wait for seven days [for us to return] to that spot … The disadvantage is when the client is very in need of us and doesn’t have money to travel to come to us.” (DTHF 07)*

*“Another thing is crime because … we’ve been forced to abandon some areas because the team [staff] has been robbed many times in those communities … We are scared to go there again because of the muggings, and it becomes a barrier to us and the clients to meet again … We tend to lose those clients because we’re not able to go and pick them up from where they are. They have to find their own way to come find us where we are.” (DTHF 03)*

Participants from the Tutu Teen Truck also highlighted two other aspects of mobile service delivery that should be taken into consideration when deciding whether to scale up PrEP using this model. First, delivering mobile services requires a substantial amount of work to identify locations suitable for both reaching clients and setting up the truck.

*“It cost us a lot of effort to look for sites. We would sometimes take a few mornings out in the week and just drive around … You would say, ‘Let’s go check out that spot and see.’ So that was a lot of hard work to get the right site. Because you don’t just want a piece of land where you can stand. You also want to catch clients … So for me, that was the biggest challenge [of the mobile clinic] … The other thing is your dynamics change within an area. So you might start off in an area which is not so busy, and you think, ‘We’ll come here once a month,’ but then it picks up and your need becomes bigger … [And then] one of your other areas might become a bit more slow because people migrate … So you sort of need to have some flexibility … You have to adapt.” (DTHF 10)*

And second, because service locations and times change regularly, operating a mobile clinic requires keeping clients constantly updated on when and where they can find the clinic. As such, participants emphasized that a mobile clinic requires a way to communicate this information to clients, ideally in real-time. For similar reasons, some participants noted that mobile clinics need to be willing to accommodate clients’ schedules, when possible.

*“It is essential [that clients can reach us] because you find that it’s 6pm and they can’t find [the truck], but if they contact you on WhatsApp, they can get you … So WhatsApp really helps a lot.” (DTHF 11)*

*“[Mobile clinics delivering PrEP] must be flexible with meeting the clients halfway, like we do. If we are unable to reach them, we give them the option to pick them up [where they are] so that they don’t miss their appointment. They [mobile clinics] need to be comfortable with that, even though maybe it’s going to be a new thing for them.” (DTHF 08)*

To address some of the aforementioned access challenges, the Tutu Teen Truck adapted its PrEP delivery model to include three other ways clients could obtain PrEP: (1) at monthly adherence club meetings; (2) delivered directly to them via a courier service; and (3) at a stationary DoH clinic.

### Acceptability

Participants emphasized that PrEP should be scaled to delivery sites that are adolescent- and youth-friendly and capable of delivering PrEP services to AGYW quickly and discreetly. For this second requirement, participants identified fast-tracking, service integration, and task-shifting as effective ways to reduce PrEP client wait time and/or maintain clients’ privacy.

#### Adolescent- and Youth-Friendly Environment

Nearly all participants across the three main POWER sites emphasized that PrEP expansion would be most successful if services were scaled to facilities that already have an adolescent- and youth-friendly (AYF) environment. When asked what makes an environment “adolescent- and youth-friendly,” participants reported the following general characteristics:

* AYF spaces are often—though not always—exclusively for delivering services to adolescents. That is, adolescent clients and adult clients do not mix.
* AYF spaces are easy to access and have opening hours that align with adolescents’ availability.
* AYF spaces feature health education materials (e.g., posters, brochures, videos) that are specifically designed for adolescents. These materials present information using language appropriate and accessible to this age group and feature individuals to whom adolescents can relate.
* AYF spaces are comfortable and relaxed. For example, they may feature couches, TVs, and Wi-Fi.
* Most importantly, AYF environments feature providers who have a positive predisposition towards young people and adopt a non-judgmental approach to care delivery that is responsive to the sexual and reproductive health (SRH) needs of young people. (For more details on AYF providers, see the section “PrEP Provider Training – Adolescent- and Youth-Friendly Services”.)

In general, most participants advocating for scaling to AYF spaces felt that AGYW are drawn to such environments because they provide a sense of privacy, belonging, and comfort. As such, the AYF climate was viewed as an important driver of AGYWs’ decision to uptake PrEP services and return for follow-up visits.

*“It’s an adolescent clinic. Now they [clients] don’t have all these other patients to contend with [like] children and elderly patients … The chances of them meeting [i.e., running into] their parents or their aunties or uncles, it’s quite slim.” (WRHI 05)*

*“The thing that really helped is the clinic environment—the way it was set up. We had a TV. We had reading materials and a place where they could sit and have reading materials. This really encouraged [clients] to return.” (KEMRI 17)*

Most participants, therefore, recommended that PrEP be scaled to clinics with an existing youth-friendly environment.

*“I think that integrating PrEP into youth-friendly services is of the lower hanging fruits because they are already doing integrated services; they are already attracting young people to those services; there’s already quite well-established services. And so, putting PrEP into that package I think is a good spot for it.” (WRHI 10)*

*“For starters, I think they need a youth-friendly clinic that is separate from the general clinic for other clients … When it is youth, we need to try to make sure there is privacy [and that it’s] a safe space.” (KEMRI 02)*

However, several participants acknowledged that scaling exclusively to clinics with AYF spaces may limit the impact of PrEP and that existing space constraints may make it infeasible for many government clinics to create a separate AYF space.

*“It would be very hard [for other clinics] to set up [an AYF space]. I worked in a clinic in a local municipality. Number one, they don’t have space. So for them to have space for adolescents is going to be a challenge because they've got rooms designed that they have one meeting area.” (WRHI 05)*

#### Service Integration and Co-location

When asked to imagine that the MOH in their country wanted to begin delivering PrEP to AGYW at twenty other clinics of the same kind as their POWER site (e.g., mobile clinic, primary healthcare clinic, family planning clinic), most participants commented on a scenario in which PrEP delivery was expanded to government-run clinics. These participants noted that most government facilities do not offer integrated services and instead make clients queue for each service they seek. The lack of integrated services was cited as driving up wait times. By contrast, nearly all participants identified “integrated services” as an advantage of their PrEP delivery model, with many referring to their model as a “one-stop shop.” Citing PrEP stigma, most participants strongly felt that PrEP should be delivered alongside other services, rather than exist as a stand-alone service. These participants explained that such a set-up is advantageous to AGYW because it affords them more privacy.

*“[PrEP should be delivered] at least in a one-stop shop, you know, to prevent the stigma because no one can know what really you’ve come for because you’ve just entered the youth-friendly clinic. They don’t know if it’s family planning, if it’s HIV testing, or it’s cancer screening, or it’s PrEP, or it’s something else.” (KEMRI 08)*

Study sites varied in terms of where and how they integrated the POWER package of services (e.g., HIV testing, STI testing, counseling, dispensing) with ongoing service delivery. Some services were integrated “*within-provider*,” such that a single provider delivered multiple services. Several participants described such within-provider service integration as potentially time-saving for the client because it eliminates client wait time between providers. It was also described as beneficial to the provider because the provider does not have to wait for other providers to complete their part of the service.

*“And I think also having a package service delivery system [is an advantage]. Instead of me waiting to be seen by a counselor, and after that I have to go back in and queue again to be seen for family planning, and after that I have to go and queue again to be seen for PrEP, for example, if it's one clinician who's doing everything that I'm presenting at that moment, [then] firstly you save [the client] time.” (WRHI 06)*

*“[Service integration] has [made it easier to deliver PrEP] because I know that I have to do everything for a participant … So it's given me that power in a way to say, ‘Yes, I can deal with everything.’ I've got my [PrEP] medicine in the cupboards [that I can dispense]. I’ve got all my phlebotomy things in there [to do blood draws]. I do most everything myself … So, yes, it gives one a lot of independence. And also the timeframe becomes shorter because now I don't have to depend on whom [i.e., another provider] to do this service, then come back, and the client doesn’t have to go away there [and] come back.” (WRHI 05)*

Whereas some participants felt as though scale-up efforts should explore options for more “within-provider” integration of PrEP services. A few participants noted that this would potentially require expanding some cadres’ scope of practice.

*“I think for [scaling to] public facilities where we have so many people coming in, we would have to have all the services being done by just one person because this will really help … It can be the [same] one who is doing the HIV test. You test them, you talk to them about PrEP, and you give them PrEP. It will really save time for the staff and for the participant because when you keep referring them to different places to go and have a service, then you discourage them from continuing with PrEP treatment.” (KEMRI 17)*

*“I wish it was a one-stop shop where they could do everything in this room and finish here. But a counselor can’t [i.e., isn’t allowed to] take blood and can’t dispense … Like follow-up [clients], do they have to go to a nurse? The nurse just gives them more bottles [i.e., dispenses PrEP] … [For scale-up], it should be something where they [clients] don’t have to see everyone.” (DTHF 04)*

A few participants warned, however, that “within-provider” integration may result in bottlenecks if too few providers are cross-trained to deliver PrEP.

*“[The PrEP provider] might be stretched too thin … because if a clinician has to deal with family planning and all these other issues that might be presented by this one patient, they’ll be spending a lot of time on this one patient, meaning that the others [the other clients] that are outside [waiting to be seen] can be quite impatient. So probably not having one person [delivering PrEP] … They might need extra hands.” (WRHI 06)*

When “within-provider” service integration is not possible, *co-locating services*—placing the services within the same general location—was viewed as the next best option. A commonly cited advantage of each POWER model was that the services were available “under the same roof” and did not require clients to visit other clinic departments. An example of co-located services is HIV testing and PrEP counseling at JOOTRH. Both services were provided within the MCH/FP clinic but by different providers: an HCT counselor and a nurse, respectively. According to participants, co-located services reduced the amount of time clients spend moving between physically separate clinical departments and waiting in additional queues. Participants strongly recommended that PrEP be scaled to locations where necessary services (e.g., HIV testing, STI testing, counseling, PrEP dispensing) were, at a minimum, co-located.

*“I think what is essential is also incorporating it [PrEP] into other services and ensuring that it’s all under one roof, like what we are doing at JOOTRH. Let’s not have clients—you’re in this building [and then] we go to another building. It increases fatigue because we are dealing with young women who, most of the time, these are people who have small children, or they are coming for a specific period of time, then they go back to their schedule. So all under one roof should be the most important thing.” (KEMRI 03)*

Participants cautioned, however, that AGYW would not find it acceptable if PrEP were delivered within an ART clinic.

*“If you were to combine PrEP with ART, they [AGYW] will not feel comfortable because they would be looking at people saying, ‘Oh, do they think I’m [HIV] positive, or what?’” (WRHI 05)*

*“When you go to a CCC [Comprehensive ART Care Center] and you meet your neighborhood there, they are like, ‘So-and-so has HIV’ or ‘She is on HIV drugs.’ … If someone got you with that bottle of PrEP, they stigmatize you to say you’re on HIV drugs … But in a youth-friendly center, nobody could judge [tell] that you came for your PrEP drugs, and so you don’t have to feel embarrassed.” (KEMRI 01)*

Similarly concerned about HIV stigma, a couple of participants reported that the Tutu Teen Truck is known for HIV testing services and that this association may turn off potential PrEP clients.

*“The truck itself has a stigma. Like, I used to see ‘Desmond Tutu’ [written on the side] and I was like, ‘Oh, the HIV truck.’ Even I, myself, [thought this] before I was working there … And I think that’s what is happening right now. People will associate us—the truck itself—the branding as ‘HIV’ and that’s it. I think that’s the thing that is scaring them [would-be PrEP clients] the most … Passersby will be like, ‘Oh, you are going for an HIV test.’” (DTHF 09)*

#### Teamwork and Task-Shifting

Some participants explained that when services are co-located, providers must work collaboratively as a team to effectively coordinate the client’s care. In some cases, providers cross-trained to deliver different services engaged in temporary task-shifting to alleviate bottlenecks.

*“If I’m outside doing the [client] registration, and I see there’s a long queue … [of people] coming for HIV testing, and all of the counselors are busy … then I would personally do the testing myself. We are very much flexible in our team. There’s a nice vibe of teamwork … If we weren’t able to do that, then it’d be a very difficult job to do each and every day.” (DTHF 03)*

In other cases, tasks that were originally assigned to one cadre were permanently shifted to a lower cadre to make more efficient use of the available human resources.

*“[What] has made the [PrEP] service [delivery] better over time has been strong task shifting that we’ve done. I remember just how long a visit took when we started compared to now. [We’ve done] a lot of task shifting, especially shifting down to counsellors. Now, the nurses only do the things that the counsellors cannot do, which is like blood draws, dispensing, and providing the family planning … [But] all of the counselling, the urine testing—all of those things happen with the counsellor. So, we had to constantly see what else can we put down to the counsellors, and then from the counsellors also working off how much [PrEP] education can happen outside [the Tutu Teen Truck] before young people [come inside]. So, constantly listening to how much we can put through a lower level has really helped with making services better.” (DTHF 02)*

#### Fast-Tracking

Nearly all participants reported that fast-tracking PrEP clients—that is, allowing them to skip some or all queues at the clinic and, thus, receive services more quickly than other clients—is critical to successful implementation of PrEP delivery among AGYW. A few participants noted that, in addition to saving clients time, fast-tracking often makes clients feel “important” or “special.”

*“I think it [Ward 21’s delivery model] is a success in the sense that you get a fast-tracked service. I think that’s really important that wherever you put it next—whether you’re having it in a clinic or a mobile van or a school or the workplace, wherever it is—the point is, it can’t be a long dubious process. Because if it [is], people are not going to do it.” (WRHI 01)*

*“[PrEP clients] don’t have to go queue. They take first priority when they come to the truck. So they don’t have to wait like others that just came for other services. So it kind of makes them [feel] important to us.” (DTHF 08)*

*“Some [clients] we have met in the informal settlements, and then they’ll be like, ‘Okay. So where are you guys?’ [And we say,] ‘We are located at Jeppe [Jeppestown] clinic.’ [Their response is,] ‘Oh, come on! Those long queues!’ They already have this mentality that if you go to the clinic, you spend the whole day because there are long, winding queues. And we’re like, ‘No, no, no … You’re going to a separate corner that provides PrEP.’” (WRHI 04)*

However, most participants anticipated that fast tracking clients in other healthcare facilities—especially government facilities—would be challenging because most clinics do not have experience with fast-tracking. As such, clinics may not know how to implement fast-tracking and/or may lack the political will to institute fast-tracking for PrEP clients, especially in the absence of PrEP targets.

*“The key thing about primary healthcare is that we have siloed services. So your clinic is always split at least into two: into a chronic service and an acute service … And then you have your antenatal care, and your immunization. And then usually you have a separate contraception [area] … And so it’s just [a question of] where do you integrate [PrEP] and how do you integrate? You don’t want to put a PrEP queue with the chronic people because they’re gonna sit there the whole day, and they’re not gonna want to do it … If we integrate [PrEP into primary care], how do you deal with the people who are also accessing that service that are not getting PrEP? How do you fast-track that?” (WRHI 10)*

*“I would say if we had targets, it [fast-tracking PrEP clients] would be a priority. But if there were no targets attached to it to say, ‘You need to reach a certain number by then,’ then it wouldn’t be a priority.” (DTHF 11)*

## Workforce Considerations

Participants focused heavily on the skills, competencies, and workforce required for PrEP implementation both within the POWER study and for future scale-up.

### Challenges to Provider Buy-in

Although much of PrEP delivery was carried out at sites by POWER staff, participants reported that obtaining buy-in from non-POWER staff was sometimes difficult. The four main challenges were low and/or inaccurate knowledge about PrEP, moral opposition to delivering PrEP to AGYW, providers giving PrEP lower priority compared to curative treatment, and provider time constraints.

#### Knowledge and Beliefs about PrEP

Participants noted that most healthcare providers still have very low knowledge about PrEP and, are sometimes unsure of its efficacy.

*“I know one participant’s parent went to a [non-POWER] clinic to ask about PrEP, and the nurse at the clinic said, ‘There’s no such thing as PrEP,’ which was a bit disappointing.” (DTHF 06)*

*“At first … I was like, ‘Why do you want to give people ARVs and they are not HIV-positive? Is it going to maybe at some point interfere? It is going to lead to maybe drug resistance? And maybe what if now when they turn to be positive and they need to use the medication [ARVs]? What is going to happen?’ At that point, I was not that enlightened about PrEP because I had known about HIV and ARVs and stuff, but very little about PrEP.” (KEMRI 17)*

#### Moral Opposition

According to participants, some providers disagreed with providing PrEP to AGYW because it did not align with their personal values. This moral opposition to PrEP is often based on the belief that providing PrEP to AGYW is tantamount to giving them a “green light” to engage in HIV risk behavior. Participants explained that these providers—fearing that AGYW using PrEP would feel free to have unprotected sex or even unprotected sex with multiple partners—voiced concerns about AGYW becoming “promiscuous,” “careless,” or “reckless” due to PrEP.

*“To many people, they are thinking if you are making this PrEP available [to AGYW] and it’s so effective in preventing HIV, you are saying to these kids—to these women—to be promiscuous. That’s some of their thinking.” (WRHI 11)*

*“[There was a staff member] who was an exceptionally religious person … It seems she just had a struggle with young women being sexually active, and she didn’t stay long with us.” (DTHF 02)*

*“[There are some] old generation staffs who believe strictly that some things are meant to be done when people are adults or when people are in marriage … This was one of the biggest barriers [we encountered] because in the beginning, the nurses that were in the family planning clinic in JOOTRH were the old generation nurses. And so they were not really open to talking about PrEP to the young women because they believed that when you give them PrEP, we are encouraging them to go have sex, and also to have unprotected sex.” (KEMRI 17)*

In some cases, provider concerns about giving PrEP to AGYW were framed in terms of risk compensation: the idea that AGYW on PrEP would perceive their HIV risk to be lower and thus engage in other behaviors—such as condomless sex—that can have other negative consequences, like unplanned pregnancy and STIs.

*“At first, I had a concern … [that] PrEP will make our young women mess up because we could counsel her, and she might think, ‘If you give me PrEP, now I won’t care. I’ll be having sex without any fear without a condom. Why? Because I’m prevented by PrEP.’ So I was feeling like ladies are going to mess themselves up because PrEP only prevents HIV.” (KEMRI 07)*

#### Relative Priority

Although participants did not report experiencing this as a problem at POWER sites, a few individuals anticipated PrEP buy-in challenges in a scale-up scenario, as providers may perceive delivering a prevention intervention for healthy people as less important than delivering curative services to sick clients.

*“When people start to think that those who come for PrEP are not sick, that will be a challenge.” (KEMRI 01)*

*“[Successful scale-up may require] a change of attitude from providers … I will see you coming to me that you need PrEP, I will see that it is not an emergency. So providers should change that attitude because it is an emergency to me. That’s why I am in the clinic … [But a provider might think,] ‘I should be checking on someone who has malaria [instead].’ So that attitude change of providers should be brought towards these young women taking PrEP.” (KEMRI 07)*

#### Anticipated Workload

Interview participants warned of healthcare provider pushback based on concerns that delivering PrEP would be too much additional work with no additional benefit to them (e.g., no accompanying pay increase). For example, participants at JOOTRH reported that, early on, other healthcare providers within the MCH department were reluctant to refer clients for PrEP because they were not receiving any additional pay for this. These participants reported that, over time, they were able to convince some of these providers to refer clients for PrEP, mainly through persuading them that PrEP was important for these clients and also by ingratiating themselves to the FP providers by assisting them with their FP clients when possible. Another example of pushback experienced at JOOTRH involved PrEP dispensing. To address this issue, study staff worked with the clinic to develop an alternative workflow:

*“We tried taking PrEP to the [JOOTRH] pharmacy, but the pharmacist there … saw that it was some extra work, and so he actually refused dispensing PrEP … So we [instead] took [the PrEP drugs] and dispensed in our separate [POWER] room.” (KEMRI 18)*

Many participants anticipated that, in a scale-up scenario, staff at other clinics would similarly perceive PrEP delivery as “added work.”

*“If you want to add a service to an existing service, the first words you will hear are, ‘We’re already working so hard. You wanna add extra now for the same pay? It’s not gonna happen.’ So that in itself it a barrier.” (DTHF 10)*

*“Will they [the government] be able to sustain it [PrEP delivery]? … Because as at the moment, when I visit public clinics, they [staff] always complain about being overworked … Now if they have PrEP to dispense to patients as well, then it’s gonna be adding more of the burden that they are complaining about now.” (DTHF 03)*

### Strategies for Obtaining and Maintaining Provider Buy-in

Participants identified strategies that their sites used to address provider buy-in challenges and that might prove useful in scale-up efforts.

#### Address Knowledge Gaps

Across the POWER sites, provider knowledge gaps and concerns about PrEP’s efficacy were addressed primarily through trainings and CME presentations. Participants stressed that, in order for PrEP scale-up to succeed, providers need to understand not only what PrEP is but *why* it is being brought in.

*“It’s good to prepare staff. That is the first point for me, because when we arrived at Jeppe [Jeppestown], people were raw in terms of ‘What are we doing? What is PrEP all about? Why is it necessary?’ That mindset can be changed through training … If they understand how PrEP works, and you try to troubleshoot whatever fears or concerns they may have—it’ll be easy [to scale PrEP up] if these other sites are convinced from the word ‘go’ of why PrEP has to be rolled out.” (WRHI 04)*

*“The critical people who provide PrEP itself need to understand it, need to believe in it, need to accept that it is an important service that they want to provide and be willing to learn and understand what it takes to provide it. If they are not convinced, and if they don’t think that it is worth taking, then I think it is very difficult for them to convince anybody else to take it. It is hard to sell a product that you don’t believe in. So they need to believe in it. And then if they believe in it enough, then the next stage is they need to be able to be empowered to give it. Being empowered to give it means they understand enough about it, they understand the side effects, they understand the benefits, they understand how it is one would take PrEP.” (KEMRI 13)*

Whereas some of the participants had never heard of PrEP before the POWER study, others had extensive PrEP knowledge, often because of previously work experience with a PrEP research study. Many individuals from both groups, however, reported that they had initial concerns about PrEP that were later addressed by trainings.

*“[In the beginning,] I was asking, ‘Why are they exposing these people to ARVs before they get infected?’ But when I learned that this thing actually protects people from getting HIV, [I felt] prevention is better than cure. It is better you protect this person rather than letting them get infected. So to me, when I learned what it [PrEP] was, I think is when I really embraced it.” (KEMRI 04)*

A few participants reported that some providers took a while to be fully convinced of PrEP’s efficacy and that the low seroconversion rates at POWER sites were compelling evidence that PrEP worked. Some participants emphasized the importance of preparing providers for the possibility of seroconversions so that such events do not breed doubt about PrEP’s efficacy or providers’ sense of self-efficacy for delivering PrEP.

*“They have enrolled about 1000 [clients at the two sites], and in our facility, only one turned positive [seroconverted] … I felt that that is important … And they [POWER staff] even went ahead and explained that this one [client] that got infected [seroconverted] didn’t follow the instructions we gave her. So it means that if she could have followed the instructions, she could not have been infected.” (KEMRI 04)*

*“Dealing with the first seroconversion was a huge emotional toll on everyone … We all felt disappointed in ourselves. ‘Had we failed?’ … [Thereafter,] the team became quite obsessed about counselling long-term PrEP users about becoming complacent … Healthcare providers, we’re so influenced by anecdotal emotional experiences … You hold onto those anecdotes of some bad things that have happened, even though the evidence shows you they’re unlikely [to recur]. You’re then always wanting to counsel people [based] on it because you know how traumatic that experience was. And I think we saw that with our seroconversion … They [the providers] were unprepared for it. And I was like, ‘Well, put that down because maybe that’s a thing we can share with people [who are going to implement PrEP].’ Thinking about these specific scenarios are important.” (WRHI 10)*

#### Appeal to Providers’ Sense of Professional Duty

To address providers’ moral dilemmas about giving PrEP to AGYW and their concerns that PrEP clients would subsequently increase their risk behaviors, participants appealed to providers’ sense of professional duty to help clients stay healthy. Some key informants reported that, during PrEP trainings, they would promote PrEP as a way to invest in and protect young people. Other participants explained that personalizing —such as encouraging providers morally opposed to PrEP to imagine members of their own family needing PrEP—convinced them that delivering PrEP to AGYW was the right thing to do, even if they did not condone some clients’ personal behaviors (e.g., having multiple sexual partners).

*“Initially, there was the issue of staff attitude in Russia [JOOTRH], but you know, the good thing is that we got to explain to them that ‘It can also be your daughter [who needs PrEP] or it can also be you. Maybe today you are here, you know your partner's status, [but] next time, he may be HIV-positive, and you need PrEP.’ … So I think that is what made them feel like, ‘I am also a human being.’” (KEMRI 03)*

*“The way I view PrEP before is not the way I view it now because now I understand we don’t want our young people to get infected … Before, I was like, ‘You’re giving [PrEP to] which people?’ But now [I feel] it can even help your own child … I cannot be judgmental.” (KEMRI 04)*

In other cases, providers’ moral opposition to PrEP reportedly dissipated over time as they gained a greater appreciation of AGYW’s HIV risk and began viewing PrEP as an opportunity to intervene.

*“My [initial] concern was that it [giving PrEP to AGYW] was like we were promoting promiscuity, like we were giving them a room. But later I realized that it [risk behavior] is still there, despite the fact that we are denying them [PrEP] … They will not stop [change their risk behavior] because you think they should be stopping.” (KEMRI 05)*

*“[Sometimes I’m] like, ‘Oh my goodness’ … But now you think [to yourself], ‘This is a girl who is at risk. Okay, I have my own values. I have my own beliefs, you know, but now I have to help these young girls, because if I don’t, maybe no one will.’” (KEMRI 08)*

*Emphasize long-term benefits*

Another strategy or participants used in generating buy-in was to encourage health providers to move beyond the immediacy of their current workload by focusing on longer term benefits of reducing HIV incidence in the population and to mitigate increasing ART client volume at the health facility.

*“The [POWER] study has been able to show even the healthcare workers that, among these people who we are just seeing everyday, there are people here who are at risk of contracting HIV. There are people who, if we do not intervene now, will be new positives of HIV next year. And these people are willing to take PrEP if given the right information. I think that is a lesson that went strongly to the healthcare workers.” (KEMRI 16)*

*“I even say to them [providers], ‘You remember we are trying to curb the spread of HIV, and people you are seeing for ART, you know, the number would be less if we now had this prevention option of PrEP. So we are working toward the same goal.” (WRHI 11)*

*“I think often the problem with something like PrEP … is that the benefits of them are long-term. And it’s hard as someone in the thick of it who sees 60 patients a day to see that, by doing this now, you’re gonna be reducing your patient load long-term.” (WRHI 10)*

#### Refer to Ministry of Health Policy

Some participants reported that, in general, healthcare providers are unaware that PrEP is part of national healthcare policy. These individuals believed that if the policy were disseminated more widely to healthcare providers, they would be less inclined to view PrEP as “extra work.”

*“[One potential challenge to scale-up] is if it’s seen as extra work rather than standard of care. So if you can somehow get it [PrEP] integrated into standard of care, then it wouldn’t be a problem at all. It’s just that people see all the new programs—HIV and AIDS [care], PrEP, even AYFS [adolescent- and youth-friendly services]—they see it as ‘extra work.’ And [they think that] that’s not their work because they were employed to do this [other thing] … But if you have a memo from the National [Department of] Health, people will do whatever the memo says.” (WRHI 01)*

*“Some staff were thinking it [PrEP delivery] is a lot of work … Now that we are transitioning [PrEP delivery from POWER staff to facility staff], we’ve explained to them that PrEP is in the Kenyan guidelines, so it’s not something that you can deny someone … It’s not that we’re doing something new. It’s something that’s supposed to be in existence already running.” (KEMRI 03)*

One Ward 21 participant added that the value of an MOH policy directive is that it “legitimizes” PrEP in the eyes of providers.

*“[Providers at trainings] would be like, ‘If this [PrEP] is such a big thing, why haven’t we heard about it from the National Department of Health?’ … I started going [to these trainings] with the policies, so I could be like, ‘This is a policy. It’s just not widely disseminated yet.’ … [Providers] often say they want to see the research, but that’s not quite what they mean. They wanna see the legitimacy. And that often comes in a policy paper …. So taking the draft policy document [to the training] was helpful … I think a lot of it is around, ‘This is approved by government. This is something that we’re now providing that’s been legitimately approved, like it’s been regulated by SAHPRA [Southern African Health Products Regulatory Agency]. It’s not just approved here. It’s approved in these countries as well that are implementing it, and we know that it works—that it’s 99% effective—because we’ve conducted studies. So it’s usually around like, ‘There have been studies that shown us this, and it’s been regulated and approved by government and regulatory bodies around the world.’” (WRHI 10)*

#### Involve Staff in PrEP Implementation Planning

A couple of participants emphasized that, to get providers to buy into PrEP, implementers should involve staff in implementation planning, especially frontline workers, as they are most familiar with the ins and outs of daily service delivery.

*“[I would recommend clinics] explain to them [staff] that, ‘This is something we have to do. We now have to deliver PrEP. So how do you guys think we can do it?’ So don’t tell them, ‘You must do this and that and that.’ You must involve them [staff] in the planning of how everything is going to run. And [ask them] how they think it’s going to be the easiest way for them to render those services.” (DTHF 08)*

#### Assess Staffing Needs

Participants further felt that managers responsible for PrEP roll-out need to keep a close watch on staffing needs and adjust accordingly. Being responsive to staffing levels—that is, ensuring that the amount of work being asked of staff does not exceed their capacity—was viewed not only as critical to helping providers keep up with demand but also to helping to keep wait times short for clients.

*“[Whether additional staff need to be hired to deliver PrEP] depends on how big your service is gonna be … You just need to weigh out what it is people are coming for. So are people coming just to test [for HIV]? Maybe we have [to hire] more counsellors. Are people coming for contraceptives? Are people coming for PrEP? You really need to play around with that and review [staffing needs], ‘Okay, so this is not really needed,’ or ‘This is not working.’ Your staffing is very, very important. You can’t go without reviewing in the year and just think things must just work. You really need to keep your finger on it.” (DTHF 10)*

*“[Clinics need to figure out] if they have to employ more staff … We don’t want a case whereby somebody comes for PrEP, we have to keep him or her for 1 hour 30 minutes, because we are still maybe attending to a family planning patient or still palpating an antenatal mother. We want them to just come, pick their PrEP, and go. So the government has to think along those lines [when they scale up PrEP].” (KEMRI 04)*

#### Revise Provider Roles

As previously mentioned, a few sites implemented task-shifting to alleviate bottlenecks and expedite PrEP services for clients. Across all POWER sites, several participants indicated that a major bottleneck in PrEP delivery occurs at the dispensing step, which can only be carried out by higher-level cadre of staff.

*“At the moment, our systems require them [providers] to have a certain amount of accreditation [in order to dispense PrEP], which creates a real barrier. How many nurses are NiMART [Nurse Initiation and Management of Antiretroviral Therapy] trained and have the accreditation to give out antiretrovirals?” (DTHF 01)*

Sites used different tactics to mitigate this barrier to dispensing. For example, to dispense PrEP at the Tutu Teen Truck’s adherence club—which meets monthly at a stationary location—a POWER staff member contacts clients due for a refill ahead of time to see if they intend to pick their medication up at the club meeting. The NiMART-trained nurse dispenses bottles of PrEP for these clients ahead of time on the Tutu Teen Truck, and the club administrator brings these bottles to the meeting where she distributes them to the indicated clients. POWER staff at JOOTRH used a different dispensing strategy whereby a clinical officer signed out PrEP drugs from the hospital’s main pharmacy and stored these in the POWER room. The POWER nurse then dispensed these drugs directly to clients, and the clinical officer signed off on the prescriptions.

Although such dispensing strategies worked reasonably well for these POWER sites, a few participants recommended that the MOH relax dispensing restrictions and, in effect, permanently revise provider roles such that PrEP dispensing can be performed by other, more readily available cadres. These participants viewed such role revisions as critical to scaling up PrEP to facilities where higher-level cadres are already stretched thin.

*“[The NiMART training requirement for PrEP dispensing] is already a very tangible limitation … I think that we do need to get out of our own heads on this piece and really should have a shift in paradigm that this really needs to be the provision of a service in the most easy, non-medicalized way. Maybe healthcare workers are actually not ideal for this at all. Or maybe a very specific cadre that isn’t the most trained expert nurse or medical practitioner [but] is somebody who identifies more easily on a kind of peer level [is better-suited to deliver PrEP] … I think that is an area of research. I’m very aware of what they’re doing in Bangkok [using laypersons to deliver PrEP] among key populations. And I think seeing more of that here [in South Africa] would be good.” (DTHF 01)*

A few participants from Kenya similarly called for scale-up efforts to consider provider role revisions, explaining that it would not only make PrEP delivery more feasible for providers but also enable PrEP to be implemented in settings that are more accessible to AGYW.

*“I think where I would push the envelope when thinking about PrEP is it is a prescription medicine. It means you require a prescriber; you need a clinician or somebody who, by law, is allowed to prescribe before you can dispense it. Can we get to the point where we will be comfortable enough with not having it be a prescription medicine? Where it can almost be an over-the-counter [medicine] with some kind of checklist? Not everybody has the ability to go to a healthcare facility; to walk there, to reach there. If transport becomes an issue, then people don’t come. If they have fare, they would not choose between coming to the clinic for contraceptive option and eating food for the day. I mean, eating food trumps any time. So can we get to a point where we can deliver [PrEP] outside health facilities and [can we get] beyond prescribing individuals, and make it a community-friendly, easily accessible method of HIV prevention? That’s what I would think about.” (KEMRI 13)*

#### Give Providers PrEP Delivery Support

Across the four main POWER sites (JOOTRH, KMET, Ward 21, and TTT), participants reported that having access to technical support for PrEP information was a facilitator to PrEP delivery success. Most participants reported turning to the POWER site study coordinator as the technical expert on PrEP. A few participants additionally described consulting colleagues who also work in PrEP, or websites or PrEP tools, such as the MyPrEP decision support tool. Questions participants raised or received were usually about side effects, discontinuing or restarting a client on PrEP, and study protocol questions. Participants emphasized that having a reliable go-to information source was especially important during the beginning stages of implementation as providers get accustomed to delivering this new intervention.

*“You would have your normal side effects. But now someone else comes up with something that is not ordinary, like a rash … [So I’d contact the doctor,] ‘Okay, so should we continue? Should they take a break, or what?’ … The doctor was supporting us … She was so helpful … We could phone her any time … So it was very easy to manage things. You weren’t left in the dark.” (DTHF 10)*

Many participants reported that, as they gained experience in PrEP delivery and grew more comfortable in their PrEP delivery role, they had fewer questions for which they need to consult colleagues.

*“At this point, I have a seasoned team that really knows how to work with young women and with PrEP. There’s very few questions that come up to me in our WhatsApp group. I remember when we started, probably for about six months, everyday I’d be on WhatsApp with them, answering questions … And now there can be weeks that pass without a question coming up … So [they’ve] just become more confident and know what to do.” (DTHF, IDI number redacted)*

Participants noted that scaling up one-on-one technical expert support to all clinics delivering PrEP is not feasible; however, many recommended that a PrEP hotline be set up to support providers.

*“You can never know everything … [Sometimes you] need a second opinion … It helps to have that someone [you can consult] … [For scale-up] it can be a call-in number. It doesn’t have to be someone you know. As long as your questions are going to be answered.” (DTHF 04)*

*“I think the biggest, most useful intervention would be like a clinical hotline that nurses could call into if they were unsure of what they were doing because then they would feel confident going forward because they know that if they ran to a problem, there’s a clinical hotline that they can phone to get assistance on a specific patient … But the amount of support that’s required is really, really minimal, and I think it’s mainly clinical support that people are looking for because they’re nervous about a new intervention … …. I think this is just while people are gaining the confidence for it because it’s not that well-known … You just want there to be something to kind of bridge this gap while it’s new. " (WRHI 10)*

#### Make PrEP Delivery Indicators Visible

Some participants believed that regularly sharing monitoring data promotes provider buy-in by reminding providers that delivering PrEP to AGYW is an organizational priority and why.

*“[It is important to] provide updates on PrEP uptake in weekly meetings—in the surveillance meetings—just to update them about the behavior of the community and young women in terms of PrEP. And if they can see the change from the community, that can make them really believe, for sure, that PrEP is working and the community desperately needs it.” (WRHI 04)*

Throughout the POWER study, sites received weekly reports with their and other sites’ enrollment numbers as well as monthly reports detailing the demographic characteristics of POWER enrollees to date, the percent of clients who attended their Month One follow-up appointment, and the percent of clients retained in care. A few participants identified these reports as useful not only for tracking progress but also for revising delivery strategies.

*“[We received] updates on how far we’ve done with PrEP delivery … [and] where we are heading to. Are we meeting our targets? We would get information on those who seroconverted. We would sit down and discuss … client management … and how to restructure and what can work best.” (KEMRI 09)*

Lastly, some participants felt that PrEP champions may be a useful way in scale-up to remind providers of PrEP’s importance, especially in government facilities where providers are often stretched thin.

*“I’ve definitely felt that as a healthcare provider being like, ‘You want us to do a measles campaign today? Are you out of your mind? Like, vaccinate a thousand kids? Who’s gonna do that? … I can’t do that because I’ve got to do this.’ [Even though] that’s important in the long-term, it’s really hard to see that in the day-to-day, which is often why getting someone in who has that kind of birds-eye view… is helpful. Maybe that person is a PrEP champion. Having someone who can kind of see it from the long-term advantages is important.” (WRHI 10)*

### PrEP Provider Training

Overall, there was a strong consensus that the skills required to deliver PrEP (e.g., HIV testing, counseling, dispensing) are not all that different from the skills that most healthcare providers should be using on a regular basis.

*“We’ve exceptionalized it [PrEP] in a way. I don’t know why or how we made it complicated, but we have. People are nervous about it. People are anxious about it, when in fact, what is required is like five simple clinical steps: [1] initiate; and [2] a month later, do an HIV test; [3] give them more pills; [4] see them four times a year; and [5] do a creatinine [test] every now and then. It’s a simple intervention.” (WRHI 10)*

*“[HIV testing] is a simple process that we normally do for family planning [anyway] … Issuing PrEP, it’s not gonna be a problem.” (DTHF 07)*

However, though the steps to delivering PrEP may be relatively easy, delivering it in a way that is acceptable to AGYW will be more challenging.

#### Adolescent- and Youth-Friendly Services

Participants identified competencies for delivering adolescent- and youth-friendly (AYF) services as critical to successful PrEP delivery to AGYW. Participants generally described AYF providers as having the following competencies:

* Knowledge about adolescent health
* Ability to ensure confidentiality
* Ability to withhold judgment
* Ability to respect adolescent decision-making ability.

Across all sites, participants provided numerous examples of providers practicing these competencies and the positive effect it had on clients.

*“It’s much nicer to come to the [Tutu Teen Truck] Truck [for services] because you don’t get what people normally experience [at healthcare clinics], especially young people. That’s why they don’t access health facilities. It’s that staff attitude … ‘They were shouting at me, and they want to know why I’m sexually active and I’m only 13 years old and I should still be at school.’ We didn’t give that kind of feel to them. It was like, ‘It’s okay to be here’ type of thing. ‘We will try to help you as much as we can.’ … It takes special people to retain them [in care]. Because I go to a place, and I’m not happy with the service, I shall not return if I can get that service somewhere else … But we had a high return rate.” (DTHF 10)*

*“There is a training that you are told on how to deal with young women so you have to really ensure that whatever they are going to tell you, you are not going to share with somebody else. That is always their biggest worry. They don’t want anyone knowing that they came here for a certain service, especially things related with STI or HIV or PrEP. So you have to really make sure that they feel safe, [that] their concerns will be dealt with privately and the confidentiality is paramount. So I think that is what makes us ideal to deal with these young women.” (KEMRI 02)*

*“The approach we took was that young women are given the information [on PrEP], but they make the decision by themself. Like, when we did assessments of their vulnerability to HIV, we didn’t say, ‘You are at high risk; therefore, take PrEP.” It was like they themselves will decide if this is for them and if they perceive that they are at high risk of acquiring HIV. I think that [approach] helped because a lot of them would say like it made them feel empowered, heard, listened to [when they] made that choice for themself.” (DTHF 02)*

In order for PrEP scale-up efforts targeting AGYW to succeed, our interview participants from both South Africa and Kenya cautioned careful staff selection and extensive training in AYF competencies would be necessary.

*“I think the other challenge could be the kind of staff who handle these young people because I can say the young people want people [staff] who can understand them, who will relate to them. If the staff can be judgmental towards them, then there cannot be any results … Staffs need to be trained on how to handle these young women and young people.” (KEMRI 01)*

*“[Providers need to] understand young ones, how they work. Because maybe they’re used to working with older people … Now they have to adjust to understanding teenagers and how to talk to them. I think that would be the only challenge … [It would require] trainings on PrEP and on communication and professionalism. You can’t communicate the same way you could communicate with an adult with a young one. You need to understand their minds. You need to try to be in their level of understanding. And not be a parent.” (DTHF 08)*

*“[Providers] need to be told that young women can decide for themselves. You don’t need to decide for them. They know their life better than you … They can make choices. Maybe they don’t always do it as you think they should, but they can do it. So I think that’s something you need for scalability.” (DTHF 02)*

Although many participants cautioned that it would be challenging to train providers to adopt an AYF approach to delivering PrEP to AGYW, most felt as though it could be done. In general, participants believed it would be easier to train younger providers earlier in their professional careers to be AYF than older providers who tend to be more “set in their ways.”

*“It’s not easy [to teach a provider how to be youth-friendly], especially if your goal is to teach older people or people who have been in the industry for a long time. They feel like they know what’s right, [even though] sometimes they don’t. So it’s not easy. It takes patience and a constant reminder that, ‘Okay, this needs to happen this way.’” (DTHF 08)*

In addition to describing competencies, participants identified several attributes that may make a provider appear more AYF to clients, including proximity in age to clients, casual dress, and use of slang or colloquial language.

#### Provider Training Format

Some participants stressed that provider trainings should be small group and interactive.

*“I think there needs to be … smaller group teaching so that people can feel comfortable to ask questions, because I mean I would feel intimidated in a room of 60 people to say, ‘Actually, can you just—?’” (DTHF 05)*

A few participants recommended that trainings incorporate role playing activities to make providers consider how they would respond to particular situations.

*“[Training shouldn’t be] just about sitting in lectures but role playing it out, you know, ‘What would you do in this situation?” … Role plays [are good] just to really, I think, unpack it. It makes somebody learn.” (DTHF 05)*

Several individuals felt that if providers received a certificate for attending the training, it would encourage more participation.

*“[Providers should] be empowered through trainings, and that training should not just fall away by me signing on a register that I attended. [It needs] to be something feasible that I can actually take with me, even if I leave that setting … So I mean an actual certificate, you know, because this is a skill that they train for and spent an amount of effort and time on … And they'll take it seriously if it's done that way. They’ll also engage more as well and feel more part of the process.” (WRHI 06)*

In terms of training content, one participant explained that trainings needed to teach providers how to explain the new content they have learned in a way that makes sense to clients.

*“The training [we received] is not really training for us to go back and teach in a way that the community is going to understand what you are saying. So it is important for me, after they do the training, I need to make things simple for the people who are not nurses or are not part of the PrEP team or are not offering PrEP to understand what I am talking about … [For example,] I realized that every time I tell participants [clients] that it takes seven days for PrEP to build up in your system before it provides protection from HIV, they freak out … So I had to be creative and … [figure out how] to teach them [this] in a way that doesn’t actually let them lose their interest in PrEP once they hear the seven day story.” (DTHF 06)*

Another participant who reported similar struggles to explain to AGYW why PrEP needs to be taken for seven days before conferring protection described developing a visual aid. It depicted a T-cell with an increasing number of concentric circles around it and a red arrow labeled “HIV.” The participant would explain to clients that each day of PrEP use was like adding a protective layer around the T-cell, thus making it increasingly harder for the red HIV arrow to reach the T-cell. The participant would then tell the client that her T-cells weren’t fully protected until she had “seven circles” around them from taking PrEP for seven consecutive days, at which point the HIV virus would no longer be able to reach the client’s T-cells.

Nearly all participants advocated for some form of continuous medical education (CMEs) on PrEP. According to participants, CMEs are critical for keeping providers updated on changes in best practice and policy, which were perceived as occurring frequently and sometimes without widespread dissemination.

*“Things are changing all the time. When we first initially started [delivering PrEP], there was information that, for PrEP to work for you, you had to have it in your system for 20 days. [We were told that] it started working at 20 days. But now, as information improves, we’re told that it's seven days. So I think, yes, we need ongoing training and information sessions.” (WRHI 05)*

## Reaching and Supporting AGYW

### Strategies for Reaching AGYW and Creating Demand

Participants reported a diverse set of strategies that sites implemented to raise awareness about PrEP among AGYW and generate demand for it. These strategies cross-cut numerous forms of media, from print, radio, and TV to social media platforms and in-person dissemination. Some strategies were viewed as more “scalable” than others. The pros and cons of each strategy are detailed in **Appendix A**.

Overall, there was a strong consensus that, for scale-up to AGYW to succeed, a wide variety of strategies for reaching AGYW will need to be used simultaneously.

*“We keep hearing, ‘We must create an app!’ But people don’t wanna spend their data on healthcare. So in that way, getting people interested, I think, is a challenge we need to think about. I think including PrEP in like TV shows has been—you know, a lot of people are like, “I saw that on 7de Laan [South Africa soap opera] or I saw that on MTV Shuga.” It just makes it common knowledge, I think to start advertising it. A lot of people say, “But I’ve never even seen that on the billboard. I’ve never seen that on TV.” So just making it widely accessible so that people can hear more about it.” (WRHI 10)*

*“So I do think the message to public sector programs is you have to go that extra mile when you have a new innovation to really make sure people get it. They are going about their busy lives. They are not looking for new solutions unlike maybe sick people are … So you have to in a way be a bit more in people’s faces and much more present with them ….” (DTHF 01)*

The simultaneous use of numerous demand creation strategies was viewed as important not only because it ensures that AGYW hear the message more than once from a range of sources, but also because it begins to normalize PrEP and make it seep into the public consciousness. Participants further emphasized that PrEP demand creation needs to be large-scale, especially since taking daily preventative medication is not common in Kenya and South Africa.

*“We know that advertising works, but advertising has to be taken to scale … Campaigns that have normalized pill-taking, have really gone big, have tried to make the whole thing very accessible, those seem to me to have made some impact … I think we should think more about that in the future.” (DTHF 01)*

Lastly, a few participants further emphasized that both the content and modality of demand creation targeting AGYW needs to be continually re-assessed.

*“You won’t do one advertisement one way that will work indefinitely and ensure that everybody will always be fine. You have to keep reinventing the wheel. You have to keep on finding ‘If this no longer works … what else can we do?’ And then people change after a period of time. The person who is 15 today, by the time she gets to 20, what appealed to her when she was 15 may not appeal to her [now]. And the new person who was 10 and is now 15, the same thing may not appeal to them as appealed to our 15-year-old who’s now 20 … So can we be in that space where we keep reinventing, rethinking, re-engineering, re-marketing, and really look to the constituents that we are looking to provide these services to help guide us so that we can tell what is working for them and what is not.” (KEMRI 13)*

*“[PrEP messaging] is not a one-size-fits-all. Not all of them [AGYW], when you talk about PrEP, will be like ‘Yay!’ Others prefer the message to come from their peers. … And we have to keep on going back to the drawing board and try and come up with a better way to deliver the messaging around PrEP. And it’s been like that throughout and we’re still learning.” (WRHI 07)*

### Strategies for Supporting PrEP Decision-Making

#### Counseling

When asked about effective strategies for helping AGYW determine whether to take PrEP, most participants felt that counseling was the lynchpin of informed decision-making. Participants reported that counseling can address multiple barriers to informed, thoughtful decision-making, including low and/or inaccurate knowledge about PrEP, inaccurate perception of HIV risk, and hasty acceptance of PrEP without thinking through the potential challenges.

Participants described how providers addressed knowledge gaps during counseling sessions, providing clients with additional factual information and dispelling PrEP myths.

*“Through counseling … the client is assisted so that by the time the client accepts to take PrEP, she has really understood it, and her doubts have been cleared. Most of them, their main concerns is the side effects of PrEP and how long one needs to use PrEP … In the communities, there is a lot of stories going on … [Some clients think] using too much PrEP will actually make you become HIV-positive … Then there are some who say that PrEP makes you fat. We normally tell them that PrEP is not hormonal.” (KEMRI 02)*

Participants reported that counseling can support PrEP decision-making by helping clients understand their HIV risk. These participants explained that, during counseling sessions, providers can probe clients about their behaviors and give them examples of circumstances under which a person might decide to take—or not take—PrEP.

*“[What supports AGYW decision-making] is that part of the counseling when you're talking about risky behavior, because you get a sense that they may not really be aware of the level of risk that they’re in until you reflect it back to them. Because when you're probing, you are rephrasing and so putting it in a different light. For example, I always ask patients who say, ‘I have one partner, and I don't see a need to use a condom’ and I say, ‘OK that's good. It's a good sexual behavior having one partner. But it's not a prevention method.’ And then I would say, ‘Do you know your partner's HIV status?’ and they would say, ‘No, I don't know my partner's HIV status’ or they would say, ‘My partner doesn't look sick.’ … And I would say, ‘So if your partner was HIV-positive, and he informed you [of this], would you still decide to have unprotected sex with him?’ And they would say, ‘No, no, no, no’ quite frantically. And I would say, ‘But how is your situation different from what you are defensive about now? … And from there onwards, you give them [different HIV prevention] options.” (WRHI 06)*

Several participants reported that some AGYW are very excited about PrEP and quick to accept it, especially when initiating with a group of friends. Many participants attributed the large drop-off in persistence at Month One is clients deciding that PrEP is not right for them. Although most of this drop-off was viewed as inevitable—with some clients just needing to experience taking PrEP in order to realize that it is not for them—a couple of participants stated that counseling may be able to reduce some of that drop-off by helping clients recognize that PrEP is not right for them. These participants reported that, during counseling, providers can prompt clients to consider how taking a daily pill may or may not fit into their lifestyles and also give clients sufficient time to make their decision.

*“When they come to me, I’ll be kinda like ‘Okay, let me kinda, like, try to make you understand what PrEP is all about, because it’s not about taking the pill every day. It’s about the commitment. So, you’ll probably along the way have stumbling blocks … Sometimes you are not used to taking PrEP every day, or even a pill for that matter.’ So, when they come to me, I will try to—not to change their mindset, but to kinda, like, fully explain what PrEP is all about. Because they are like ‘Ah! I'm taking a pill every day. That’s a no brainer, man.’ But actually it is a brainer because [for it to work] you have to take it every day, even if there are side effects. What if you can’t handle side effects at the end of the day? … So I’m kinda, like, making sure by putting a concrete level that says ‘This is what is what might happen [when you’re on PrEP]. The pros and cons’ … It’s not just taking a pill and that’s it.” (DTHF 09)*

*“For me, the important piece is to talk to people about [during counseling]—other than the core PrEP messages—are … the facilitators and barriers to PrEP use. Because I think that people don’t think that through properly and they don’t realize why it’s difficult or easy for them to use PrEP. So being able to have that conversation.” (WRHI 10)*

The main anticipated barrier to scaling up PrEP counseling was provider time constraints. Several participants expressed concern that this initial counseling session to help clients decide whether to initiate PrEP would be too time-intensive to carry out in routine settings, especially if clients had very low biomedical literacy.

*“PrEP is really about a conversation. It is about understanding someone’s reproductive health and sexual choices, understanding their goals and aspirations, and helping them understand and adopt PrEP as a lifestyle choice for a period of time, if it suits their desires and aspirations and helps them meet those desires and aspirations. Now that’s not an easy thing to do in a short period of time, and then the healthcare worker may not have the luxury of time to be able to do that in-depth … [The question is] how do we create/protect that time for a healthcare worker [to attend to] a woman who walks in and requires PrEP and is going to take an hour, which means that she [the healthcare worker] has 10 other people that are standing there that she could have seen? So there is that genuine pressure around time.” (KEMRI 13)*

However, some participants highlighted that such in-depth counselling is not necessary for all clients. For example, some clients come to the clinic already possessing thorough and accurate knowledge about PrEP and require little provider support in deciding whether PrEP is right for them.

*“Maybe you don’t take so much time with some of them because already they [clients] are the ones who are willing to pick the PrEP because they know their behavior. They know the way they are living. So I don’t think [time will be a problem] because you don’t need much time to convince such clients [to take PrEP]. It is like you are only telling them, ‘This thing I am giving you, you have to do [steps] one-two-three so that it works for you. If you don’t follow this, then it might not work for you.’ So it doesn’t always take so much time.” (KEMRI 04)*

At Ward 21, when counseling a PrEP client, providers used a simplified checklist of standard messages that followed National DoH guidance. Like the above-quoted Kisumu participant, some participants from Ward 21 felt that, for most PrEP clients, counseling could be carried out efficiently, with more in-depth counseling only needed for particular clients:

*“I think there are two [kinds of] patients. You get the one who’s coming and knows they want to do this, so there’s not much you have to do there, and they’ve decided they will just tick the boxes and go through with it [i.e., uptake PrEP]. And then there’s the other person who’s still on the wall or you’ve just introduced it and they are kind of, like, interested, and I think that’s the one that we need to focus on mostly.” (WRHI 01)*

Participants identified several strategies that they felt could reduce the amount of time providers spend counseling new clients, including exposing clients to more PrEP education prior to them reaching the provider and counseling clients in groups. Some participants expressed the belief that, as knowledge of PrEP increases in the general community, the amount of counseling providers have to give will drop even farther.

*“[A lot of the] decision-making can happen before they see the counsellors, actually, if you have educators or peer navigators or just interactive information systems so that, when they come and sit in front of the counsellor, she or he doesn’t have to start telling you what PrEP is. You already know that. You already mostly know whether you do want PrEP or you don’t by the time you get there.” (DTHF 02)*

*“[Counseling] could be done in groups. Obviously, it might mean that some people might hold back certain things because it’s a group. They might not feel comfortable disclosing certain things about their life. But I think in that sense it would mean that as a counsellor you might further say that ‘If you would like a more individual counseling, which is an option that you have, you might do it today or another day. It's entirely up to you. You can still come and see the counseling that on an individual basis.’” (WRHI 06)*

#### Decision Support Tool

To enhance patient-centered counseling and reduce the amount of time providers spend counseling clients, POWER developed the Decision Support Tool, a web-based module that walks users through different HIV prevention and family planning options using adolescent-friendly language and images. On a tablet provided by the clinic or on their personal mobile devices, users interact with the tool by clicking on different components to learn more information, noting questions they would like to discuss with a provider, and completing a survey to obtain a preliminary recommendation as to which family planning methods might best suit their preferences.

Whereas the Decision Support Tool was formally evaluated through a randomized clinical trial at the Jeppestown clinic (with data analysis currently underway), the tool’s implementation was more ad hoc at the remaining POWER sites. As such, provider and user experiences of the tool varied across sites. For example, challenges around poor internet connectivity and tablet security led some sites—such as JOOTRH and KMET—to switch over to using a printed version of the Decision Support Tool. Key informants at the Kisumu and Cape Town sites reported that the tool did provide some clients with a basic understanding of PrEP but noted that—as implemented at their sites—the tool was of limited use for supporting PrEP decision-making. One major limitation reported by JOOTRH and KMET participants was that the tool was only available in English.

*“The Decision Tool …. It worked for some clients, but [for] like 80% [of clients] it didn’t because … the literacy part of it … There are clients who can’t even read. … They are just seeing pictures, but they can’t understand … For some clients, it was nice. Some reported that this thing has really helped because it gave them information—at least a clue of what they are going to be told about to make an informed choice. But for others, bearing in mind we are living around informal settlements, and those girls maybe they have not gone to school. They don’t understand English. It was a bit of a challenge. It didn’t work that much like we expected.” (KEMRI 08)*

A couple of participants at these sites also noted that the Decision Support Tool had a substantial amount of content and that many clients did not have sufficient time to get through all of it.

*“The [Decision Support] tool, they [clients] can’t sit with tablets outside, and when they are inside, they can’t spend time on the tablet because things need to be done—[like] urine testing needs to be done. So there isn’t a lot of time for them to sit inside and have that decision tool.” (DTHF 04)*

A couple of key informants interviewed for this qualitative study had firsthand experience with the Decision Support Tool as formally implemented at the Jeppestown clinic. One such participant felt as though one-on-one counseling was preferable to the tool:

*“The Decision Tool in Jeppestown, I don’t think it has got any effect because I have never had even once a person asking me any question based on the tool. Not even once … I don’t think it works there … [With some clients] you just need a one-on-one [counseling] conversation … I would stop with the decision tool. It would make things easier.” (WRHI 11)*

Two other participants with experience working at the Jeppestown clinic, however, reported having heard positive feedback from colleagues and clients about the tool:

*“When they [my colleagues] are done [counseling a client who has used the Decision Support Tool], they will say, ‘Wow, that was helpful. I see in the tablet that the client said this and this.’” (WRHI 02)*

*“They [clients randomized to use the Decision Support Tool] are given a time to decide on or to read about what they are shown [in the Decision Support Tool], and they find it exciting, and they identify themselves. They can categorize themselves. ‘Okay. Am I at risk? Am I not at risk?’” (WRHI 04)*

Full results from the formal evaluation of the Decision Support Tool at Jeppestown are forthcoming.

### Strategies for Supporting PrEP Persistence among AGYW

We asked participants what helps AGYW adhere—that is, take PrEP every day as prescribed. We also asked participants what helps AGYW to persist on PrEP, meaning continue to take PrEP during periods of HIV risk. Participants identified several support strategies for helping AGYW to adhere and/or persist on PrEP that varied both in terms of their observed impact within the POWER study and in their potential scalability to other clinics.

#### Flexible Appointment Scheduling & Dispensing

Many participants emphasized that if PrEP delivery to AGYW were to be scaled up, clinics need to be flexible in terms of appointment scheduling. Specifically, participants stated that clinics need to be prepared for clients making last-minute changes and be patient with clients who miss their appointments.

*“I know with other clinics, if you don't make that [appointment] date, and you come in another day, the possibility of being turned away is very high. But at Ward 21, whether you’re on your date or not, they still see you. It’s OK. And they don’t judge you, and they don't make you feel bad for not coming on that date, or that, ‘The next time you won’t be seen’, you know? That threatening approach. I think that level of flexibility [when it comes to appointments] is a great approach [for PrEP delivery to AGYW].” (WRHI 06)*

Similarly, participants called for clinics to be flexible—to the extent possible—in terms of the amount of PrEP dispensed at a given visit. Such flexible dispensing entailed making a special allowance to give a client extra PrEP—usually no more than one bottle—to last them through an extenuating circumstance, such as a period of travel. This strategy was viewed as supporting clients’ persistence on PrEP by ensuring that they do not run out of pills.

*“We have school-going clients, and sometimes during the holidays they come [to the clinic]. And sometimes when they go back to school, you lose them. So what we do [is] we talk to them. We reschedule their visits. There are clients we’ve given four bottles of PrEP to take them through the four months, so that she doesn’t go off PrEP during the time she is in school.” (KEMRI 08)*

Several participants expressed doubt as to whether, in a scale-up situation, government clinics would be willing to adopt such flexible appointment scheduling and dispensing practices. The main anticipated barrier to the former was that it is not the norm in government facilities, and the main anticipated barrier to the latter was concerns about medication stockouts.

*“We are restricted to, I think, [giving clients only] one month or two months of PrEP … I think [even ART clients], they can only give a three-month prescription [of ARVs] once they are stable … So this has been an ongoing battle with South Africa … I think there’s concerns around wastage of drugs and adherence and so on.” (DTHF 05)*

*“[Stockouts are] a really big concern for clinics, and I don’t know how they’re gonna manage that when that [PrEP/ARV] stock is all coming from government, and you have ART patients who need that drug and PrEP patients who need that drug.” (WRHI 10)*

#### Counseling

When asked about effective strategies for helping AGYW adhere and persist on PrEP, participants again identified counseling as key. Common barriers to adherence and persistence—and reported examples of what providers did to address these barriers—included the following:

* **Side effects**: Providers reassured clients that side effects will subside and connected them to further care, if needed.
* **Upcoming activities (e.g., travel) that may make PrEP-taking more challenging**: Providers encouraged clients to plan for future scenarios—such as upcoming travel that could interfere with regular pill-taking—and suggested strategies that could help facilitate discrete pill-taking, such as using pill boxes so others do not see the prescription bottle. If the client ran out of PrEP while away from home, providers directed them to a clinic where they could get PrEP.
* **General forgetfulness**: Providers suggested strategies to help clients remember to take PrEP, such as setting alarms, aligning PrEP use with routine daily activities, and establishing a “treatment buddy” who could remind them to take PrEP.
* **Partner/family disapproval of client’s PrEP Use**: If the client desired, providers talked to the partner or family member about PrEP to explain what it is and how it works to protect against HIV.

As with counseling related to PrEP uptake, participants again worried that time constraints may hinder providers’ ability to carry out counseling in sufficient depth as to adequately address AGYW needs for persistence support. However, some participants noted that if other resources for PrEP support catch on among AGYW, this may reduce the time burden of counseling on providers. Examples of such resources include online communities of PrEP users and web-based applications such as B-Wise, a South African DoH platform where users can obtain health information, ask questions, and connect to health services in their community.

#### Appointment Reminders and Periodic Check-ins

Most POWER sites did some form of appointment reminders and check-ins with clients. In general, participants felt that reminders helped support AGYW’s PrEP use by increasing the likelihood those who desired to continue on PrEP made it to their appointments. They further felt that check-ins were an opportunity for providers to learn whether clients needed additional support (e.g., more counseling on side effects) and to give clients affective support (e.g., showing clients that providers cared about them).

*“[These clinics should] have someone who keeps track of everyone so that, just now and then, you give them a reminder, because sometimes these young people do need an encouragement.” (DTHF 03)*

*“[It would be good] if there can be someone who is dedicated to check in [with clients] … even via WhatsApp, to say, ‘How are you today? How are you feeling? Any side effects?’ I think that will work because they will be able to tell you, ‘I am experiencing this and this,’ and you will be able to reassure them … [Sometimes] you can’t be sure whether they hear all these things you say [to them during the initial counseling session] because they are excited … So [doing a] check-in pretty soon after that … I think that will help a lot … [with dealing with] side effects and then reminding them of other things [you discussed].” (WRHI 11)*

*“The other thing that can help them to continue being on PrEP is just continuous communication with them. Once you give them the medication, you just call maybe to check on them, to know how they are doing with the medication. This encourages them because they feel like you didn’t just give them the medication because you wanted them to take the medication, but it is because you cared for them. It is just building a relationship between the caregiver and the participant or the patient that really encourages them to be on PrEP. (KEMRI 17)*

However, participants reported some challenges with conducting these appointment reminders and check-ins. For example, early on in the POWER study, the Tutu Teen Truck began sending automatic SMS appointment reminders to clients; however, technical challenges with keeping the system up-to-date with clients’ appointment schedules eventually led the site to discontinue using such reminders. Another challenge to both SMS and phone-based appointment reminders and check-ins was that clients frequently changed phone numbers or shared phones with others, thus presenting challenges to contacting them or contacting them confidentially.

Due to both of these challenges, as well as anticipated resource constraints, some participants questioned whether this support strategy would be feasible for other clinics to adopt in the context of scaled up PrEP delivery

*“In terms of finances, it [SMS appointment reminders] is going to be a challenge [to scale up] … Who’s going to sit there and do it? Because now it’ll be a huge number of clients that will be coming.” (WRHI 05)*

*“I think that phone call is mostly important … [but] I don’t know how it would happen if it was done at a public hospital or clinic. Who will be able to do that in that space? Because now if it’s in … a public clinic, they [clients] will just be just offered something and [it] depends on them to come back or not. Nobody would even care if they are coming back or not.” (DTHF 03)*

#### Virtual Support Groups

All three main POWER sites created a closed WhatsApp group chat that PrEP clients could choose to join. Participants from the Tutu Teen Truck described how these WhatsApp groups sometimes served as virtual support groups for clients.

*“We have a WhatsApp group … [and one client was] saying, ‘I forgot to take PrEP.’ And before we [POWER staff] answered, there was a participant who answered and said, ‘You know what? I keep my tablets next to my charger, so it’s easier for me to remember because I know that every day I need to charge my phone’ … They will talk in the group by themselves to say like, ‘Guys, don’t forget to take your tablets.’ So sharing experiences—it makes it [taking PrEP] much easier for them … And I think it [this reminder to take PrEP] is better coming from them because the other one will be seeing that as a motivation [like], “Oh, … my peers are doing it [taking their PrEP now]. So why shouldn’t I do?’” (DTHF 11)*

Overall, participants felt that such virtual support groups would be a useful model component to scale-up, but cautioned that such groups would not suit the needs of all AGYW (e.g., clients without smartphones, clients who prefer one-on-one communication) and would require a facilitator who could monitor the group and correct misinformation, as needed.

*“Remember, there’s talkative ones, and there’s quiet ones. There’s those ones who feel free to talk in the groups, even if they are having challenges with taking the pill. [And] there’s those ones who need one-on-one [communication].” (WRHI 09)*

*“[Virtual support groups] do require thoughtfulness in terms of who is moderating it, how is the information getting on, how many people can you keep on the group, do you start the second group, what are the means of connecting, how do you ensure that people aren’t being joined on the groups especially with the news of data protection and privacy concerns” (KEMRI 13)*

One participant, anticipating that running such a group would be too time-demanding for government clinics—recommended other options.

*“I know DoH right now has got the mobisite [mobile app/website]—which is B-Wise—where young people can go and talk and questions and learn … There is someone responding to those messages. So it [supporting clients’ PrEP use] doesn’t have to be a one-on-one telephonically, but it’s a group [forum] and people can learn. And maybe it can be something like that, because I don’t think those small groups on WhatsApp and the courtesy [check-in] calls is gonna work. [Individual clinics] can’t sustain that.” (WRHI 07)*

#### Two-Way Communication Between Clients and Providers

POWER clients also had the option to contact POWER staff members directly with their questions. Participants reported receiving calls, texts, and messages on the site’s WhatsApp group or Facebook Page.

*“If you’re there, you get [a message on] WhatsApp. ‘Oh, I didn’t take my pills yesterday, so what should I do?’” (WRHI 09)*

*“[We get questions via Facebook like,] ‘I’m feeling nauseous. What must I do?’ [We write back,] ‘Just relax and take a drink of water.’ … Another common message [we receive] is our whereabouts ... When we are coming to this place?’” (DTHF 08)*

*“Sometimes we get calls … One was asking just this [past] Saturday, ‘Can I drink this [PrEP] with a cider?” (DTHF 04)*

*“Anyone can call [or] send us an SMS. They’ll indicate, ‘Can I come at this time? This day?” (WRHI 06)*

A few participants noted, however, that responding to clients’ messages can be time-demanding, especially since clients send messages after-hours and on weekends. And a few people further noted that such messaging can pose confidentiality issues.

 *“If I get a message from a number that I don’t know even, if you say, “I am [so-and-so]”, it’s still a little bit tricky because you might just not be you. So I can’t write everything I want to … because it’s like, ‘I just hope someone is not trying to do something funny now here’. You know, that kind of thing.” (DTHF 10)*

#### Adherence Clubs

As described in **Appendix A**, POWER sites in Kisumu and Cape Town established adherence clubs. POWER implementers at Ward 21 decided against having an adherence club because two previous Johannesburg-based PrEP studies that had tried implementing adherence clubs found that scheduling conflicts prevented about half of the participants from being able to participate in the clubs regularly. Key informants from Kisumu explained that the adherence club in Kisumu—known as the POWER Queens—met on a quarterly basis, usually at a local hotel. During the early stages of the POWER Queens, sessions were run by POWER staff who answered clients’ questions. Over time, the staff began grooming clients who were particularly engaged in the clubs to lead discussions, and at the time of the interview, participants reported that club sessions were primarily led by AGYW. During POWER Queens sessions, attendees discussed a range of health topics in addition to PrEP. Participants reported that POWER Queens attendees share their PrEP experiences, including how they use PrEP, any challenges they are facing taking PrEP, and strategies they use to address these challenges. As previously mentioned, some clients brought friends with them to POWER Queens meetings who later went on to initiate PrEP. Although clients could not initiate PrEP or receive PrEP refills at POWER Queens meetings, POWER staff used these sessions as an opportunity to arrange appointments and, when possible, to see clients in the clinic after the meeting ended.

The Tutu Teen Truck’s adherence club was similar to the POWER Queens in that, over time, sessions came to be more client-led and group discussions covered a broad array of health topics. Clients similarly were allowed to bring friends to sessions. Unlike the POWER Queens, the Tutu Teen Truck’s adherence club met monthly on Saturday. And clients already on PrEP and not due for laboratory testing had the option to pick up their PrEP refills at the adherence club meetings.

Overall, most participants felt that the adherence clubs provided valuable support to the clients that attended and would have similar effects if scaled-up.

*“[We discuss] so many things [at POWER Queens meetings]. We discuss about family planning … about PrEP and … sexually transmitted infections. We also discuss about myths and misconceptions because there are some of these ladies—they come from communities whereby people believe if you’re taking PrEP, you’re promiscuous … So we talk to them and advise them … It’s an open forum …* If someone doesn’t want to ask a question [out loud], they write questions on a sheet of paper and then they pass it forward.*” (KEMRI 03)*

*“[I think adherence clubs would work well for AGYW] because it would be them talking about PrEP, talking about their side effects, talking about different experiences, talking about how their family responded to seeing the PrEP pills, how their partner responded to seeing the PrEP pills, and things like that … Young people learn from other young people’s experiences … [These] people’s experiences influence how other people think and behave.” (WRHI 05)*

Anticipated challenges to scaling up adherence clubs, however, were the required resources.

*“I believe that can work [i.e., other clinics can dispense PrEP at adherence clubs], but I don’t think it’s easy. It needs many extra human resources to run that.” (WRHI 04)*

*“I think the problem with a support group is that it requires structure, and it requires a time and place.” (WRHI 10)*

*“In a clinic in the real world, it would require us [staff] investing in training the participants who would later train others. And I think this would cost time and also money.” (KEMRI 17)*

*“You definitely need someone that is going to be passionate. You need someone who is young that is going to run the club, somebody who is coming from the same community as they are from who has insight of what is happening in the community.” (DTHF 06)*

## Additional Considerations for Scaling Up PrEP Delivery to AGYW

### Obtaining Buy-in from Other Individuals and Institutions that Influence AGYW PrEP Use

Many participants emphasized that two major advantages of PrEP over other HIV prevention options, such as condoms, is that PrEP is user-controlled and can be taken covertly. This was viewed as particularly beneficial to AGYW who may have difficulties negotiating condom use with partners. Many participants, therefore, reported that PrEP can empower AGYW to take control of their health. These same participants, however, acknowledged that AGYW’s decision to take PrEP is often influenced heavily by their family and partners. Engaging individuals within AGYW’s broader networks of influence was, therefore, viewed as critical to achieving PrEP uptake and persistence at scale.

*“Because PrEP is associated with issues of sexuality, there is always this concern about how we are promoting promiscuity. ‘Are we encouraging people to have sex? Is it because they know they are protected that will make them have sex?’ It is a difficult sort of line to walk between in making it clear that people who want to have sex will have sex, whether they are protected or not. The question is, if they aren’t [protected], can we protect them to mitigate against consequences of other decisions that they may not be ready to make—whether it is pregnancy or infection with STI, including HIV,—so that we minimize the potential other risks that will come with this choice around having sex? … So I think one needs to deal with the stakeholders because stakeholders will differ from the healthcare providers to the clients themselves who needs PrEP, and to the people who inform these clients’ decision-making. It can be friends. It can be family … People who they trust. So all the different people who played the decision-making role that would allow this individual to protect themselves, all those will become key important parts for this person.” (KEMRI 13)*

*“Men are so, so powerful on being able to influence women in this country. Not just [male] your partners, but you’ll find your brothers or fathers or uncles can have an influence on a woman’s sexual reproductive health.” (WRHI 01)*

*“We have to reach the parents, we have to reach the uncles, the grandmothers, grandpas, the guardians. Let’s reach them because they are the ones who can pass this message [on to AGYW] better than us … If we can go once in a while in a community and explain about PrEP, it will do wonders.” (DTHF 09)*

Although participants make specific recommendations as to how these additional influencers should be engaged, nearly all participants called for the MOH in their country to conduct large-scale PrEP awareness campaigns. Participants were adamant that PrEP scale-up to AGYW will not succeed unless PrEP knowledge among the communities in which AGYW live increases.

*“When it comes to educating the community, maybe we should … use the radio stations in the community … [And] maybe we could ask the local soapie [soap opera]—you know, “Generations”—to act out a piece on PrEP, because once people see it on TV, they believe it. And everybody watches Generations in South Africa. So yeah, so maybe if we advertise that way, it will make things much easier for us.” (DTHF 06)*

Participants from the South African POWER sites emphasized that partnering with the Department of Education might also be an effective way to engage and educate parents about PrEP.

*“You know what has been missing in South Africa? We have DoH and we have DOE—the Department of Education—and we’re saying, both of us, that we’ve got the best interests of these young women. But we don’t want to work together … We preach the same gospel—all of us—and I know that if we work with the DOE, they work with parents, and then we could get involved in those meetings. We also educate them [the parents]. And when it comes from the school and the parents, the young people are gonna attend.” (WRHI 07)*

Although parents and partners were the most frequently cited stakeholder groups in need of engagement, many participants additionally called for engagement of community leaders.

*“I think there’s a lot of work that needs to be done within other communities … definitely religious groups and also sort of within tribes or you know other cultural castes. Just making sure you really do engage with community leaders.” (DTHF 05)*

*“We should involve … the chiefs … You know, when the chiefs call a baraza [a public meeting] … people will come, and then this message can be passed to them … I want to believe they [chiefs] will be [in supportive of PrEP] because the deaths we have seen in this region because of HIV. I don’t think they will fight … If you can protect somebody before they get infected, don’t you think it is something important? Who would say, ‘I don’t want such a thing?’” (KEMRI 04)*

### Monitoring & Evaluation Considerations

A few participants identified current challenges to monitoring and evaluating PrEP programs that will likely continue to be challenging in scale-up scenario. First, these participants noted that, for a variety of reasons—some of which are completely unrelated to the PrEP delivery model—clients sometimes discontinue PrEP permanently or temporarily and that such stopping and re-starting PrEP—although entirely appropriate—can make it difficult to characterize clients’ PrEP use and understand whether PrEP programs are delivering services well.

*“[According to the definitions used by] the Department of Health, I think if you stopped it [PrEP] for two or three months, you were [considered] “lost to follow-up.” Which is not really the right term. I think the terminology [we ought to use] is “cycling on or cycling off” … We saw one [client] that—she was classed [classified] as “lost to follow-up,” but then a couple of months later started [PrEP] again. And I think the reason [for stopping] was she had just broken up with her partner, and now [coming] back, she had a new partner.” (DTHF 01)*

*“Something that healthcare providers are constantly asking is, ‘How do we measure success? How do we know if we’ve got a good [PrEP] program?’ And we don’t have a good answer for them. But I think one of the things is about making sure that those people for whom PrEP is a good option for them and they want to take PrEP, stay on PrEP.” (WRHI 10)*

A second challenge to monitoring and evaluating PrEP programs is that clients may initiate PrEP at one clinic but subsequently decide to continue PrEP care at a different clinic. A few participants stated that it would be important for ministries of health to establish PrEP client tracking systems.

*“It’s very possible to [track clients using] an electronic system. It’s just money that needs to go into it. But if you really want to make it scalable, that’s what’s needed. ‘Cause then that person can move between trucks, or wherever, and still have their medical records everywhere. That’s what we will be doing now. We will be able to see their medical record at the [DoH partner] clinic and [at] the adherence club, and at the mobile clinic.” (DTHF 02)*

### Continued Research Expand HIV Prevention Options

Nearly all participants mentioned the need for AGYW to have a variety of HIV prevention options. Acknowledging some of the challenges associated with daily pill-taking, many participants expressed desire for a long-lasting form of PrEP, such as an injectable.

*“[We need] long-acting products. Depo [a contraceptive injection] is very popular in sub-Saharan Africa. But I think it’s not just about long-acting products in terms of injections. It’s other options as well. Not every person is a pill-taker. And maybe people who can happily take pills everyday are very different group of people from those who prefer injections or those who prefer other options. So different formulations and different ways of being able to give PrEP may also be important beyond just the longevity. Is it a one-month? Is it a 2-month? Is it a 3-month? Is it a 4-month? Or is it a half year, you know, kind of product that you are offering? But definitely having variety, I think. We’ve seen many times in the contraception world that variety definitely improves uptake because someone may find something that works for them. When there’s only one way to do it, there will always be a segment for whom that doesn’t work and they just won’t do it.” (KEMRI 13)*

# RECOMMENDATIONS AND CONCLUSIONS

A key finding from these KI interviews is that successful PrEP delivery to AGYW will likely require a variety of delivery models that address the major contextual barriers faced by AGYW in the target area of interest. Key informants identified client transportation to and from the POWER sites as a significant barrier to PrEP uptake and persistence among AGYW clients—a finding that aligns with a large body of literature that has also found transportation to be a significant barrier in the steps of the HIV treatment cascade.13 Accessing PrEP may be particularly challenging for adolescents, as compared to adults, because adolescents frequently have limited access to resources to cover transportation costs.14 As such, “scaling out” PrEP to service delivery locations that are closer to AGYW—such as on-campus clinics for school-going AGYW or retail pharmacies within AGYW’s home communities—may improve PrEP uptake and persistence among AGYW if it increases access.15 A variety of PrEP delivery models is also necessary because, as noted by study participants, AGYW are not a homogenous group, and whether AGYW find the PrEP care received within a given delivery model accessible and acceptable will likely vary based on factors such as whether they are school-going, working, or neither, and whether they are financially independent or not. Robust stakeholder engagement will be necessary to effectively tailor any PrEP delivery models to the specific AGYW population and service delivery setting of interest. Demand creation and social marketing strategies tailored to the target AGYW group are also needed to stimulate PrEP awareness and interest.

Key informants across all POWER sites identified several characteristics of delivery sites and PrEP providers, as well as specific delivery strategies, that they felt would increase the acceptability of PrEP care among AGYW and the overall feasibility of delivering PrEP services. Here we summarize key findings and their implications for scaling-up PrEP delivery to AGYW.

**PrEP implementation efforts must include a focus on the provision of adolescent- and youth-friendly (AYF) services**. As the South African and Kenyan Ministries of Health scale-up PrEP, prioritizing expansion to clinics with a proven track record for AYF services is advisable, as these settings are generally better-poised to address known barriers that prevent AGYW from initiating and/or continuing on PrEP. Both Kenya and South Africa have national guidelines for the provision of AYF services,16,17 and the South African DoH has developed a standardized tool—based on the WHO’s recommended standards for AYF Services18—for clinics to self-assess the quality of SRH services offered to adolescents and youth.19 Even if a clinic is unable to create a separate physical space for its adolescent clients, it can designate certain times and days for serving young PrEP clients,20 try to align PrEP appointments with other routine care clients receive (such as FP services), and ensure that a provider with the requisite PrEP dispensing qualifications is available at all times or on-call. In addition, clinics can display and disseminate adolescent-specific PrEP materials and have an adolescent PrEP champion on staff. In line with principles of AYF services, clinics delivering PrEP to AGYW should give clients the option to pre-book their appointments (rather than being a walk-in only service) and have opening hours that are convenient for AGYW (e.g., before and/or after school; on weekends). In addition, we recommend that AYF competencies be integrated into PrEP provider training. Existing AYF training resources—such as Wits RHI’s healthcare provider toolkit “Working with Adolescents Living with HIV”,21 EngenderHealth’s training manual22 for providing youth-friendly SRH services, and the Spark trainings23 developed by the University of Michigan’s Adolescent Health Initiative—could be adapted for PrEP delivery to AGYW. Strengthening AYF services for PrEP will likely have a positive “spill over” effect for other services, such as FP and STI testing and treatment.

**Prepare on-going, ‘light-touch’ support for PrEP providers.** Although PrEP is not a new intervention, most healthcare providers in Kenya and South Africa do not receive any ongoing training on PrEP, and even fewer have firsthand experience delivering PrEP. No PrEP delivery model can succeed without direct service providers who are knowledgeable about PrEP and confident in their ability to correctly deliver the intervention. As such, we recommend that PrEP implementers consider making subnational-level PrEP technical advisors available—in person or through remote means, such as a telephone hotline—to new PrEP providers to answer their clinical questions and provide technical assistance to support clinics in the early stages of PrEP implementation. Such clinician support services have proven successful in other settings, such as the California-based National Clinician Consultation Center, which—since 1993—has provided free and confidential phone consultations to healthcare providers with questions about HIV testing and prevention, treatment, co-infections, post-exposure prophylaxis (PEP), and PrEP.24 As indicated by our key informants, the typical learning curve for PrEP delivery is short, and—given that many providers already possess the necessary technical skills to deliver PrEP—fostering providers’ sense of self-efficacy is, in some cases, the biggest hurdle to getting providers to uptake PrEP delivery. Light touch support early on may help new PrEP providers “get their feet wet” and create the right learning environment to quickly gain confidence in their ability to deliver PrEP on their own.

**PrEP implementers should continue to advocate for health systems that better meet the needs of AGYW** and consider integrating PrEP into wraparound services that more holistically support AGYW’s well-being, including SRH services, laboratory-based STI testing and counseling, and psychosocial support services. As indicated by key informants, AGYW often face a myriad of health and social issues, many of which may take priority over HIV prevention and/or impact their ability to uptake and persist on PrEP. To the extent possible, pairing PrEP delivery with other services that support clients’ physical and mental well-being may help maximize the impact of this HIV prevention method by better enabling AGYW to recognize their HIV risk, and whether and when PrEP is right for them. It may also help providers identify clients that are more or less likely to need support persisting on PrEP.

**Orient providers to anticipate some clients will seroconvert.** Mitigating the risk of professional stress and burn-out may be key to sustained uptake of PrEP delivery among providers. We recommend that PrEP training prepare providers for challenges, such as learning that clients are in relationships with intimate partner violence or having a PrEP client seroconvert. Acknowledging the possibility of such events up front, emphasizing that providers cannot prevent all of these occurrences, developing contingency plans for dealing with such events, and having provider support systems in place—such as an open communication forum for PrEP providers—may cultivate resilience among providers by equipping them with the tools they need to handle these situations when they occur and reducing the chance that such events will demoralize them and/or turn them off of PrEP delivery altogether.

**Increase PrEP awareness and education for the general population.** Although over the course of the POWER study the number of PrEP initiatives in both Kenya and South Africa increased, there was a strong consensus among participants that PrEP knowledge among the general public remains critically low. We recommend that PrEP implementers and, in particular, Ministries of Health invest in large-scale community education programs to increase awareness of and knowledge about this HIV prevention method. As indicated by key informants, AGYW’s decisions about PrEP are influenced by a wide array of individuals and institutions, many of which lack accurate information about what PrEP is and how it works. Community education is one way to potentially reduce stigma around PrEP use and mitigate some of the barriers that AGYW face in initiating and/or persisting on PrEP. Higher levels of PrEP knowledge within the general community may also make PrEP delivery more efficient, as providers would not need to spend as much time counseling clients who are already well-informed about PrEP.

**Simplify and streamline PrEP delivery.** Widespread scale-up of PrEP will likely be required in order for PrEP to impact HIV incidence among AGYW. To reduce the resources required and to mitigate both provider- and AGYW-facing barriers to PrEP delivery and use, we recommend that PrEP implementers and Ministries of Health consider implementation approaches and policies that would simplify and streamline the delivery of PrEP services.25 First, rather than training a few select providers at each clinic to deliver PrEP, different cadres could be cross-trained in PrEP delivery so that multiple providers can “jump in” and help when PrEP client workload is high or when the usual PrEP providers are unavailable. In some cases, this may mean expanding the scope of practice of some cadres. For example, if the South African National DoH relaxed the requirement for nurses to be NiMART-trained in order to dispense PrEP, this would facilitate PrEP scale-up to clinics that do not have a NiMART-trained nurse on staff. It may also help make care more client-centered by enabling clients to receive PrEP at any time, not just when the NiMART-trained nurse is working. Ministries of Health may consider reducing the requirements for laboratory testing to initiate and stay on PrEP, especially creatinine testing, as studies have found that creatinine elevations due to PrEP use are rare.26,27 Similarly, hepatitis B screening could be made optional, as the likelihood of encountering a client with chronic active hepatitis B is low. Given that about one-third of the AGYW enrolled in POWER tested positive for Chlamydia, Gonorrhea, or both, it would be reasonable to invest resources in STI diagnostic testing, rather than hepatitis B screening. Minimizing laboratory tests would align with current WHO guidance for most ARV regimens—including tenofovir-based regimens—which recommends a symptom-focused approach to safety and toxicity monitoring.28 It would also potentially reduce client-facing barriers to PrEP, such as out-of-pocket costs for getting such tests, and clinic-facing barriers to delivering PrEP, such as test stockouts and/or lack of on-site laboratory testing services.

**Expand HIV prevention options.** As noted by key informants, PrEP is not a one-size-fits-all HIV prevention solution. As also discovered in other PrEP implementation studies, like the PrEP Implementation in Young Women and Adolescent Girls (PrIYA) study, challenges related to the PrEP intervention itself—such as difficulties with pill size, pill fatigue, and pill storage—emerged as barriers to persistence among AGYW in the POWER study.4 As such, we recommend continued research to expand the menu of options available for primary HIV prevention, especially long-lasting methods.

# LIMITATIONS AND NEXT STEPS

Our study has some limitations. First, implementation outcomes (e.g., acceptability, feasibility) were not quantitatively evaluated in our study; however, given the current dearth of validated quantitative tools for evaluating such implementation outcomes,29,30 a qualitative study gathering key informant perspectives on implementation and scale-up represent a reasonable and appropriate approach for capturing lessons learned about PrEP implementation that may help inform future scale-up efforts. Second, because many of the lead implementers of PrEP within the POWER project were hired study staff, it is possible that our findings do not reflect the perspectives of healthcare providers and managers delivering PrEP in routine, non-research settings. We did, however, include in our study non-POWER staff who played a role in PrEP implementation either directly (e.g., by providing HIV testing services to POWER clients) or indirectly (e.g., managing the departments in which the POWER study operated; engaging in other research and policy initiatives related to PrEP delivery to AGYW in Kenya or South Africa). Moreover, common themes between the experiences reported by key informants in our study and those reported in other PrEP research studies which did not hire external delivery staff (e.g., the Partners Scale-Up Project)31 suggest that our findings—particularly around challenges encountered—may be relevant to these more “real-world” settings. Lastly, because POWER did not scale PrEP to many other clinics during the course of the larger study, participant perspectives on the scalability of PrEP delivery to AGYW are largely speculative. Nevertheless, these perspectives are anchored in participants’ extensive first-hand experience of implementing PrEP—often over the course of multiple years—and their in-depth knowledge of the target communities.

We are disseminating the implementation lessons learned and recommendations to local and international stakeholders via presentations, project briefs, and publications. We will also assess the feasibility of triangulating our findings from these KIIs with monitoring and evaluation data that was routinely collected during the POWER project to arrive at a more in-depth process evaluation for POWER. These include routine reports and notes from meeting and calls among POWER staff directly involved in PrEP provision and/or demand creation (e.g., nurses, HCT counselors, community mobilizers) and POWER research staff (e.g., research assistants, study coordinators, project managers). Using both data sources together may help elucidate further detail about implementation context and specific implementation strategies that were used to integrate PrEP delivery into routine care at POWER sites. Lastly, we will also see whether our KII findings can be triangulated with findings from the PrEP client interviews, costing study results, and uptake and persistence outcomes to examine scalability more thoroughly.

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# Appendix A: Strategies for reaching AGYW used in POWER

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| **Appendix A**. Strategies for reaching AGYW used at the original POWER sites (Ward 21, TTT, KMET, and JOOTRH) |
| **Strategy** | **Description** | **Site(s)** | **Reported Advantages** | **Reported Disadvantages/ Challenges** | **Additional Considerations for Scale-Up** |
| Peer Referrals | Asking PrEP clients to tell their friends about PrEP and refer to the clinic for further information | All  | * Allows clinic to “cast a wider net”/broaden its reach at no extra cost to the clinic
* Lowers the burden on clinics to identify and reach AGYW who are potential PrEP candidates
* Sometimes lowers the burden of initial counseling, as AGYW referred by peers often arrive with a higher baseline knowledge of PrEP and greater resolve to uptake PrEP
 | * None reported
 | * None reported
 |
| Print Materials | Hanging posters and distributing brochures on PrEP within the clinic and in public spaces in the target communities | All  | * AYF materials resonate well with some AGYW
* Can feature different languages
* Materials bearing the DOH logo sometimes help “legitimize” PrEP in the eyes of AGYW *(South Africa sites only)*
* May reduce amount of counseling needed during initial session
 | * Potential language and health literacy barriers
* Print materials do not resonate with all AGYW. Some may not read them (e.g., in waiting areas), and some may throw them away without reading them.
 | * Consider using preexisting MOH materials or getting educational materials approved by the MOH to increase client confidence in information veracity
 |
| Videos | Showing a PrEP educational video in clinic waiting areas | * Ward 21
* TTT
* KMET1
 | * “Catchy”, “appealing”
* AGYW generally able to relate to the young people featured in the video
* Communicates information in terms most AGYW can understand/may reduce amount of PrEP education needed during initial counseling session
* Persuasive/facilitates some AGYW to uptake PrEP/may reduce amount of counseling needed to help AGYW decide whether PrEP is right for them
 | * Videos may make AGYW feel like PrEP is not for them if they feature AGYW to whom clients cannot relate (e.g., an urban-dwelling, Zulu-speaking, colleague-educated young woman will not resonate with all AGYW across South Africa)
* High quality videos are often costly to produce
 | * Videos should be tailored to feature young women to whom AGYW in the target area can relate
* Videos should be disseminated widely, including on public TV.
 |
| Social Media | Disseminating PrEP information on the site’s Facebook page and/or Twitter  | All | * Free or low cost to clinics
* Easy for AGYW with internet-enabled devices and available data to access
 | * Not accessible to clients without internet-enabled devices and available data
* Some sites’ Facebook pages received little traffic, suggesting that AGYW might not use this social media platform for seeking/receiving health information
* Requires routine maintenance
 | * Requires staying up-to-date on the social media platforms used by AGYW
 |
| Public Radio | Disseminating PrEP information—including where it is available—on local radio shows | * KMET2
* Ward 21
* TTT3
 | * Low cost to clinics
* Potential to reach AGYW across wide geographic areas
* Information can be easily disseminated in different languages
* Also a potential way to reach parents and other adults who may influence AGYW PrEP use
 | * Unclear how many AGYW reached by this method.
 | * None reported
 |
| In-House StrategiesHealth Talks | Including PrEP in daily talks/information sessions given to clients in clinic waiting areas  | * JOOTRH
* KMET
 | * Low cost to clinics
* Captive audience
* Can be delivered in different languages
 | * Unless delivered in an AYF clinic, fairly untargeted strategy
* Clients may feel hesitant to raise questions in front of a crowd
* Unclear whether this strategy resonates with AGYW. Some participants think AGYW do not like being “preached” to.
 | * None reported
 |
| Peer Educators | Training AGYW to deliver PrEP information to clients, primarily in clinic waiting areas | * Ward 21
* KMET
 | * Volunteer peer educators do not present extra cost to clinics
* Peer influence: AGYW may respond better (e.g., be more willing to listen, more comfortable to ask questions) to someone who is around their same age
* May reduce amount of counseling needed to help AGYW decide whether PrEP is right for them
 | * None reported
 | * Peer educators need to be trained and supervised to ensure they are giving clients accurate information
 |
| Internal Referrals | Informing other clinic staff about PrEP’s availability and asking them to refer AGYW who are interested in and/or would potentially benefit from PrEP to the clinic’s PrEP providers  | * KMET
* JOOTRH4
 | * Free
* Efficient/reduces burden on clinics to identify and reach AGYW who are potential PrEP candidates
 | * Staff may decline to refer clients, especially if they believe they should receive extra compensation or “tokens” for referring clients to PrEP
 | * None reported
 |
| Outreach Activities5 | Disseminating PrEP information within communities (e.g., AGYW hotspots, schools, markets, health fairs)  | * KMET
* JOOTRH
 | * Reaches some AGYW who would not otherwise be reached because they do not obtain services at the clinic
* May also raise PrEP awareness among other stakeholders (e.g., parents) who often influence AGYW PrEP use
 | * Depending on activity location and scope, can require considerable human and financial resources.
 | * Some clinics may hit “saturation” among existing clientele. As such, if clinics are given PrEP targets, then they may need to conduct outreach in order to find new PrEP clients.
* Clinics should consider using community health workers to reach AGYW—especially those who do not attend school—and liaise with community leaders whose support may influence the success of PrEP implementation efforts.
* Unless clinics already conduct such activities onto which PrEP can “piggyback,” resource shortages may hinder clinics’ ability to do outreach.
 |
| Adherence Clubs6 | Integrating PrEP into the topics discussed at monthly or quarterly club sessions, which are often attended by prospective PrEP users  | * TTT
* KMET/

JOOTRH (POWER Queens) | * Peer influence: AGYW may respond better (e.g., be more willing to listen, more comfortable to ask questions) to someone who is around their same age
* Hearing about PrEP users’ positive experiences often motivates PrEP-naïve AGYW to try PrEP
* Normalizes PrEP by associating it with other healthcare needs and services (e.g., FP, STI)
 | * Can require considerable human and financial resources to carry out
* Clients may lack transport fare to attend club meetings
 | * Resource shortages may hinder clinics’ ability to implement adherence clubs (e.g., most clinics would not be able to afford renting out space for club sessions to take place)
 |
| 1 In Year 1 of the study only. KMET stopped showing the video after the USB drive containing the video file was stolen (i.e., taken from the TV) several times.2 KMET has an Advocacy Department that markets the clinics services—including PrEP—via radio and other platforms. 3 TTT promoted PrEP via radio shows only a few times before the radio station with whom it partnered closed permanently.4 JOOTRH’s internal referrals came primarily from the other implementing partner delivering PrEP at the hospital. Participants reported that, otherwise, few site staff (e.g., FP providers within the MCH/FP department) referred clients to POWER for PrEP. 5 Both KMET and JOOTRH had dedicated POWER staff for conducting community mobilization. At KMET, PrEP was also occasionally incorporated into some of the site’s outreach activities for other health initiatives (e.g., community-based cervical cancer screening). Participants from Ward 21 reported occasionally participating in outreach activities (e.g., POWER staff giving talks at universities), but conducting outreach activities was not a core component of its PrEP delivery model. Because the TTT delivers services within communities (e.g., in adolescent hangout spots and near schools), it essentially conducts outreach at the same time it delivers services. 6 Although these adherence clubs were originally intended to support current PrEP users, the sites quickly learned that many AGYW bring their friends and that some of these friends end up initiating PrEP. As such, adherence clubs became an effective strategy for reaching potential PrEP users.  |

# Appendix B: Key Informant Thematic Guide













